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# Monopolies Inflict Great Harm on Low- and Middle-Income Americans

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### ABSTRACT

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Today, monopolies inflict great harm on low- and middle-income Americans. One particularly pernicious way they harm them is by sabotaging low-cost products that are substitutes for the monopoly products. I'll argue that the U.S. housing crisis, legal crisis, and oral health crisis facing the low- and middle-income Americans are, in large part, the result of monopolies destroying low-cost alternatives in these industries that the poor would purchase. These results would not surprise those studying monopolies in the first half of the 20th century. During this period extensive evidence was developed showing monopolies engaging in these same activities and many others that harmed the poor. Models of monopoly were constructed by giants in economics and law, such as Henry Simons and Thurman Arnold, to explain these impacts of monopoly. These models are of *sabotaging monopolies*. Unfortunately, in the 1950s, the economics profession turned its back on this evidence, these models and these giants. It embraced the Cournot model of monopoly, that found in textbooks today. In this model the monopolist chooses its price, nothing more. Gone are the decisions on whether to sabotage substitutes or to employ any of the other weapons at the disposal of sabotaging monopolies. I'll call this Cournot monopoly the *toothless monopoly*. Using this model, the economics profession has concluded that the costs of monopoly are small. But the toothless-monopoly model is ill-equipped to study the "costs of monopoly." By relying on it, the economics profession has made major errors in its study of monopoly.

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Monopolies “possess tremendous power for exploiting the community at large and even for sabotaging the system.”

Henry Simons<sup>1</sup>  
*A Positive Program for Laissez Faire*, 1934

Monopolies “consolidate their power by destroying existing independent enterprise.”

Thurman Arnold<sup>2</sup>  
*Labor Against Itself*, 1943

“The fundamental axiom [is] that in a monopoly economy luxuries expand while the necessities of life contract. . . . The exploitation of monopolies is always most dangerous in the things people cannot do without.”

Thurman Arnold  
*Robert La Follette Memorial Address, Univ. Of Wisconsin*, 1942

Monopolies “enter into politics using money and economic coercion to maintain themselves in power, making alliances with other powerful groups against the interests of consumers and independent producers. In short, they will become a sort of independent state within a state, making treaties and alliances, expanding their power by waging industrial war, dealing on equal terms with the executive and legislative branches of the government and defying governmental authority if necessary with the self-righteousness of an independent sovereign.”

Thurman Arnold  
*Labor Against Itself*, 1943

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<sup>1</sup>Henry Simons was a member of the Department of Economics at the University of Chicago in the 1930s. Simons, along with Frank Knight and Jacob Viner, were widely regarded as the leaders of that great department.

<sup>2</sup>Thurman Arnold was a giant of the legal profession who was appointed by FDR to be Assistant Attorney General for Antitrust in 1938, serving from 1938 to 1943.

## Note to Reader

I am writing a series of essays on the great harm caused by monopolies in the United States. The greatest harm they inflict, by far, is on low- and middle-income Americans. I call this collection of essays, “Monopolies Inflict Great Harm on Low- and Middle-Income Americans.” The essays are listed on the next page.

This staff report is the first essay in the collection. Its title is the same as the collection’s title.

The collection of essays is part of a larger project showing the great harm caused by monopolies. Research papers are being produced, a few near completion. One paper is “How HUD and NAHB Created the U.S. Housing Crisis,” joint with Arilton Teixeira and Mark Wright. Another paper is “How the U.S. Dental Monopoly Created the U.S. Oral-Health Crisis,” joint with Shi Qi. Slides for talks given on each of these papers are available on my webpage.<sup>3</sup>

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<sup>3</sup><https://sites.google.com/site/jamesschmitzjr/home>



# Monopolies Inflict Great Harm on Low- and Middle-Income Americans (A Collection of Essays)

## Essays

1. Monopolies Inflict Great Harm on Low- and Middle-Income Americans
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# Acknowledgements

While the work on these essays has mostly been done over the last few years, I want to acknowledge the help (and luck) I've received studying monopoly over the last 40 years.

I recall purchasing "Industrial Concentration: The New Learning" in Minneapolis in Fall, 1978. I bought it in the basement of Blegen Hall (which housed a satellite bookstore at that point) at the University of Minnesota. I was in Minneapolis by chance. Driving cross-country with my friend Tom Whelan, we stopped in Minneapolis since he had a friend playing with the Minnesota Vikings. Little did I know that, to my great fortune, a few years later I would be upstairs in Blegen Hall studying industrial organization and monopoly with Edward C. Prescott. Those who know the history of economics at the University of Minnesota during the 1980s know what an incredible learning and research environment I joined. I particularly want to thank Edward C. Prescott (my advisor) and Thomas J. Sargent for their help all along the way.

When I started as an assistant professor at the University of Wisconsin-Madison, my good fortune continued. Leonard Weiss, who played a large role in the literature that spawned "Industrial Concentration: The New Learning," was one of my senior colleagues. I met Tom Holmes, who was also starting as an assistant professor, and who I've worked with since on monopoly issues, and without whom I would not have "survived" in the economics profession.

Another important period was at the Federal Reserve Bank of Minneapolis (FRB-MPLS) during 1993-1994. A small group, consisting of Edward C. Prescott, Edward Green, Stephen Parente, Thomas Holmes, and myself, regularly met to discuss monopoly. I met David Backus around this time, who always provided sharp criticism of my work along with encouragement.

Fifteen years or so after the meetings at the FRB-MPLS, I began participating in new, more informal discussions of monopoly, these in my house, with my children, Alice Schmitz and Martin Schmitz. These discussions, still ongoing, have helped open my eyes to the great harm monopolies inflict on the low-income, the poor, in America.

More recently, Pete Klenow has read many drafts of this Introductory Essay, as well as drafts of some of the other 16 essays. This means, of course, that he's read thousands of pages (Yikes. Thank you!). Kyle Herkenhoff has also read a tremendous amount of material. Many others have read versions of the essays, offered criticisms of the work, and provided support of various kinds, including David Berger, Ben Bridgman, Paco Buera, Tim Dunne, April Franco, Jeremy Greenwood, David Levine, Ellen McGrattan, Virgiliu Midrigan, Matt Mitchell, Dave Mount, Juan Pa Nicollini, Lee Ohanian, Chris Phelan, Edward S. Prescott, Shi Qi, Victor Rios-Rull, Richard Rogerson, Dave Schmitz, David Scoones, Frank Shaw, Ruth Shaw, Chad Syverson, Arilton Teixeira, Martha Thompson, Brooke Tosi and Mark Wright.

If not for the librarians at the FRB-MPLS, I probably would not be doing the research I am doing. The volume of material, the quality of material, and the material they have found without my specifying sources, is truly extraordinary. If left to my own devices, I would have chosen a less cumbersome research path. And my office would be a hell of a lot cleaner (I am overwhelmed with papers, documents and archival material obtained with their help). I thank, in particular, Sara Brandel, Kate Hansel, Shawne Osborne, Jannelle Ruswick and Brooke Tosi.

Elena Falcettoni was my research assistant for most of the time I've been working on these essays. Her help can only be described as an out-of-the-solar-system effort. When I requested she track down information on some monopoly, she would invariably return with much more information and details than I requested, and often the new material was much better than the material I was looking for. Her help was truly extraordinary and I am in debt to her.

When I started writing these essays, quite some time ago, Dirk Van Duym was my research assistant. Though he was only involved a short while at the start, he was of great help. He might not have known it then, but his interest in my work was a great support to me. He understood what I was trying to do.

Ronan Brooks has been my research assistant since Elena accepted a position at the Board of Governors of the Federal Reserve Bank in Washington, D.C., a few months ago. Ronan and I had worked together for about six weeks when he was a summer intern at the bank during his junior year at Grinnell College. In that six weeks he quickly digested the concept of sabotaging monopolies, and then taught me about weapons they were using in industries I thought I knew well. He now has research underway in a number of areas, including sabotaging monopolies in residential construction and trade associations. With this research, he continues to teach me important lessons about these monopolies.

When I consider my circle of colleagues who have supported me in this research, and that I wish to thank, I include Thurman Arnold and Henry Simons. Finding their work in the last few years has been a great inspiration to me. Also truly inspirational was learning about how they conducted their business. In a tribute to Arnold after his death, Edward Levi wrote that Thurman Arnold was "one of the greatest lawyers and human beings of his time." There is an award in early music that I think fits the careers of Arnold and Simons well which, paraphrased for them, reads "an award for scholars whose significant contributions to economic understanding have been motivated by neither commerce nor ego."

# 1 Monopolies Inflict Great Harm on Low- and Middle-Income Americans

Today, monopolies inflict great harm on low- and middle-income Americans. They do so in many different ways. In this Introductory Essay, I will present the *Arnold-Simons model of monopoly*, one that reveals the great harm inflicted by monopolies. This model, which was developed during the first half of the 20th century, was the consensus model of monopoly during that period. It's a model where monopolies sabotage and destroy their rivals. With this model, we have uncovered evidence of significant harm inflicted on low- and middle-income Americans by monopolies in the United States. This evidence is presented throughout this Introductory Essay, and in more detail in Essays 2 through 17.

The claim that monopolies inflict great harm conflicts with the consensus in the economics profession, namely, that monopolies inflict little harm. How do I reach such a different conclusion? I employ the Arnold-Simons model to study the harm caused by monopoly, rather than today's consensus model of monopoly, the *Cournot-monopoly model*. Many readers will be familiar with the model – it has been included in introductory economics textbooks for many decades. Using the Cournot-model of monopoly as its workhorse model to study the costs of monopoly, the economics profession has concluded, erroneously, that monopolies inflict little harm.<sup>1</sup>

In this first section, I describe the Arnold-Simons model of monopoly (Sub-section 1.1). In the model, monopolies kill substitutes, sabotage institutions generally and lower productivity

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<sup>1</sup>Economists have a term, the “costs of monopoly,” to refer to the social losses inflicted by monopolies. It refers to social losses that are pure waste. I use the term “harm” in this same sense. More below.

in the monopolized industry. Also in Sub-section 1.1, I discuss how the widespread view of monopoly in the first half of the 20th century was that monopolies inflicted great harm on society and, in particular, on low-income Americans. Also in Sub-section 1.1, I show that monopolies inflict great harm on today's low- and middle-income Americans.

I then sketch the Cournot-monopoly model (Sub-section 1.2). In this model, the monopolist chooses its price, nothing more. Gone are the decisions on whether to sabotage substitutes or to employ any of the other weapons at the disposal of sabotaging monopolies. I'll call this Cournot monopoly the toothless monopoly. In Sub-section 1.2, I show how the Cournot-monopoly model is ill-equipped to study the harm inflicted by monopolies. The great harms inflicted by monopolies simply fly under the radar of the Cournot-monopoly model.

I then discuss, in Sub-section 1.3, how during the course of, roughly, the 1950s, the Cournot-monopoly model replaced the Arnold-Simons model as the consensus model to study monopoly and the harms they inflict. Also in Sub-section 1.3, I show that it was through a series of mistakes, or missteps, that the economics profession came to choose the Cournot-monopoly model as its consensus model.

As discussed in Sub-section 1.4, when economists began to consider the Cournot-monopoly model as the consensus model, *they did not initially change their view that monopoly was costly*. They had switched their *consensus model*, almost unknowingly, but not their view that monopoly was costly. The *consensus view* remained that monopoly was very costly. This is clear in the economics profession's reaction to the seminal paper by Harberger (1954).

Harberger asked: What is the cost of monopoly? To answer this question, he employed the

consensus model *at the time*, that is, the Cournot-model of monopoly. He found that the costs of monopoly in the United States were trivial. Harberger was initially surprised by his result. He wrote: “I must confess that I was amazed at this result.” (p. 86) Most economists were more than amazed: they were highly skeptical. They thought, surely Harberger was wrong. After all, it was a long-held view that monopoly inflicted large costs on society. But, as we explain later in this Introductory Essay, the profession’s skepticism quickly fell away.

Harberger was wrong. In the Cournot-monopoly model there is *only one cost of monopoly*, what economists have termed the *costs of misallocation*. When a monopolist raises its price, its quantity produced falls. This means too few of the monopolist’s goods are produced (and too few consumed). Another way to describe this: there are too few resources, like labor and capital, being devoted to producing the monopoly goods. There is a *misallocation of resources*.

But there are many more costs of monopoly as recognized in the Arnold-Simons model of monopoly. As described throughout this Introductory Essay, monopolies kill substitutes, sabotage institutions generally and lower productivity in the monopolized industry. So, when Harberger estimated the costs of monopoly, he was estimating only one cost — that resulting from misallocation of resources. That’s it. But he assumed he was calculating *all the costs of monopoly*. The economics profession never corrected Harberger’s error. So, as a result, for the economics profession the cost of monopoly has come to mean *only* the costs associated with the misallocation of resources.

The consequences of not correcting Harberger’s mistake have been significant. By employing a model ill-equipped to study monopoly harm, the economics profession has erroneously

concluded that the costs of monopoly are small. By relying on such a model, we have contributed little to the debates about the harms caused by monopolies.

After this first section, there will be 16 other sections, whose titles (roughly) correspond to the titles of the Essays listed on the Table of Contents page (p. iii). So, Section 2 reviews material in Essay 2, Section 3 reviews material in Essay 3, and so on.<sup>2</sup>

## 1.1 Arnold-Simons Model: Powerful Model to Study Monopoly

### Harm

The history of the Arnold-Simons model of monopoly goes back to the first half of the twentieth century (see, e.g., Hawley's (1966) discussion below in this Essay). In fact, the early development of the model predates the writings of Thurman Arnold and Henry Simons. I name it for them because, for example, Arnold (1943) and Simons (1934) so clearly and forcefully described the ideas in the model. As the quotes from Arnold and Simons above on (p. i) make clear, this model is one of sabotaging and destroying monopolies.

Skipping ahead 50-60 years from Arnold's and Simons' writings, Thomas Holmes and I developed a model of a sabotaging monopoly based on the behavior of monopolies we studied in the 1980s. In particular, the monopoly had the choice of whether to *sabotage low-cost substitutes* (Holmes and Schmitz (1995)). An extension of this model was developed in Holmes and Schmitz (2001a). Further ideas were developed in Schmitz (2012, 2016).

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<sup>2</sup>The approximate page numbers for the sections are: Section 1 (pp. 1-94), Section 2 (pp. 95-112), Section 3 (pp. 112-132), Section 4 (pp. 133-144), Section 5 (pp. 144-146), Section 6 (pp. 146-151), Section 7 (pp. 152-163), Section 8 (pp. 163-170), Section 9 (pp. 171-238), Section 10 (pp. 238-245), Section 11 (pp. 245-266), Section 12 (pp. 266-270), Section 13 (pp. 270-304), and Section 14 (pp. 305-344).

When Thomas Holmes and I developed our initial model (Holmes and Schmitz (1995)), we thought it was a new type of monopoly-model. But our model was anything but new. We were working in the shadow of Thurman Arnold, Henry Simons, and others, though we didn't know it.<sup>3</sup>

What I call the Arnold-Simons model of monopoly is, then, an amalgam of ideas from my research with Thomas Holmes and others, and the research of Henry Simons, Thurman Arnold and many others from the first half of the 20th century. By “model” we mean, first and foremost, ideas. Sometimes ideas are put into a mathematical form, an important achievement. Arnold's and Simons' development of the model consists of their ideas, which were put into a narrative form. Thomas Holmes and I put some of our ideas into mathematical form (Holmes and Schmitz 1995, 2001a). Some other ideas are still in a narrative form (like some in Schmitz 2012, 2016).

Here, then, is a description of the Arnold-Simons model of monopoly. Monopolies are formed by *groups of individuals* to enrich themselves. They make significant investments of time and other resources to help build the monopoly. They develop formidable *concentrations of power*. They make alliances with other similarly situated groups (i.e., other monopolies).

In the process of attempting to enrich themselves, monopolies have many weapons at their disposal. Monopolies take great effort and time in developing weapons. They use these weapons on any group that stands in the way of their goal — enriching themselves. Many of

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<sup>3</sup>Our model was, in fact, developed at the same time, and in conjunction with, other models of sabotaging-monopolies (see, e.g., Parente and Prescott (1994, 1999, 2000)). During 1992-1993, a small group, consisting of Edward C. Prescott, Edward Green, Steve Parente, Tom Holmes, and myself, regularly met to discuss monopoly. From these meetings, these new models were developed. Another model developed at roughly the same time is Herendorf and Teixeira (2011).



the weapons they use are illegal, but not all. But since many of the monopolies themselves determine what is legal, we need a broader range of criteria in judging their actions.

The model “recognizes” that monopolies inflict harm in many ways. These include:

A. Monopolies *sabotage and destroy markets*. They typically destroy substitutes for their products, those that would be purchased by low-income Americans.

B. Monopolies also use their weapons to manipulate and sabotage *public institutions* for their own gains.

C. Monopolies not only inflict harm on “outsiders,” that is, those not in the monopoly. In Thurman Arnold’s (1943) words, monopolies “*exploit members of their own group.*”

The reason monopolies exploit members is simple to understand. Monopolies typically need a large group of members if it’s to be powerful. But this, obviously, can lead to conflict among these members of the group. This may seem of little concern to the rest of us, but this infighting often has significant negative consequences for society. It often leads to *lower productivity and productivity growth in the monopolized industry*.

Another feature of the Arnold-Simons model is the recognition that monopolies are *difficult to detect*. This is, of course, an extremely important point, one emphasized by many scholars in the 1930s and 1940s. Some were, in fact, in the antitrust group at the Department of Justice with Thurman Arnold, including Wendell Berge. I’ll give this discussion its own section.

## Monopolies Are Often Difficult to Detect

There are at least three reasons scholars gave for monopolies being difficult to detect: monopolies devise weapons to destroy rivals that are difficult to detect; monopolies often construct power relations of infinite complexity; and monopolies take many different organizational forms.

First, the weapons monopolies use to harm market and non-market institutions are *weapons that are difficult to detect*. Wendell Berge, who worked with Arnold at DOJ, and who was later appointed Assistant Attorney General for Antitrust by Franklin Delano Roosevelt in 1943, and who served from 1943-47, described the weapons this way: “The weapons of monopoly are as numerous as they are artful and varied. It is for this reason that monopoly conditions have often grown up almost unnoticed by the public until one day it is suddenly realized that an industry is no longer competitive but is governed by an economic oligarchy able to crush all competition” (Berge 1947, 362-3).

Second, monopolies are difficult to detect because they form power relationships of infinite complexity that are *hard to untangle*. Who is “in the monopoly,” who “has the greatest power in the monopoly,” and so on, are often difficult questions to answer. Consider the view of Frank Knight (1939, p.273): “The imperfections of the market, including monopoly of all kinds and bases, create power relations of infinite complexity as to kind and degree. They are by no means limited to ‘big business’ or to ‘trusts,.’..”

Third, monopolies take *many different organizational forms*. Knight followed the quote above on “complexity” by saying the two biggest monopolies in the 1930s were labor unions and farmers. In his American Economic Association (AEA) Presidential Address, Jacob Viner (1940, 13) discussed the many forms taken by monopolies. He mentioned those in

construction (with “concealed protection of monopoly by doctored building and other ordinances”), retail trade (with “so-called ‘fair-trade’ laws which compel businessmen to act as if they were monopolists even if they wish not to”), farming (where farmers enjoy “the pleasures and profits of monopolistic behavior”) and labor unions.

Trade associations were widely recognized as significant vehicles to construct monopolies. Robert Brady, a Professor of Economics at the University of California – Berkeley, argued: "Meanwhile, staffed with experts gradually becoming conscious not only of economic but also of the political, social, and possibly even the cultural implications of the issues at stake, the trade association ..... [has] increasingly fortified itself behind federal and state laws whose titles appear not to extend — as they do — but to curb arbitrary use of cartel power which they do not. Such already is the origin and effect of much — perhaps most — of the agricultural marketing legislation, laws promoting fair trade practices, and resale price maintenance, laws relaxing antitrust regulations, and regulations enforcing building code and health inspection laws, to mention but a few of the outstanding categories." (Brady, 1947, p. 319)<sup>4</sup>

Professional associations were also recognized as monopolies, and as sabotaging monopolies. As early as 1900, groups of doctors were experimenting with new methods to deliver health care to the low- and middle-income, such as group health plans. The AMA sabotaged these efforts. The DOJ filed, and won, an antitrust lawsuit against the AMA for these sabotaging activities (see Arnold (1938) for a discussion of the lawsuit). Henry Simons (1934) also discussed how professional associations acted as sabotaging monopolies.

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<sup>4</sup>Note how Brady sounds very much like Wendell Berge at times, arguing that trade associations hide behind laws, that is, weapons, that look as if they promote competition when they do the opposite.

During the late 1930s, a new type of monopoly organization began to develop: *union-management monopolies*. Union-management organizations, because of developments in the late 1930s, such as U.S. courts conferring antitrust exemptions for the organizations, began monopolizing the industry of representing unionized workers. Arnold (1943) and Simons (1944) wrote about their concerns with these developments (see below).<sup>5</sup>

Next, and arguably most importantly, another large group of recognized monopolies were those developed along *color lines*. It was recognized that whites organized monopolies among themselves in order to improve their economic position relative to blacks. Such monopolies did this by, for example, sabotaging the participation of blacks in public institutions that were crucial for their economic and political development.

One such monopoly were those developed to block the voting of black Americans. This monopoly, and others developed along color lines, arguably inflicted much greater harm than any other monopoly. Northrup (1946) and Marcus (1946) discuss how whites sabotaged black economic progress in specific institutions, for example, unions and professional organizations. Stern (1941) presents a very general, and very inspired, discussion of how monopolies excluded blacks from participation in U.S. institutions.

Staying on this third point, that monopolies take many different organizational forms, there is an another extremely important fact about monopoly organization, also emphasized by many scholars in the 1930s and 1940s. The fact: Monopolies organizations often have no formal organization.

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<sup>5</sup>Knight and Viner, above, had already listed these union management monopolies as strong concentrations of power by the late 1930s.

## Monopolies Are Often Informally Organized

An important lesson from these monopolies devoted to sabotaging black voting, these “anti-voting” monopolies, beyond the great harm they inflicted, is a theoretical point about monopolies. There does not have to be a centralized authority directing monopoly members. There does not need to be an official trade association, for example, with a headquarters and staff. As discussed below, those in the anti-voting monopolies, like the local voting registrars that threw up obstacles to black registration, knew their roles and performed them. If they didn’t, there was always *peer pressure* from those around them. Peer pressure is a powerful force in holding monopolies together, and in dictating the actions of members.

That monopolies could be informally organized was widely known and understood before 1950. Economists, political scientists and others were well aware of this phenomenon. Theodore Kreps (1945), Professor of Economics at Stanford University, who also served in the Antitrust Division of the DOJ during the late 1930s, discussed, for example, how businesses were increasingly forming concentrations of power, monopolies, using informal organizations. He begins by stating that “... the type of collaborative action embodied in and limited to the terms of a written contract is in many respects the weakest. After competitors come to know and trust each other, the written agreement or formal association is felt to be crude, inflexible, and unnecessary.” He continues: “There then evolves what has been called the ‘basketball technique,’ proceeding according to unwritten almost automatic habit patterns of action.” (p. 299)

He adds: “In the United States and in other countries which have antitrust laws on the books, such a pattern of conduct has the additional advantage of leaving no evidence lying

around loose of conspiracy to restrain trade.” (p. 299)

He compares these developments to mercantalism, and groups who “take into their own hands the co-ordinating functions of the market place...” He continues: “Like the Mercantalists in England or the *Kameralists* in Germany, the agreement-fabricators of the twentieth century ..... contrive to ‘preserve their favored positions through the use of nonbusiness methods, by influencing governments, by combining to control foreign and domestic markets, by withholding scientific knowledge and practices from general use, by obtaining special privileges as a means of defeating competition.’”<sup>6</sup> In a subsequent publication, Kreps (1949) argues: “Such power may be directed against competitors, suppliers, customers, distributors, labor organizations, economic liberals in government, universities, and so forth, i.e., against all who may be suspected by precept or program adversely to tend to affect the profits, honor or security of the businessman or his interests. Such business activities are both *totalitarian* (*embracing the entire industry*) and *collectivistic* (*requiring group action and adherence*).” (p. 308)<sup>7</sup>

Later in this Introductory Essay, and throughout the individual essays, we show how such

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<sup>6</sup>Kreps takes the quote above from “Senate Small Business Committee – Its Record and Outlook : Progress Report of the Special Committee to Study Problems of American Small Business” (p.4). Including some of the text before Kreps’s quote reads as: “Developments of the last several decades have strengthened the monopolistic and near-monopolistic practices of economic giants in an ever-increasing area of American business. The rate of such developments is alarming. Powerful segments of the business community seek to preserve their favored positions through the use of nonbusiness methods, by influencing governments, by combining to control foreign and domestic markets, by withholding scientific knowledge and practices from general use, by obtaining special privileges as a means of defeating competition.” This report can be found at: <https://fraser.stlouisfed.org/archival-collection/marriner-s-eccles-papers-1343/senate-small-business-committee-record-outlook-460635>

<sup>7</sup>From a short biography on Stanford University’s website: Kreps “was active in government during the 1930s and 1940s, holding posts in the National Recovery Administration and the Works Projects Administration, and serving as an economic adviser to the U.S. Maritime Commission, the antitrust division of the Department of Justice, and the Temporary National Economic Committee.” see: <https://www.gsb.stanford.edu/experience/news-history/history/theodore-kreps>

informally organized monopolies are prevalent today as well.

This, then, is the Arnold-Simons model in narrative form. With this model as our tool, we have found that, today, monopolies inflict significant harm on low- and middle-income Americans. I next briefly describe the three harms of monopoly introduced above: monopolies sabotage markets, often the products of substitute producers; monopolies harm public institutions; and monopolies exploit their own members, leading to reduced productivity growth in the monopolized industry. The reader can see a more condensed statement of a version of the model, given in Arnold's (1943) words, on page 102 (approximately). Arnold presents a list of six actions that monopolies take as they create harm.

## A. Monopolies Destroy Markets (Typically Goods Bought by Low-Income Americans)

Monopolies *sabotage and destroy markets*. They typically sabotage markets offering *low-cost substitutes* for the monopolies' products and services, those that would have been purchased by the low- and middle-income. When monopolies destroy *low-cost substitutes*, they often create crises in the lives of low- and middle-income Americans.

Let me present a list of some industries where monopolies sabotage substitute products:

### 1. Housing Construction.

Monopolies sabotage low cost substitutes in residential construction. For the last 100 years, monopolies in the residential construction sector making homes *on-site*, often called the

*stick-built* sector, have sabotaged the sector producing homes in *factories*. Before the 1950s, this monopoly sabotage of factory-built homes was well known to economists and the public.

In the early 1920s, Judge Kenesaw Mountain Landis wrote an arbitration decision (dealing with warring monopolies in the construction sector) that he hoped would permit factory homes to be shipped into the Chicago area, where they had been blocked by monopolies. Figure 1 is an advertisement in the *Chicago Tribune*, from an Iowa firm that manufactured factory-built homes, placed the day after Landis' arbitration decision. The firm was offering to deliver factory-built homes to Chicago.

Thurman Arnold and his colleagues at the DOJ provided some protection to factory-built home producers from monopolies during his tenure as Assistant Attorney General. After Arnold left DOJ, he continued to publicize how monopolies in the stick-built sector were still sabotaging factory-built homes. In 1947, Arnold wrote an article for *Life Magazine* discussing how monopolies sabotaged low-cost housing. Figure 2 is the cover from the article.

Despite many efforts before 1950 to protect factory-home producers, monopolies in the stick-built industry mostly succeeded in thwarting factory production of homes. However, in the 1960s, the producers of factory-built homes were briefly able to overcome the sabotage inflicted by monopolies in the stick-built housing industry. By the end of the decade, 60% of single family homes produced in the United States (that is, those homes manufactured in factories plus those constructed on-site) were manufactured in factories.

Figure 6 shows the shipments of one-type of factory-built home, modular homes of one or



two pieces, those that are often called *manufactured homes*. Figure 7 shows the fraction of all single family homes that are built in factories. The rapid rise in both the shipments of modular homes of one and two pieces, and the share of factory-built houses in all housing production, are evident in the two figures.

Though producers of factory-built homes overcame much of the resistance by stick-built monopolies in the 1960s, monopolies in the stick-built housing sector regrouped and delivered a devastating blow to the factory-housing industry in the 1970s.

Who were the monopolies involved? Many different monopoly groups have engaged in blocking factory-production of homes over the last 100 years. Beginning in the late 1960s, however, two monopolies stand out: the National Association of Home Builders (NAHB), the trade association for stick-builders, and the Department of Housing and Urban Development (HUD). When I say that HUD is a monopoly I mean that there are groups within HUD who form concentrations of power in order to enrich themselves. These groups in HUD, of course, make alliances with groups in NAHB.

The sabotage was accomplished through the use of many different types of weapons. Some weapons imposed regulations, still in force, on how factory-homes are produced, regulations that serve no purpose other than to destroy the industry. Other weapons ban factory-produced homes from being placed in various locations. In fact, some factory-homes are banned from most locations in the United States.

As a result of these weapons unleashed on the factory-built housing sector, production of factory-built homes crashed in the mid 1970s. The impact of these weapons, and ones

adopted since, has meant the factory-built housing sector is a shell of its former self, accounting for less than 10% of single family housing production in the United States.

Above we mentioned how it was well known long ago that monopolies used weapons that were difficult to detect. One such weapon that has been used by these monopolies has been efforts to block factory-built homes from official housing statistics. Because of these efforts, the majority of factory-built homes are not included in U.S. housing starts, permits and new home sales. By suppressing information on the factory-built housing industry as much as possible, the monopolies make it less likely that their other methods of sabotage will be discovered. As we show below, many leading housing economists are even unaware of the factory-built home industry. This strategy could be called: If there is no body, there is no crime.

Because of this sabotage, housing prices are significantly greater than they need be, and we've had recurring housing crises as a result. For a house of a given size and quality of materials, the house can be produced in a factory at a small fraction of the cost to construct it on-site. Logic and evidence supports the view of much lower costs for factory production. As for logic, imagine that Honda had constructed my Honda Accord on-site, delivering the thousands of pieces to my front yard, and then assembling them over 6 to 8 months, with a highly skilled and highly paid work crew. What would it have cost Honda to build the car in my front as opposed to the cost of producing it in a factory?<sup>8</sup>

As for evidence on costs, below we present statistics from the U.S. Census Bureau showing that average costs per square foot for factory built homes is up to one-third less than average

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<sup>8</sup>I thank Chris Phelan for this logic.

costs per square foot for homes constructed on-site. As explained below, I take this as an understatement of the actual cost differences.

Note that factory-production of homes disproportionately benefits the low income for many reasons. I give two here, many more later. First, low-income households spend a larger share of their income on housing than other households. Second, while factory production of homes lowers the costs of producing all homes, its greatest cost advantage over on-site construction is in the production of *small houses*.

While economists and the general public were aware of monopolies sabotaging factory-built homes before the 1950s, today no one is aware. Robert Brady's and Wendell Berge's quotes above perfectly describe the sabotage by monopolies of U.S. factor-built housing. As for Brady's quote, as shown below, "the trade association [NAHB] .... [has] increasingly fortified itself behind federal and state laws." And, as Brady said, trade associations [NAHB] hide behind laws and regulations that they say promote competition when the laws and regulations do the opposite.

As for Berge's quote, monopolies in the traditional on-site construction industry have deployed these weapons (of the late 1960s and early 1970s) for more than 50 years. They've added many more since. Yet, as shown below, these "[m]onopoly conditions have .... grown up almost unnoticed by the public."

The second part of Berge's quote has not come to pass, namely, "until one day it is suddenly realized that an industry is no longer competitive but is governed by an economic oligarchy able to crush all competition." The public does not realize that the construction industry

is not competitive, that monopolies have badly sabotaged factory-built housing. Moreover, the hundreds of economists currently studying the housing industry have no idea about the sabotage either.

How is this possible? That is, how was it once well known that monopolies sabotaged factory-built homes but today nobody knows? The “devious means” and “artful weapons” of the monopolies clearly play a role. But monopolies employed devious means in the first half of the twentieth century. *What has changed is the consensus model of monopoly.* Whereas monopolies were once seen as sabotaging monopolies employing devious means, now, with the Cournot-monopoly model, *monopolies are toothless.* They simply decide on prices. The Cournot model has numbed us to the great harm inflicted by monopolies.

We have two research papers in progress on monopoly sabotage of the factory-built housing industry in the United States. The first develops the history of the sabotage, the second shows how this sabotage is responsible for the recurrent housing crises in the United States (see Schmitz, Teixeira and Wright, 2019a, 2019b). We describe these research papers, this work in progress, in Essay 9.

At this point, I can describe the decision to write this collection of essays. Normally, colleagues and I circulate “working papers” on research in progress. The essays in the collection can be thought of as working papers. We have decided to gather them as a collection, rather than release them individually, as is usually the case, for several reasons.

Most importantly, collecting them as a group allows us to emphasize just how widespread is the harm being inflicted by monopolies. It adds force to our arguments. Also, releasing

them as a collection is likely the quickest way to disseminate the results.

There a couple of reasons quick dissemination might matter. First, some of the research may be of use to those fighting monopolies and developing policy responses to them. Our research in housing, for example, may be of use to those seeking solutions to our recurring housing, and homelessness, crises.

Second, vast amounts of more research needs to be done to expose the harm being inflicted by the monopolies discussed in these essays. These essays are only the first tiny step. Again, take housing. One might have imagined, before reading this Introductory Essay, that a significant amount of research has been conducted on factory-built housing over the last several decades. But there has been next to no research. As suggested above, through deceit and misinformation, the monopolies in the stick-built sector have managed to almost erase the factory-built sector from the public imagination, and certainly from the economics literature. There is a large literature in economics, then, that is simply missing. There are 100s of papers on factory-built housing's role in the residential construction sector that have never been written.

We need a 100 papers simply on how monopolies have sabotaged the industry. In the United States, we have primarily focused on the sabotage that was unleashed in the late 1960s and 1970s. There has been plenty more since then of which we know little. As for the rest of the world, there are only a few countries where factory production of homes accounts for the major share of all production. This is true of Sweden. Japan has a significant amount of factory production of homes, though less than Sweden. For other countries, the factory-built housing industry has been sabotaged by the traditional construction sector. Below, in

Section 9 (and in Essay 9), we discuss this sabotage for some of the countries where we have studied the factory-built home industry, including Canada and England.

But the housing industry is not the only one where a large literature is missing. The same is true of most of the monopolies I discuss.

Note that I have arranged material so that the overview of *Essay 2* appears in *Section 2*, that of *Essay 3* appears in *Section 3*, and so on.

## 2. Legal Services.

In legal services, monopolies, including state bar associations, have also operated for nearly 100 years. These monopolies are instrumental in passing Unauthorized Practice of Law (UPL) statutes that prohibit a non-lawyer from giving legal advice of *any kind*. Bar associations have blocked books that give legal advice. Clerks in courts cannot tell visitors what documents are appropriate for their cases. Paralegals are not permitted to practice independently. Again, *all substitutes* are banned.

As a result, the price of legal services is beyond the reach of many Americans. It means nearly all low-income and many middle-income households have no access to legal advice on civil matters. In such a situation, economic theory predicts, and experience shows, that these households are preyed upon by those who have access to legal services. This research is described in Section 8.

—Health Care Markets

In many health care markets, low- and middle-income Americans are simply unable to purchase the good or service produced by the industry. And the reason is simple: Monopolies in these markets block low cost substitutes that the households could purchase. In many of these markets there is often no public insurance, like Medicaid and Medicare, provided to purchase the good. This means low- and middle-income households go without these health care goods and services, ones that are very important to their health.

Some of these markets include *hearing aids* that, as discussed below, are beyond the means of nearly all low-income (and many middle-income) Americans. The same is true for *eyecare and eyeglasses*, though not to the same extent. There is no public insurance coverage for hearing aids, very little for eyeglasses.

These markets also include *oral health services*. Some low-income Americans may receive insurance from the government. But many live in areas with little or no access to dentists, areas called Health Professional Shortage Areas (HPSA). These areas are in both rural and urban regions. These Americans often have limited transportation options, so that, in HPSAs, traveling to dentists is often not possible.

When low-income Americans with public insurance can find dentists that are within travel feasibility, whether the households reside in HPSAs or outside HSPAs, these Americans must find dentists who will take the insurance. Very few do, or if they do, take a very limited number of patients. Many middle-income Americans don't have insurance, and face little access to oral health care.

### 3. Oral Health Services.

In oral health services, dentist-monopolies, including state dental associations and the American Dental Association (ADA), sabotage the introduction of non-dentist professionals who offer low-cost substitutes to services provided by dentists. These alternatives to dentists include hygienists, denturists and therapists.<sup>9</sup> These monopolies are instrumental in having state laws passed that block the practice of these professionals. As a consequence of blocking these low-cost alternatives, many low-income families receive little or no dental care. Children in low-income households have untreated cavities at far higher rates than children in high-income families. Monopolies in the oral health industry are discussed in Section 7.

#### 4. Hearing Aids.

The hearing aid industry is overrun with monopolies, from top to bottom: manufacturers, audiologists, audiology associations, and various groups in the FDA, AARP and state legislatures, to name some of the monopolies. These monopolies work together, spinning power relationships of “infinite complexity,” to pursue their goals. They inflict great harm on low- and middle-income Americans.

In a report to President Barack Obama, the President’s Council of Advisors on Science and Technology (PCAST) (2015) quotes a survey where the average price for a pair of hearing aids was \$4,726.<sup>10</sup> That monopolies are able to sell a pair for this average price is an amazing, but despicable, feat.<sup>11</sup>

Monopolies block the introduction of low-cost technology. An alliance made up of audiolo-

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<sup>9</sup>Therapists are oral health care professionals who can treat and fill cavities.

<sup>10</sup>The report can be found at: [https://obamawhitehouse.archives.gov/sites/default/files/microsites/ostp/PCAST/pcast\\_he](https://obamawhitehouse.archives.gov/sites/default/files/microsites/ostp/PCAST/pcast_he)

<sup>11</sup>Most insurance programs don’t cover hearing aids. For a discussion of this, see Mary Helen McNeal, “Say What? The Affordable Care Act, Medicare and Hearing Aids,” Harvard Journal on Legislation, 2016.



gists, manufacturers, the Federal Drug Administration (FDA), and others has blocked the over-the-counter sale of hearing devices that cost as low as \$150 and which perform well (see Zimmerman 2004, for example).<sup>12</sup>

Monopolies have also blocked the practice of low-cost providers in the industry. There are typically two types of professionals that serve as hearing aid fitters in U.S. states. One is audiologists, individuals who hold advanced degrees, both MAs and PhDs. Audiologists also provide a wide range of other services, many of a more technical nature. The other professional group, one that goes by slightly different names across states, simply fits hearing aids. They typically require only a high school degree. In Minnesota, they are called hearing instrument dispensers (HIDs). But audiology groups have been sabotaging the practice of these professionals. Many audiologist groups have been working to make their profession comparable to the legal profession. That is, just as no individual can give legal advice *of any kind* without being a member of the bar, these groups want no individuals to give *any kind of hearing care, including fitting of aids*, unless they are an audiologist – that is, have an MA or PhD from an audiology program.

## 5. Eyecare and Eyeglasses.

The U.S. eyecare and eyeglasses industry is a lot like the U.S. hearing aid industry. The first similarity is high prices. While eyeglasses don't cost thousands of dollars, they do cost hundreds of dollars. The high prices of hearing aids essentially means low-income Americans cannot purchase them. Though eyeglasses are less expensive, it's still true that many low-

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<sup>12</sup>Recent legislation has hopefully opened up the over the counter market to some of these devices.

income Americans cannot afford eyecare and eyeglasses.

The second similarity is that, like hearing aids, the eyecare and eyeglass industry is overrun with monopolies. The industry involves a multi-step process, from eyecare services (provided by professionals including opticians, optometrists and ophthalmologists), to manufacturers of medical equipment (both frames and lenses), to the retail stores, and to the “builders” of brand names. There are monopoly elements at each step. There are also monopolies that consist of alliances between the monopolies at various steps. The arrangements, like Frank Knight said, are of infinite complexity.

Third, like monopolies in hearing aids, and like so many monopolies we discuss, monopolies in eyecare and eyeglasses have been around for 75 years. Arnold addressed eyeglass monopolies in *Bottlenecks of Business*. “There is no economic reason why the ten-cent stores should not sell spectacles. The argument is made that it is necessary to the health of the public that good optometrists be employed. However, Woolworth’s is in as good a financial position to hire a good optometrist as is anyone else. The fact is that merchants who are willing to distribute spectacles cheaply have been unable to get hold of the best type of product.” .... “Spectacles are a necessity. ... The tax on low income groups by fixing the price of spectacles is enormous.” (p28)

## 6. Pharmaceuticals

Many low- and middle-income Americans face great difficulties affording critical drugs. A case in point are the great hurdles faced by diabetics in purchasing life-saving insulin. Monopolies in pharmaceuticals have played a large role in creating these crises. Monopolies

have blocked the introduction of lower priced medicines, obviously disproportionately hurting those without insurance, primarily low- and middle-income Americans. One way monopolies thwart competition is by emasculating the generic drug market. Three methods by which generics are frustrated or stopped include *pay for delay*, *citizens petitions*, and *authorized generics* (see below).

—Financial markets

## 7. Financing of Factory-built homes

Monopolies have not only blocked the production of factory-built homes. For those factory-built homes that are produced, monopolies have sabotaged low-cost means of financing the homes.

Today, the majority of factory-built homes are sold and financed as cars, with personal, or chattel, loans. A much lower-cost option is to finance them as real estate, with traditional mortgages. But attempts over the last 50 years to reform these financial markets so as to finance the homes as real estate have been blocked by the monopolies earning fabulous returns selling them as cars.

Let me mention two very important facts about this monopoly sabotage. Both will be described in detail in Section 9.

i) The sabotage is of a *whole set of financial institutions*. When a potential purchaser of a factory-home walks into a dealership, it's not as if the salesman has the option of providing financing of the home as a personal loan (i.e., like a car) or as real estate (i.e., with a

traditional mortgage). It's not as if the salesman, through deceit, sells the house with car-like financing. The whole institution of real estate financing of factory-built homes has been blocked by monopolies.<sup>13</sup>

ii) The institutions that could finance factory-built homes as real estate have been blocked by groups of monopolies that are not formally organized in any sense. There are many monopolies that desire to keep the system of financing factory-homes as cars, and working together, without a central headquarters, and so on, have succeeded for 75 years.

## 8. Credit Cards.

There are considerable monopolistic elements in the credit card industry. Herkenhoff and Raveendranathan (2019) (HR) present a long list of antitrust cases brought against the credit card industry, many involving blocking low cost alternatives. The credit card industry invariably lost these cases (see their Table 5). The impact of these monopolies falls disproportionately on the low income.

For families with little or no savings, typically low-income households, having access to short-term credit can significantly improve economic well-being. Such short-term credit can allow a family to cover a temporary excess of expenses over wages. Credit cards are a form of short-term credit that play this role for many low-income families with little or no savings.

For families with significant savings, access to such short-term credit is less important.

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<sup>13</sup>Let me quickly add that there other types of deceit at dealerships selling factory-built homes. The dealerships are run like car dealerships of old, with no posting of prices and many predatory practices. For a nice description of this industry see the series of articles by Ronald Wirtz, a colleague at the Minneapolis Federal Reserve Bank, including Ronald A. Wirtz, 2005, "Dealer, heal thyself," Fedgazette, Federal Reserve Bank of Minneapolis, vol. 17(Jul), pages 7-8.

## —Other Important Services for Low-Income

### 9. Repair services.

Repair services are provided by two broad groups. The first are *original equipment manufacturers* (OEMs), such as those in farm equipment (e.g., John Deere), autos (e.g., General Motors, Ford, ..) and computers, through their franchised dealers. The second group consists of those in *independent repair firms*. The independent repair services industry is under attack from OEMs. The OEMs in these industries have formed monopolies, such as trade associations and lobbying groups, to sabotage independent repair firms.

### Monopolies Snuff Out Innovation in Industries That Are Sabotaged

Note well that, in all the industries discussed above, when monopolies sabotage low-cost substitute products, they *snuff out all the innovation* that would have occurred in those markets had they not been destroyed. In this way, and others described below, monopolies lower productivity in the economy.

## B. Monopolies Harm Institutions Generally, Including Non-market Institutions

With the Arnold-Simons model, we have found that monopolies not only sabotage markets but they *harm institutions more generally, including non-market institutions*. Just as monopolies typically hurt the lowest-income individuals when they sabotage markets, when monopolies harm non-market institutions they also harm those of the lowest-income.

As before when monopolies sabotaged low-cost substitutes, when they harm *non-market institutions* they often create crises in the lives of low- and middle-income Americans. The harm monopolies inflict when they sabotage non-market institutions may, in fact, be *much greater* than the harm they inflict by destroying markets.

Monopolies harm non-market institutions in many ways:

- (i) They steal “public” money meant for the low- and middle-income.
- (ii) They sabotage institutional reforms meant to benefit low- and middle-income Americans, as these reforms would lower the income of the monopoly.
- (iii) They infiltrate public institutions, also to enrich members. The infiltration is sometimes accomplished by members of the monopoly taking positions of power inside the public institution, then directing the institutions to serve the interest of the monopoly.

Let me present a list of some public institutions that have been compromised by monopolies. The list includes housing-subsidy programs, voting institutions, antitrust institutions, bail systems and foster care services.

## 1. Housing-Subsidy Programs.

When a monopoly sabotages a low cost substitute for its good, many low-income households are not able to afford the monopoly good. At this point, monopolies typically present themselves as champions of the low- and middle-income. They lobby governmental and

private groups to provide subsidies to the low-income so that they can purchase the monopoly good.

Monopolies in the stick-built construction industry use this ploy today, and have been doing so for the last 75 years. When monopolies in the stick-built industry sabotage the low-cost substitute of factory production, housing becomes extremely expensive for the lower income. Monopolies in the stick built industry have been successful at convincing the government to provide housing subsidies to the low- and middle-income to purchase homes made on-site.

This is theft by stick-builders in the sense that, for a given amount of housing subsidies for the low- and middle-income, many fewer houses will be constructed using the stick-technology than if the factory-technology were employed.<sup>14</sup>

Seventy-five years ago, Thurman Arnold and Henry Simons alerted the public to the purpose of those subsidies: to prop up inefficient and costly producers. Here is Arnold (1940, p. 45): “[Y]ou can’t spend money in a relief market [housing] like that without subsidizing inefficiency and thus raising both prices and taxes.” Arnold (1939) made a related point in a speech to the New York Building Congress: “The building industries are unique in that they have frankly given up half of their job. They take for granted that it is impossible, as things are today, for them to build houses without public aid and sell them cheaply enough that the lowest paid half of the population can afford to live in them.”<sup>15</sup>

Henry Simons (1938), in a speech on monopoly at the Art Institute of Chicago, makes a sim-

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<sup>14</sup>This is also theft of taxes.

<sup>15</sup>From speech at the New York Building Congress, 6-21-1939. I found this speech in the paper’s of Edward Levi. Found in: Edward Levi papers, University of Chicago, Box 75, Folder 3. I thank John Levi for granting me access to Edward Levi’s files on housing (Edward H. Levi. Papers, Special Collections Research Center, University of Chicago Library).

ilar point: “Urban housing conditions become worse and worse, largely because labor costs prohibit new construction; and the widespread demand for governmental housing projects is mainly a demand for government subsidies to offset excessive building costs.”<sup>16</sup>

## 2. Voting Systems.

As mentioned, groups build monopolies along many dimensions, including color lines. Whites have long developed monopolies in order to improve their economic position relative to blacks. A particularly venomous monopoly were those formed to sabotage black voting. I’ll call them “*anti-voting*” monopolies. By sabotaging voting rights, these “anti-voting” monopolies enabled countless other monopolies to develop which harmed the economic prospects of black Americans (see, e.g., Stern (1941), Olsen (1983) and Roithmayr (2010)).

Many individuals and groups belonged to these anti-voting monopolies. Voting registrars would adopt rules making it difficult or impossible for blacks to register. Martin Luther King, Jr. wrote that one of the groups “abridging Negro voting rights is the registrar himself, administering complex registration procedures designed specifically to slow up and frustrate Negro applicants.” From: M.L. King, Jr., "Civil Right No. 1–The Right to Vote"<sup>17</sup> Blacks that did register would find great resistance from those “manning” the voting booths on election day.

When I mentioned that monopolies that infiltrate public institutions to enrich themselves often inflict the greatest harm, I had in mind monopolies like these that blocked the voting

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<sup>16</sup>Lecture on Monopoly, at the Art Institute of Chicago. Henry Simons papers, University of Chicago, Box 9, manuscript #148.

<sup>17</sup>New York Times, March 14, 1965, p. SM26-7, 94.



of black Americans.

These matters are further discussed in Essay 13.

## Monopolies as Informal Organizations

Let me return to an important issue discussed above. Again, a significant lesson from the monopolies sabotaging black voting, beyond the great harm they inflicted, is the theoretical point that monopolies can be informally organized. In many respects, these anti-voting monopolies were informal groups. There were tens of thousands of monopoly members. Members were often anonymous. There was no central office, no official trade association, no staff: The monopoly ran on its own.

There does not have to be a centralized authority directing monopoly members. Those in the anti-voting monopolies knew their roles and performed them. If they didn't, there was always *peer pressure* from those around them. Peer pressure is a powerful force in holding monopolies together, and in dictating the actions of members.

Mancur Olson (1983, p. 109) described, in general terms, such informal groupings among whites in the South: "the first important special-interest coalitions [i.e., monopoly] that emerged in the South during and after Reconstruction were small, local, and white-only coalitions, *sometimes without formal organization.*"

Informally organized monopolies continue to inflict significant harm today. We just argued that the institutions that could finance factory-built homes as real estate have been blocked by groups of monopolies that are not formally organized in any sense.

I next turn to another important set of institutions, antitrust institutions, where there has been concerns about monopoly infiltration. And the monopolies here have mostly been organized in an informal way.

### 3. Antitrust Institutions.

Antitrust institutions are another important set of institutions where there has been concerns about monopoly infiltration. An early concern was that industries could influence decision-making at the FTC through Congress (see, e.g., Posner (1969), Faith, Leavans and Tollison (1982) and Weingast and Moran (1983)). A typical narrative was: (1) Industries have influence over Congress<sup>18</sup>; (2) Congress can the influence FTC (through its Congressional appropriations, etc.) and (3) its not a leap, then, to imagine that industry, through its influence on Congress, can influence the FTC.

Imagine, then, two mega-firms wanting to merge. The firms could approach members of Congress, asking them to pressure the FTC to permit the merger. In diagram form, we have

Merging firms  $\rightarrow$  Congress  $\rightarrow$  FTC(CE is civil servant)

where "FTC(CE is civil servant)" means the chief economist (CE) at the FTC is a civil servant. In this situation, we can think of there being two concentrations of power that act to enrich themselves, and can be considered monopolies: the two merging firms and the groups in Congress that push the FTC to clear the merger.

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<sup>18</sup>An industry may have a very large presence in the district of a Congressman or Congresswoman.

These merging firms can deliver monetary payoffs to members of Congress in numerous ways. Campaign contributions is an often discussed channel. But there are much more powerful mechanisms. The firms can offer employment to family and friends of members of Congress. They can direct "business" to firms owned by the same individuals. And so on.

More concerns about antitrust institutions have emerged in the decades since Posner, Tollison, Weingast and others were writing. A new consulting industry has developed that offers services to corporations that are facing antitrust challenges from the FTC and/or DOJ-AD. The industry consists of economists at private consulting firms. I'll call it the "Antitrust Consulting (from) Economists" industry, and denote it by "ACE."<sup>19</sup>

One concern often goes by the name "revolving door." This concern, in diagram form, can be written

Merging firms  $\rightarrow$  ACE-firm  $\rightarrow$  FTC(CE is civil servant)

where the merging firms now approach an ACE-firm to help them through the merger process. We have replaced "Congress" with an ACE-firm in the diagram, though, of course, the merging firms can still attempt to influence Congress through mechanisms already discussed.

Whereas the previous concern was that monetary inducements could be directed toward members of Congress, the new concern was that the ACE industry could find mechanisms to deliver compensation to the CE-civil servant. The ACE industry can, of course, provide

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<sup>19</sup>The industry also provide services to government antitrust agencies.

employment opportunities for CEs after the civil servant's period of service at the FTC. This may influence the person's actions while they are CE. By giving "special treatment" to an ACE-firm, say when that ACE-firm is hired to represent merging parties, the CE may increase their chances of receiving lucrative employment when they leave government service. The ACE industry, of course, has an incentive to signal such benefits. By doing so, it can attempt to influence behavior.

The first two concerns about antitrust institutions are about groups *outside the FTC* attempting to influence civil servants *inside the FTC*. Again, the first concern was about merging firms "purchasing" Congressional influence, and the second about the ACE industry providing the promise of future benefits to CE-civil servants (the revolving door).

We now turn to another concern, a different type, and one that seems of another order. Over the last several decades, it has become common practice for economists belonging to ACE to leave their consulting positions to take leadership positions at the DOJ-AD and/or FTC. This model, in diagrammatic form, is

Merging firms —>ACE-firm —>FTC(CE is ACE-consultant)

where the CE is a consultant from ACE. Sometimes the CE has a single affiliation before becoming CE, that being a consultant at an ACE firm. Other CEs have two prior affiliations: a university affiliation and an ACE-firm affiliation. The ACE consultant typically stays for a period of two years, but is then replaced by another ACE consultant.

This situation is very different from the first two. In those cases, groups *outside the FTC* are trying to influence the decisions of civil servants inside the FTC. Now these *outside-groups* groups are, in fact, *inside the FTC itself*. They no longer attempt to influence decision makers: They are in positions to directly make decisions.

Let's be clear about this situation: An executive from industry X is given a very important position in an agency that, in principle, has adversarial relationships with industry X. Unfortunately, this situation is not unique. The situation at the Securities and Exchange Commission (SEC) is of a similar nature.

The situation just summarized in the last diagram obviously leads to many conflicts of interest for the CE that is an ACE-consultant. We discuss many of these in Essay 13 (and Section 13 below).

## ACE is a Monopoly

Below I discuss how the ACE-industry can be thought of as a monopoly. Again, a monopoly does not need a formal organization, and the ACE monopoly is not so organized. Yet it's held together by some powerful forces.

One force is that members of ACE have incentives to act cooperatively with each other. Adversarial relationships would greatly harm the industry.

Members of ACE often find themselves facing each other in situations that are adversarial in nature. Consider the last diagram. Suppose the FTC challenges a merger. The CE-ACE-consultant might be part of the team challenging the merger, and be pitted against other

ACE consultant/economists. The CE-ACE-consultant could bring up previous conflicts of interest faced by ACE members on the defense team. But, of course, the challenges would immediately be met by accusation of conflict of interests faced by the CE-ACE-consultant.

Thus, there are no incentives for ACE members to challenge the credibility of other members, to bring up conflicts of interest that obviously emerge. Such challenges to credibility are a losing proposition for both sides. The incentives of ACE consultants are aligned. They act in a cooperative fashion, not an adversarial one.

They are essentially one organized group, one concentration of power, a monopoly. No formal organization was needed to work out these agreements.

Another powerful force holding the monopoly together is peer pressure. There are 100s of consultants/economists in ACE. If an economist is a member of ACE, it's very likely that a large fraction of that person's professional colleagues are ACE-members. And some of them may earn fabulous amounts of money from ACE. For such a person to be critical of the ACE-industry, suggesting it may be a monopoly, potentially brings high costs.

The first concern raised by ACE influence on antitrust institutions has been named the revolving door. This second concern needs a name. One suggestion is to call it monopoly-infiltration of the FTC.

These matters are discussed in Essays 13 and 15.

#### 4. Bail System.

Consider those caught in the current U.S. bail crisis. It's referred to as a crisis since a very large fraction of those in jail have not been convicted and await trial on very low bail amounts, literally a few hundreds of dollars. For example, in midyear 2014, 744,600 individuals were held in local jails. Of this total, 62.8% were unconvicted, with only 37.2% convicted (see discussion below). Many that were held had committed misdemeanors.

As mentioned, bail amounts are often small. In many states, non-profits have emerged to post small bail bonds for those that cannot afford them. In Minnesota, a non-profit, Minnesota Freedom Fund (MFF), was started to post bonds. The limit per individual was a \$1,000 bond (or \$100 cash, as 10% cash is usually required). They have posted more than 500 bonds. As reported by Andy Mannix, Star and Tribune, March 27, 2020, the MFF has "... continued to see bails set at \$78, the exact amount of the surcharge for court fees in Hennepin County."

There are now attempts to reform the bail system. But these attempts at reform are being blocked by monopolies. Trade associations of bail bondsmen, which are concentrations of power, that is, monopolies, are mounting large efforts to crush reforms that have been won and to sabotage other efforts underway. For recent reporting on how the bail-monopoly is blocking reform, see Richards and Griffin (2109), "States are trying to change a system that keeps poor people in jail. The bail industry is blocking them."<sup>20</sup>

Smith (2017) discusses how previous efforts at bail reform in the 1960s mostly failed, due to efforts of the same monopolies to sabotage reform. The sabotage of such efforts at reform

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<sup>20</sup>See the recent report at CNN Investigates, Fri August 30, 2019, available at [cnn.com/2019/08/30/us/bail-reform-bonds-lobbying-invs/index.html](http://cnn.com/2019/08/30/us/bail-reform-bonds-lobbying-invs/index.html)

obviously disproportionately hurt those unable to meet small amounts of bail.<sup>21</sup>

## Monopolies Harm the Most Vulnerable

We've been arguing that monopolies inflict great harm on low-income Americans. But that description really falls short of the harm monopolies are willing to inflict on others. Here we present a monopoly infiltration of a public institution that harms some of the most vulnerable members of our society.

### 5. Foster Care Services.

Hatcher (2016) provides a devastating critique of the current state of foster care institutions in some U.S. states. He shows monopolies have sabotaged these institutions.

Groups of individuals in these agencies, concentrations of power, monopolies, have organized themselves in order to illegally disperse money to private firms. These firms are called "revenue maximizers" by Hatcher. One way they accomplish this is by applying for the social security benefits of orphaned foster children in their care (without their knowledge) and then illegally dispersing a share of this money to the revenue-maximizers. The incentives that drive groups in these agencies to commit fraud include the possibility of individuals in the group receiving lucrative jobs in the private companies (see Hatcher, 2016).

## C. Monopolies Exploit Own Members, Reducing Productivity

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<sup>21</sup>There are many more monopolies in the criminal justice system that exploit low-income Americans. One example are the small towns, primarily in the South, that arrest and jail individuals for not paying parking tickets. These towns, acting as monopolies, turn to these methods to cover parts of their budgets. It's not legal to jail those not able to pay parking tickets, though it continues to happen. Since these individuals could not pay parking tickets, they remain incarcerated for periods of time as they now have to raise the parking ticket fee and the bail bond.



With the Arnold-Simons model, we have found that monopolies not only sabotage markets and public institutions, they exploit their own members. As mentioned, this often lead to *lower productivity and productivity growth within the monopolized industry*.

We've already suggested why monopolies may lead to reductions in productivity in the monopolized industry. When members of monopolies agree to contribute effort and resources to destroy low-cost substitutes, this can lead to large industry profits. Because members of the monopoly act in their own self interest, this increases the incentives for members to seek a greater share of the monopoly's profits. This often leads to great conflict and competition among members of the monopoly. One way to say this is: When monopolies block competition from substitutes, from *outsiders*, competition emerges *inside* the monopoly.

This internal competition can lead to the collapse of the monopoly. To avoid this outcome, monopolies strive to limit competition among members. Monopolies often put restrictions on the actions members can take. These restrictions oftentimes lead to lower productivity and productivity growth *within* the monopolized industry (and, of course, to lower industry profits). Reductions in productivity within an industry, everything else equal, have a negative impact on all Americans. But, as shown below, in many cases the blocked innovation, or the reduced productivity, disproportionately harms the low-income.

Let me next discuss industries where research has shown monopolies have lowered industry productivity and productivity growth. I begin by describing a few monopolies from long ago, and from very different industries, that reduced productivity in their respective industries. As the reader has likely recognized, monopolies tend to behave much the same, regardless of time period, or the type of the industry they sabotage. Hence, knowing monopolies from

long ago, or from industries flung far and wide, is useful to understanding monopolies today.

Some of the lessons from these first few studies is that *quotas on production* can have significant negative impact on productivity. Another is that “*jurisdictions*,” or giving rights to certain jobs to particular workers, can also have negative consequences for productivity.

As we show below, both these methods to reduce competition, quotas and jurisdictions, *are widely used today*. Jurisdictions in union-management organizations are employed throughout industries today, from manufacturing to public education. In monopolies composed of professionals, like dentists and lawyers, jurisdictions are also employed to limit competition among the members. As for quotas, these professional groups put restrictions on the types of inputs, and the amount of inputs, that individual practices can employ. These restrictions have the same impact as does allocating quotas across the professional practices.

## 1. U.S. Sugar Manufacturing — 1934-74.

The first study shows the very negative impact of quotas on production.

During the Great Depression, the U.S. sugar manufacturing industry was permitted to form a cartel. There was significant disagreement among cartel members, of course, about how to structure the cartel. Cartel members included farmers (that grew the sugar crop), manufacturing firms (that processed the crops), and representatives of Federal and state governments. There were disputes between these groups, but also among members of each group. These conflicts threatened the ability of the industry to form a cartel. To overcome these conflicts, significant restrictions were placed on the actions that cartel members could take. The restrictions led to great reductions in productivity, and also productivity growth.

Here are a few of the many restrictions. In the conflict between farmers and manufacturers, farmers won the right to have quotas set on acres devoted to sugar crops, and that they be grandfathered the rights to these quotas. Without the quotas, firms could have used other farmers. Individual U.S. states feared other states would steal "their quotas." They would do this by encouraging farmers to move these states, bringing the quotas they owned with them. U.S. states won the restriction that quotas could not be sold (or rented) beyond initial county lines.

At the start of the cartel in 1934, the vast majority of U.S. beet-sugar was made in California and Colorado. In the decades that followed, it became increasingly more profitable to produce beet-sugar in eastern North Dakota and western Minnesota. Yet beet-quota could not move. Vast profit opportunities were wasted. The situation was even worse in cane-sugar, where the vast majority of domestic production in 1934 was in Louisiana. Florida, which had yet to develop much as a state by 1934, had little production, and was given little quota.

These systems of quotas, then, led to large losses in productivity and in profits (see Bridgman, Qi and Schmitz (2009, 2015) and Bridgman, Qi, Schmitz and Teixeira (2019)).

## 2. Construction industry — Early 20th century

As mentioned, in the early 20th century groups in the traditional construction industry were often able to form alliances, monopolies, to sabotage factory-built housing. These groups included small contractors, different groups of skilled and unskilled construction workers, building code inspectors, local politicians, and others who stood to lose from factory-built homes.

But while these groups could agree on blocking factory-built homes, on *sabotaging substitute products*, there was often conflict among them on matters at the construction site. Here we briefly mention conflict between groups of workers. A group of workers, like carpenters, would attempt to claim as many jobs (or tasks) on the construction-site as possible. Carpenters would argue it was their right or job to carry materials onto and around construction sites. But laborers would argue this was low skill work and they should have the right to the work. The carpenter's union and the laborer's union were often in conflict over these issues.

To limit this conflict, this competition, between workers, formal mechanisms were developed. These included "jurisdictions" on construction-sites. A jurisdiction, as defined in union contracts and by other methods, is *a collection or set of tasks* that need to be completed on the construction site. Groups of workers were assigned the right to different jurisdictions. Again, jurisdictions were established on job-sites in the hopes of avoiding disputes among groups of workers.

There were disputes among workers, of course, even after these jurisdictions were rolled into union contracts. They were worrisome enough that in 1925, James Davis, U.S. Secretary of Labor, addressed the issue of jurisdictional disputes in construction in a lead article of the *Monthly Labor Review*. He wrote: "The fact is these jurisdictional disputes have become a matter of grave concern to the public" (Davis 1925, 2).

But, more importantly, even when jurisdictions in union contracts were successful at limiting disputes, they lowered productivity. Rigid jurisdictions slowed down the construction process. Construction work under these contracts is often temporarily delayed when job tasks are required but no workers "within this jurisdiction" are available. Construction is delayed

until the “correct” staff can be deployed on the tasks.<sup>22</sup>

The clauses in union contracts that implement jurisdictions are often described as *wasteful (or restrictive) work rules*. So, one often hears that “restrictive work rules lead to lower productivity,” though it might also be described as “*jurisdictions lead to low productivity*.”

Recall that Judge Kenesaw Mountain Landis was engaged in arbitrating disputes between warring monopolies in the Chicago construction industry in 1921. Based on his research, he concluded that the major sources of the “disease in housing construction” in Chicago were not high wages but that: “The real malady lurked in a maze of conditions artificially created to give parties a monopoly, and in *rules designed to produce waste [jurisdictions]* for the mere sake of waste; all combined to bring about an insufferable situation, not the least burdensome element of which was the *jurisdictional disputes* between trade-union members of the same parent organization” (Montgomery 1926, 273).(emphasis added)<sup>23</sup>

### 3. U.S. Water transportation — Late 19th Century.

In Holmes and Schmitz (2001b), we document how monopolies in U.S. water freight transportation reduced productivity. There were many monopolies in this industry. One we focused on, given availability of sources and data, were the monopolies that supplied long-shore labor to the major U.S. ports, like New York City, New Orleans and some along the Great-Lakes-Erie Canal system. In New Orleans, these monopolies dated from the 1850s.

In these ports, conflict between groups of workers also led to union contracts with strict

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<sup>22</sup>See my discussion of Knox and Hennessy (1966) below on the negative impact of job jurisdictions on productivity.

<sup>23</sup>Landis called the Chicago construction industry “a thing diseased” (reported in Montgomery 1926).

jurisdictions. One skilled longshore group in New Orleans were those that loaded cotton into the holds of vessels travelling to Europe. The group was abtly named the “*screwmen*,” in part because of the way they screwed the cotton into ships, but also because of the great wages they earned, and the control they operated over the ports. The screwmen won the right to unload the cotton from boats traveling down the Mississippi into New Orleans (at the same rate of pay), though this was work that was unskilled and had been claimed by other groups.

Not only did jurisdictions reduce productivity in these ports, but new technology was blocked. New technologies often wreaked havoc with long established jurisdictions at the ports (and in many other places, like manufacturing plants). New technologies would hurt some groups more than others. Union-management organizations often responded to the possibility of increased conflict by blocking technology. Longshoring monopolies placed restrictions on the type of equipment that could be used to load and unload freight.

#### 4. Medicine Before WWII

As we mentioned, as early as 1900, groups of doctors were experimenting with new methods to deliver health care to the low- and middle-income, such as group heath plans. The AMA sabotaged these efforts. By blocking these efforts, the AMA obviously blocked experimentation and innovation. This was groups of doctors, in the AMA, fighting and exploiting other doctors, those trying to form group health plans. Obviously, the sabotaging of this innovation disproportionately harmed the low-income.

These studies of monopolies in the first half of the 20th century show that these organiza-

tions reduced productivity through various mechanisms meant to reduce competition among monopoly members. The mechanisms included quotas, jurisdictions for work, and blocking of new technology. We next turn to discuss how these mechanisms have grown to be more commonly used since the 1950s. One reason for the increased use of these mechanisms is the surge in the number of union-management organizations that have grown into monopolies over the period. This is the result of these organizations being granted broad antitrust immunity in the 1940s. Another reason is the growing strength of professional organizations that are run as sabotaging monopolies, including dental and lawyer associations. These associations use the same mechanisms to limit competition as do union-management monopolies: quotas, jurisdictions, and blocking new technology.

Let me briefly discuss some of the developments of labor law, and judicial interpretation of antitrust laws, in the 1930s and 1940s.

### —Labor in 1930s: Collective Bargaining and Antitrust Exemptions for Union-Management Organizations

Labor won the right to collective bargaining in the United States in the 1930s. Thurman Arnold (1943) had high praise for the development: “When the history of our time is written the recognition of the right of organized labor to bargain collectively will be numbered among the great achievements of the Roosevelt Administration. It took a long time for Congress to accept the simple idea that unless industry is compelled by law to deal with labor as an organized group, workmen will be powerless to protect themselves against exploitation ..... The principle of collective bargaining expressed in the Wagner Act, in my opinion, is here

to stay and every thinking American should be glad of it.”

While Arnold had high praise for the Wagner Act, he worried about other legal developments at the time. Arnold (1943), and other strong supporters of collective bargaining rights, worried about antitrust exemptions being conferred on union-management organizations. A union consists of its members, that is, the rank-and-file, together with an organization that manages the union, the union-management organization. Arnold was concerned that union-management organizations were being exempted from antitrust laws.

Here is Arnold (1943): “Labor acquired its present extensive power as a result of a series of Supreme Court decisions which suddenly and completely reversed the Department of Justice in the interpretation which it had previously put on the law. These decisions fell like a bomb on the Department’s policy of prosecuting indefensible labor restrictions. The Department’s attempts to free the building industry from the indefensible labor practices which made cheap housing impossible in many cities was sunk without a trace.”

Arnold continued: “Its [the DOJ] program to protect independent unions from the aggressive attacks of labor leaders who sought personal domination against the desire of the workers ended at the same time.”

If these management organizations developed into monopolies, Arnold knew they would behave as any other monopoly. Many other leading scholars expressed concern with the growing monopoly power of union-managements, including Simons (1944), Wolman (1940,1948) and Stone (1947).<sup>24</sup> Both Arnold and Simons saw how union-management monopolies in the

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<sup>24</sup>For a review of Wolman’s (1948) book, see Underhill (1949).



construction industry had hurt labor in general terms, and now saw the monopolies on the verge of spreading into the broader economy.

Arnold's and Simons' predictions in the late 1930s, that union-management monopolies would begin to expand significantly after these antitrust exemptions were granted, were astonishingly accurate. These monopolies developed in the majority of manufacturing industries. But they have spread to many other industries far flung from manufacturing, like public education. Wherever union-management monopolies have developed, strong worker jurisdictions have invariably followed. Conflicts between rank and file union members have invariably led to significant restrictive work rules and reductions in productivity.<sup>25</sup>

## Monopolies Reducing Industry Productivity (More Recent Monopolies)

The next few studies document how, as Arnold and Simons warned, very strong union-management monopolies developed in manufacturing after these organizations were granted antitrust immunity. Along with these monopolies invariably came union contracts with very strict jurisdictions of work. These studies have shown how restrictive work rules, and union-contract clauses blocking adoption of new technology, led to lower productivity in these industries. These studies, and others like them, are described in more detail in Essay 6.<sup>26</sup>

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<sup>25</sup>Union-management monopolies developed in longshoring, construction and other industries, like newspaper typesetting, long before the late 1930s, before these antitrust exemptions. The reason was that the nature of the goods produced presented great opportunities to form monopolies selling labor. One feature is that goods cannot be stockpiled by management in order to weaken a strike. Stockpiling old newspapers is not a good strategy. If a construction crew walks off the job, there are no inventories of buildings to be shipped into an area (this, of course, is true if there is no factory-production of homes). It's not surprising that industries like longshoring and construction typically have elements of monopoly in them across countries, across various legal systems and institutions.

<sup>26</sup>These studies of manufacturing that I now discuss are about industries clearly far flung from housing, legal services, health services and public education, industries where monopolies are inflicting the greatest harm on low-income Americans. But these were some of the initial studies of monopoly that we undertook. The studies proved invaluable to us in understanding the nature of monopolies generally, and in helping us

## —Manufacturing

### 5. U.S. Cement Manufacturing.

As of 1940, most of the cement plants in the United States were unionized. But no union management organization had a large share of the market. That is, the number of cement plants represented by any union-management organization was a small share of total cement plants (the material in this section is from Dunne, Klimek and Schmitz (2010, 2014)).

Beginning in the late 1940s, likely because of the judicial interpretation of antitrust laws mentioned above, there was a fairly quick consolidation of the union-management industry. The Cement, Lime and Gypsum Workers (CLGW) quickly organized the vast majority of the plants in the industry.<sup>27</sup> Herbert Northrup (1989) provides a fine history of union-management in the industry, and in particular, the CLGW.

The CLGW delivered extraordinary wage growth to U.S. cement workers over the three decades of the 1950s, 60s and 70s. Cement workers were among the elite manufacturing workers, in terms of wages and benefits.

CLGW contracts also included strict jurisdictions for plant workers. One key jurisdictional divide, one seen throughout U.S. manufacturing, was the division of work between “production” workers, those operating machines, and “repair” workers, those maintaining machinery

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to “see” monopolies in the very far flung industries that we have studied since, and are currently studying now. Since I won’t discuss these manufacturing industries much at all in Section 6 (leaving that for Essay 6), I want to present at least a few pages on one of the industries – the U.S. cement industry.

<sup>27</sup>While there were many monopoly elements in the U.S. cement industry, we focus on the union-management monopoly because the evidence of monopoly behavior and actions, like that contained in union contracts and arbitration decisions, are readily available. This is true as well in our study of other manufacturing industries.

in operating order and fixing equipment that broke. The repair staff, the most highly skilled groups in the plants, typically had the best-of-it in confrontations with production workers. In practice, this meant that machine operators were not allowed to “touch” their machines for any reason other than operating them. They were not permitted to undertake any task, no matter how simple, to maintain the machines they operated. They could not, for example, help someone from the repair staff with their tools or by carrying spare parts and so on.

The contracts also had many repair “classifications,” or many job jurisdictions for repair workers. A repair worker in classification-A (or jurisdiction-A) had the right to complete certain tasks, and similarly for a repair worker in classification-B. But typically each type of repair worker could successfully complete most of the tasks in other job classifications.

One important dimension of union contracts is the determination of seniority. Workers are divided into “seniority-classes.” Within a seniority-class, if a reduction in the workforce is needed, the employee with the least tenure is the first to leave. Sometimes a seniority-class is the same thing as a jurisdiction. Say a jurisdiction is all the workers who operate machine-type-A. Then that could be a seniority-class as well. In cement contracts bargained by the CLGW, there was one seniority-class: The entire plant. Such a system is called “plant-wide” seniority. So, it’s possible that if a machine operator in a limestone quarry at the plant lost his or her job, as a result of job reductions in the quarry, that this person could bump a lab assistant in the chemistry department from their job.<sup>28</sup>

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<sup>28</sup>We mention this possibility as we studied an arbitration decision on this very situation. The question for the arbitrator was how long the machine operator was permitted to acquire the skills of a lab assistant. The machine operator was repeatedly given time to study for, yet kept failing, the math test that was part of the job requirement. The CLGW argued the contract gave the operator more time to pass test.

While seniority has obvious benefits, it's also thought to reduce productivity.<sup>29</sup> Whatever productivity reducing impacts it does have, plant-wide seniority can obviously magnify them, as workers move to far flung jobs where they have no experience, bumping workers who may have extensive experience.

Because of the tremendous growth in wages, cement plant managers undertook significant investment programs in machinery in the late 1950s and early 1960s to reduce labor input in production. The major piece of machinery in these plants are kilns. A "large" kiln produces significantly more output (typically called clinker) than a "small" kiln. Yet the extra labor staff required for the large kiln is "small." Managers began replacing many "small" kilns with a "large" kiln, leaving output much the same, but reducing the labor staff.<sup>30</sup>

In response to this, the CLGW fought for, and won, a new clause in union contracts in 1965 that hampered this type of investment strategy. In particular, the clause forbade a plant from firing workers because of new investment in machinery. This new clause led to less investment in bigger kilns beginning in the mid 1960s.

All these developments in the U.S. cement industry, the separation of repair and other work, the classification of repair work into many jurisdictions, the move to plant-wide seniority, and the prohibition of reducing employment because of new investments, led to stagnation of productivity in the roughly 15-20 year period from the mid 1960s to the early 1980s.

It's interesting to note that the industry did invest in larger kilns in the mid 1970s, though

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<sup>29</sup>For a series of extraordinary papers on seniority in railroad transportation, see Dan Mater (1941) and his related work.

<sup>30</sup>The size of the largest kilns at a point in time is determined by technological and control issues. So, the industry's small kilns in the late 1950s and early 1960s represented investments made many years earlier.

there were no labor productivity gains as a result. The investment was in response to the energy crisis of the 1970s. Many of the industry's kilns had low energy-efficiency (so called "wet" kilns). As cement manufacturing is one of the most energy-intensive industries, it had to update its kilns in order to survive. The industry invested in new, energy-efficient, "dry" kilns, which also happened to be significantly larger than the kilns they replaced. But labor productivity gains did not follow, as the above mentioned clause prevented managers from reducing the labor force.

In the late 1970s, as the productivity of cement plants in other countries began "catching up to," and some surpassing, those in the United States, the U.S. industry began to experience its first significant increase in foreign competition. As the 1980s began, U.S. productivity continued to deteriorate relative to productivity in foreign cement industries. The competitiveness of the industry was further eroded by the appreciation of the U.S. dollar. Monopolies in the industry, including the CLGW, came under tremendous threat.

Productivity in the industry began to surge. The source of the productivity gains was not the closing of inefficient plants. It was not a surge in new investment — the future of the industry was bleak. A significant part of the productivity gain was due to the collapse of the CLGW, and the elimination of its contracts. Rigid job jurisdictions were relaxed at the plants. Machine operators were permitted to perform simple maintenance and to help repair crews. The number of repair classifications was dramatically reduced. Managers at plants that had invested in large, dry kilns during the energy crisis could now reduce the staff that operated the kilns, reaping productivity gains that were not possible in the 1970s.

The history of many U.S. manufacturing industries, from 1940 through the 1980s, was broadly similar to that of the U.S. cement manufacturing industry. That is, a strong union-management monopoly developed. The monopoly introduced contracts that significantly hampered the growth in productivity, leading to the deterioration of U.S. productivity relative to that in other countries, and ultimately to a surge in competition, typically in the 1980s. The competition invariably led to, as the monopoly elements were weakened, to a surge in U.S. productivity.

Let me add just a few more paragraphs on two other such industries that have been studied in detail, U.S. tire manufacturing and U.S. iron ore manufacturing.

## 6. U.S. Tire Manufacturing

During the mid 1930s, a strong union-management team emerged in U.S. tire manufacturing, the United Rubber Workers (URW). With the granting of antitrust exemptions in the late 1930s and early 1940s, the organization grew into a strong monopoly.

As discussed in Section 3 below (and Essay 3), economists were arguing, as early as 1940, that poor labor relations in the U.S. tire industry was hampering productivity growth in the industry. Such arguments were presented in Gaffey's (1940) Ph.D. thesis, an interesting history of productivity growth in the industry. Sobel (1954) later presented arguments that supported Gaffey's claim. A few years after Sobel's work, Kuhn (1961) produced a major study of the labor relations environment at U.S. tire plants, in particular, those represented by the URW. He documented great conflict between workers in the plant. He argued this conflict, which he called factional disputes, and which I've called jurisdictional disputes, were

a significant drag on productivity. Again, Gaffey, Sobel and Kuhn are discussed in Section 3.

I am doing research on the productivity of the industry over the 1960s, 1970s and 1980s. Like most U.S. manufacturing industries, it faced a dramatic surge in foreign competition in the 1980s. Productivity in the U.S. industry soared. Much of the surge in productivity, as in cement and other manufacturing industries, came from changes in union contracts.

A dimension of URW contracts not found elsewhere, that I know of, were clauses that limited the number of shifts that plant managers could operate during a week. A plant might have two shifts each day, Monday through Saturday, and no shifts on Sunday. So, out of a possible 21 shifts, nine might be ruled off-limits to the plant managers. During the 1980s, a large fraction of plants dropped these clauses. This change obviously led to a very large increase in capital productivity.

## 7. U.S. Iron Ore Manufacturing.

U.S. steel plants were not organized to a great extent, or success, until the mid 1930s. Initially, individual unions, representing particular sets of workers, like millwrights, were organizing the plants. So, there might be a large number of AFL unions in any given plant. By the mid 1930s, that strategy was changed, from the intercession of John Lewis and others, to organizing the entire workforce under a single CIO union, the United Steel Workers (USW).

With the change in the antitrust treatment of union-management organizations, the USW grew in power in the 1940s and 1950s. Rose (1998) discusses how changes in labor relations

in the steel industry in the 1940s and 1950s led to strong jurisdictions, and to declining productivity.

The USW went on to organize essentially all the iron ore manufacturing plants in the United States, which are primarily in northern Minnesota, with some in northern Michigan. The USW contracts, sharing many features of cement contracts, and those at steel plants proper, greatly hampered productivity growth in the industry (see Galdon-Sanchez and Schmitz (2002) and Schmitz (2005)). The industry faced a dramatic surge in competition in the 1980s. While the industry had faced competition in ports along the east coast, like Baltimore, the 1980s saw developments that had not been imagined until then. Brazilian producers were threatening to ship iron ore deep into the interior of the United States, to ports on the Great Lakes, at major iron ore markets in Gary, Indiana and Cleveland, Ohio. Brazil was offering to sell iron ore at 50% of U.S. iron ore prices.

Productivity soared in the U.S. industry in response to these developments. Again, the gains were not from closing inefficient mines, or undertaking new investment projects. The USW did not collapse of course, as did the CLGW. But the USW introduced significant changes in its contracts, leading to much less distinction between repair and other work, and to a dramatic reduction in the number of repair job classifications. At the biggest manufacturing plant in Minnesota, the repair workforce, which was about 50 percent of total employment before the crisis, fell to about 25 percent of the workforce after the contract changes were implemented.

As mentioned, union-management monopolies, and their restrictive contracts, have spilled



into many other sectors of the economy. One such sector, one of great importance to the country and, in particular, to low-income Americans, is the public education system. But before I discuss public education, I discuss these issues in professional associations.

## —Health Care Markets

### 8. Oral Health Services

In the oral health industry, we can find all the productivity reducing mechanisms that we found in manufacturing: quotas, strict jurisdictions, and blocking of technology.

As for quotas, professional groups put restrictions on the types of inputs, and the amount of inputs, that individual practices can employ. These restrictions have the same impact as does allocating quotas across the professional practices. Herkenhoff and Schmitz (2015) examined the impact of restrictions placed on the number of hygienists that a dentist can employ. These restrictions vary by state: some have no restrictions, some limit the number of hygienist to two per dentist, some to one per dentist.

Using a version of the Lucas (1978) size-distribution of firms model, we show that moving from a case with no restrictions on hygienist inputs to a case restricting dentists to no more than, say, one per dentist, shifts the distribution of industry output. Production by the most skilled dentists (and largest firms) falls, while the output produced by lesser skilled dentists increases. It's equivalent to a redistribution of output through quotas. It reduces industry productivity. There are many other restrictions on input usage in dental practices (see below).

Professional associations also use jurisdictions to limit competition among members. Requirements for licensing are typically set at the state level. This means that competition between dentists is reduced by limiting the incentives of dentists to migrate across state lines.

As for blocking technology, consider what happened to Sarrell Dentistry, an innovative dental group in Alabama. It developed new and efficient ways to deliver dental services to the poor (as described later in this Introductory Essay). But Sarrell faced fierce opposition from Alabama dentists (see, for example, Harrison 2011). These were dentists fighting dentists. Sarrell also attempted to expand into other states. Dentists in other states blocked Sarrell's entry (see Thomas 2015).<sup>31</sup> As a result, these other states where dentists blocked Sarrell's entry did not enjoy the increased productivity growth Sarrell (and imitators) would have provided.

—Public Education

## 9. Union-Management Organizations in Public Education

Union-management monopolies also developed in public education, but not until the 1960s.

We expect that the impact of union-management monopolies in public education should not be much different from the impact of union-management monopolies in manufacturing, construction, transportation and other industries. And the consequences should not be much different than those monopolies composed of professionals, like dentists and lawyers.

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<sup>31</sup>I thank Todd Smalley for educating me about Sarrell Dentistry.

From the experiences in *all these other industries*, we expect strong job jurisdictions in teacher-union contracts in public education. We expect these restrictive work practices to reduce productivity. And this is precisely the history of the public education industry since the 1960s.

In a remarkable speech at the National Press Club, on February 5, 1997, NEA President Robert Chase described the development of the NEA since the 1960s.<sup>32</sup> He describes how the NEA followed the industrial relations model of industrial unions, including the development of restrictive practices in teacher contracts.

Here is Robert Chase: “When we reinvented our association [NEA] in the 1960s, we modeled it after traditional, industrial unions. Likewise, we accepted the industrial premise: Namely, that labor and management have distinct, conflicting roles and interests, that we are destined to clash, that the union-management relationship is inherently adversarial.”

“Our challenge is clear: Instead of relegating teachers to the role of production workers, with no say in organizing their schools for excellence, we need to enlist teachers as full partners, indeed, as co-managers of their schools. Instead of contracts that reduce flexibility and restrict change, we, and our schools, need contracts that empower and enable.”<sup>33</sup>

One important feature of teacher’s contracts is the treatment of seniority. I mentioned above

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<sup>32</sup>Robert Chase, President of the NEA, to the National Press Club, Feb 5, 1997, “The New NEA: Reinventing the teachers Unions for a New Era.”

<sup>33</sup>Robert Chase continued: “In 1983, after the Nation at Risk report came out, NEA President Mary Hatwood Futrell tried to mobilize our union to lead the reform movement in American public education. At the time, as a member of NEA’s executive committee, I took a leading role in opposing her. I argued that we should stick to our knitting, stick to bargaining for better pay and working conditions.”“

“That, ladies and gentlemen, was the biggest mistake of my career. I was wrong. And today, with all due respect, I say to the traditionalists in NEA’s ranks, to those who argue that we should stick to our knitting, leaving education reform to others: You are mistaken.”

how contracts in the U.S. cement industry (before 1980, in any case) offered plant-wide seniority. Teacher contracts typically offer district-wide seniority, an even wider seniority-class than plant-wide seniority (here, plant-wide seniority would correspond to school-wide seniority). So, if school-A is reducing its staff, the person with lowest tenure (in the district) at that school, say teacher-A, loses their job. But teacher-A can bump another teacher in school-B, say teacher-B, if teacher-A's tenure (in the district) exceeds that of teacher-B.

A union management monopoly in education disproportionately harms low-income Americans. Consider a high-income household some of whose members are currently attending public schools in an area where teacher-union contracts start to reduce productivity. The household can send their children to private schools in the area. The household can also consider moving to areas where these monopoly elements are not so large. In contrast, low-income families have fewer options. Private schools may cost too much. Moving may also be less of an option.

Given the controversy that often surrounds discussions of public policy as it relates to public education, let me reiterate my comments above. I have discussed some of the problems that emerge with a monopoly, in particular, a union-management monopoly. Concerns about such monopolies need not be related to one's views about unions. One can be a strong proponent of unions and collective bargaining, as was Thurman Arnold, and yet think that a union-management monopoly is not in labor's interest (as Thurman Arnold did).

## Remark: Monopolies Lower Productivity Growth for Two Major Reasons

That monopolies reduce productivity and its growth *within* monopolized industries, as we

just argued, seems to be a general phenomena. We've shown this in studies across many different types of industries. We've shown it for industries in many different time periods.

This leads me to pause to emphasize an important point: We have provided *two general reasons* why monopolies lower productivity in the economy. First, from Section A, we noted that as monopolies killed low-cost substitutes, they squashed the innovation that would have occurred in these industries. Second, as just argued in Section C, monopolies reduce productivity *within* the monopolized sector itself.

The analysis thus far shows, as the title of this Section (Section 1.1) promised, that the Arnold-Simons model is a powerful one to uncover monopoly harm. Because it was the consensus model before 1950, economists well understood that monopolies inflicted great harm.

In the decade or so after 1950, the Cournot-monopoly model replaced the Arnold-Simons model as the consensus model to study monopoly and the harms they inflict. The Cournot-monopoly model, in contrast to the Arnold-Simons model, is ill-equipped to study the harm caused by monopolies. By relying on this model, the economics profession has erroneously concluded that the costs of monopoly are small.

I now turn to briefly describe the Cournot model, how its ill-equipped to study monopoly harm, and how economists by using it have concluded, erroneously, that the costs of monopoly are small.

## 1.2 The Cournot Model: Ill-Equipped to Study Monopoly Harm

In the basic Cournot-monopoly model, a monopoly consists of a single entrepreneur having the sole right to sell a good. The entrepreneur decides what price to charge for the good. It is assumed that the entrepreneur, the monopolist, produces *efficiently*. Many readers will be familiar with the model – it’s found in introductory textbooks today.

The Cournot model is obviously very different from the Arnold-Simons model of monopoly. For one, the weapons available to the Cournot-monopolist are extremely limited. Gone are the choices to sabotage substitutes and/or to infiltrate non-market institutions. It’s for this reason that I call the Cournot monopoly a *toothless monopoly*.

Other commonly used models of monopoly, like the model of monopolistic competition, is also a toothless monopoly model<sup>34</sup> Others in this class are the Bertrand model, the Stackelberg model, the Cournot-oligopoly model and so on. The weapons available for monopolies in these models are extremely limited. Let me set up the convention, which perhaps I should have stated earlier, that when I say “Cournot-monopoly model” in this Introductory Essay, I use it as a *shorthand* for the entire class of toothless monopoly models.

The Cournot-monopoly model, that is, the toothless monopoly models, are not equipped to study the harm caused by monopolies. The harm that is uncovered by the Arnold-Simons model of monopoly is simply not detected with the Cournot-monopoly model. Those employing the Cournot model do not “see” the killing of low-cost substitutes; they don’t “see” the sabotage of non-market institutions, the infiltration of public institutions; and they don’t

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<sup>34</sup>The model of monopolistic competition was developed in the 1930s by Edward Chamberlin. An extremely useful rendition of the model was developed by Dixit and Stiglitz (1977).

“see” the destruction of productivity in the monopolized industry. These harms simply fly *under the radar* of the Cournot-monopoly model.

Those who study monopolies today with the Cournot model reach erroneous conclusions about the harm caused by monopolies. Below we show, using the Arnold-Simons model, that monopolies in oral health services, legal services and residential construction, to name a few industries, inflict great harm on low- and middle-income Americans. But those using the Cournot model to study monopolies in these *same industries*, miss this great harm.

Consider the U.S. oral health services industry. The recent literature looking at monopoly in this industry has used the Cournot-oligopoly model. A classic paper is by Bresnahan and Reiss (1991). They examine price-cost margins of dentists in relation to the population at a location (a town).

But, of course, price-cost margins of dentists tell us only a small part about the costs of monopoly in the oral health services industry. Price-costs margins can be small (as Bresnahan and Reiss find in all but the smallest population locations), but the costs of monopoly very large. Using the Cournot monopoly model, Bresnahan and Reiss miss the three types of monopoly harm discussed above. They miss the harm caused when substitutes are sabotaged. Therapists are completely blocked from nearly all locations. Hygienists are permitted to clean teeth only at dentist offices. The Cournot-oligopoly model completely misses the costs associated with *blocking low-cost substitutes*.

They miss the harm when dentists infiltrate public institutions and lobby for subsidies for dentists to practice in areas with few or no dentists (HPSAs). The ADA convinces the public

to *subsidize dentists* to move to HPSAs.

Bresnahan and Reiss miss that conflict among dentists leads to *lower productivity and lower innovation* among dentists. We just discussed the case of Sarrell Dentistry above, which had developed a productive and efficient technology to deliver oral health care to low-income children, but which was blocked from expanding by the ADA.

Consider the legal services industry. Posner (1993) discusses how the lawyer monopoly faced a surge in competition beginning in the 1960s.<sup>35</sup> From his perspective, in 1993, he said: “Today all is changed, changed utterly . . . Although the profession has not been thrown open to free entry, an accelerating accumulation of legal and especially economic changes over the past three decades has transformed the profession decisively in the direction of competitive enterprise” (Posner 1993, 26).

Competition among members of the monopoly certainly led to changes in lawyer’s day to day work: “Competition makes them work harder, too, and reduces their security of tenure—so there are more and more cases of firms dissolving, restructuring, regrouping; of firms firing associates and even partners; and of wide fluctuations in earnings within firms (p.28).”

But did the industry change “utterly?” No, it did not. Increases in competition may have led lawyer-work to be less enjoyable, but the lawyer-monopoly *continues to block all substitutes*. Unauthorized practice of law statutes have not been eliminated. They are still enforced, or threatened to be enforced.

The competition Posner discusses *did not lead* to large reductions in the great harm caused

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<sup>35</sup>He used the word “cartel.”



by the lawyer monopoly. Very little changed as far as the *poor's access to legal advice*. In the most important way, then, the industry didn't change.

Using the Cournot model, as Posner does (see, e.g., Posner and Landes (1980)), he cannot see that little has changed. Posner did not see that the great harm caused by lawyer-monopolies in killing low-cost substitutes had not changed.

In residential construction, those studying the industry, employing Cournot-type logic, point to the ease of entry into the industry, to the great number of firms in the industry, and so on, to argue the industry is competitive. Hence, monopolies inflict *no harm* – because there are *no monopolies!* (see, e.g., Gyourko (2009, 298) and Glaeser, Gyourko, and Saks (2005, 331)). But this flies in the face of 100 years of monopolies inflicting great harm in residential construction.

Using Cournot models, and Cournot-type logic, these researchers, and the rest of those studying residential construction, don't see monopolies inflicting the three types of harm mentioned above. They don't see the harm monopolies cause by killing low cost substitutes, in particular, factory-built homes. With the Cournot model, researchers also miss that monopolies in the stick-built sector have lobbied for, and won, massive subsidies to prop up their inefficient production methods. And they miss that conflict among different groups in the monopolies in the stick-built sector have to led *lower productivity and lower innovation* among traditional producers.

All this material is discussed in Essay 12 (and Section 12 of this Introductory Essay).

The Cournot model, then, is ill-equipped to study the harm caused by monopolies. How

was it, then, that the economics profession came to choose the Cournot-monopoly as its consensus model in the 1950s? I'll argue that there was a series of mistakes, or missteps, that led the economics profession to choose the Cournot-model for studying monopoly harm.

### **1.3 How Cournot Model Became Consensus: A Series of Mistakes**

Here are a few of the missteps that led to the Cournot-monopoly model becoming the dominant model to study harm caused by monopolies.

#### *Misstep 1 – Arnold-Simons Model Built on Evidence, then Ignored*

As already mentioned, the consensus model of monopoly in the first half of the 20th century was the Arnold-Simons model. The development of the Arnold-Simons model was driven by evidence. There was extensive evidence developed in the *first half of the 20th century* showing that monopolies inflicted great harm. It was this evidence that led Henry Simons (1934), Thurman Arnold (1943) and others to formulate the Arnold-Simons model of monopoly. The first misstep of the profession, starting in the late 1940s and early 1950s, was to turn its back on this model, without any debate, even though it had been developed to explain the behavior and actions of actual monopolies.

There was no argument that the world had changed, that there once had been sabotaging monopolies, but no longer. There were no arguments that the evidence developed in the first half of the 20th century showing the great harm monopoly inflicted was not as strong as once thought. It was not argued that the Arnold-Simons model was too complicated to be useful. The model was simply ignored.

*Misstep 2 – Cournot Model Not Developed to Understand Harm, But Embraced Anyway*

Augustan Cournot developed his monopoly model in the 1830s. He solved the maximization problem of an entrepreneur facing a demand curve for his product. His model was a monumental contribution to the development of mathematical economic theory. Cournot was not trying, of course, to explain a body of evidence on how monopolies behaved.

Significant interest in Cournot's model developed in the 1920s and 1930s. Those working on the Cournot-monopoly model during this period were, like Cournot himself, not driven by facts about how monopolies operated or behaved. Nor were trying to understand the harm created by monopolies. The interest was in the development of mathematical economic theory.

Here is J.R. Hicks (1935) discussing Cournot's model of monopoly: "The generally increased interest in mathematical economics during the last few years ... has naturally turned attention back to the work of Cournot, the great founder of the subject ... It was Cournot's creation of elementary monopoly theory which was the first great triumph of mathematical economics; yet Cournot had left much work to be done" (1-2).

Hicks again: "The preoccupation of contemporary theorists with problems of monopoly [and the Cournot model] does not appear to be due, as might perhaps be expected, to their consciousness of the increased urgency of these problems in the modern world ... [Rather,] the widespread interest in monopoly theory is much easier accounted for on grounds inherent in the development of economic theory itself" (1).

During the 1940s and early 1950s, the Cournot model began to draw attention from a much

wider group of economists, including those interested in economic policy. This was likely due to its simplicity. There was every reason to explore the model and its applicability. But the profession did more than simply explore the model's applicability. Economists quickly elevated the model to the *consensus model* to study the harm caused by monopolies.

The second mistake, then, was to so readily designate a model, a model not developed to explain facts, or to understand the harms caused by monopolies, to be the consensus model to study monopoly harm.

In fact, the major prediction of the Cournot monopoly model is wrong. The Cournot model predicts that a monopoly reduces the production of its good relative to what a competitive market would produce of that good. I will address the inaccuracies of the Cournot model's prediction shortly.

### *Misstep 3 – Numerous economists tried to stop embrace of Cournot, Were Ignored*

In the late 1940s and early 1950s, some economists pointed out that the Cournot model had many shortcomings as a model to study economic policy.

Fritz Machlup (1952, 34) noted that the Cournot model had a stark policy implication. In the Cournot model, letting all firms be monopolies led to the *same outcome* as when all firms were competitive firms (see discussion below later in this essay). Machlup argued, sardonically: "...if the nation cannot reach its full economic potential when it is half monopolistic and half competitive, and if it is apparently too difficult to 'demonopolize' the monopolistic half, would it not be the best solution to monopolize the competitive half? .."

Machlup was being sardonic since he knew such a policy would do great harm to the nation.

Machlup (1952, 32) knew, for example, that monopolies reduced productivity: “One must be on guard against the widespread misunderstanding that the effects of monopoly power are always visible in the form of ‘exorbitant prices’ being charged to buyers .... Where the monopolistic restrictions lead to inefficient use of resources, it may be the economic costs that are excessive, not the profit margin.”

Robert Brady (1942, 89), when discussing the harm caused by monopolies, was clear what he thought of the new emerging models of monopoly: "Only the historically untutored or politically and philosophically naive could suppose that the power phase of coordinated monopoly controls ... [could] ... be handled in terms of ‘duopoly,’ ‘oligopoly,’ ‘imperfect competition,’ and the like."

The third misstep, then, was ignoring these economists who pointed out the very significant shortcomings of the Cournot model as one to study the costs of monopoly.

The Major Prediction of Cournot Model is “Wrong.”

The Cournot model predicts that a monopoly reduces the production of its good relative to what a competitive market would produce of that good. This outcome, in fact, is not what we observe in many monopolies. It is not the case in oral health services, legal services and residential construction.

Take the case of residential construction. In the 1970s, there was a huge surge in the extent of monopoly power held by groups in the stick-built sector of the industry. What followed was a large *increase* in the number of homes built on-site. The Cournot model’s prediction, that homes built on-site would decrease, did not materialize.

What happened was that, in the 1960s, the stick-built housing sector faced a surge in competition from the factory-built housing sector. Factory production of homes soared and stick-built home construction fell. Factory production threatened the very existence of the stick-built industry. In response, in the 1970s, the stick-built sector greatly expanded its monopoly by, for example, making alliances with the newly formed HUD to sabotage factory production. The greatly strengthened monopoly then *expanded its production*.

## 1.4 With Cournot as Consensus, Profession Changes View of Monopoly

### Harm: Or, Harberger Enters the Picture

When economists began to consider the Cournot-monopoly model as the consensus model, *they did not initially change their view that monopoly was costly*. They had switched their *consensus model*, almost unknowingly, but not their view that monopoly was costly. The *consensus view* remained that monopoly was very costly.

This is clear when we consider the reaction to the seminal paper by Harberger (1954). Harberger asked: What is the cost of monopoly? To answer this question, he employed the consensus model, that is, the Cournot-model of monopoly. He found that the costs of monopoly in the United States, during the years 1924-28, were very small.

Harberger was initially surprised by his result. He wrote: “I must confess that I was amazed at this result.” (p. 86) Most economists were more than amazed: they were highly skeptical. They thought, surely, Harberger was wrong. After all, it was a long-held view that monopoly inflicted large costs on society.

But, as we explain later in this essay, the profession's skepticism quickly fell away. Many researchers checked the robustness of Harberger's results. Using the Cournot-monopoly model, they came to similar conclusions. Harberger's paper, then, was a watershed in the profession changing its view about the costs of monopoly.<sup>36</sup>

Let me briefly explain how Harberger arrived at his result. Harberger asked, using the Cournot model, what was the cost of monopoly. A cost of monopoly in the Cournot model, and the *only cost of monopoly*, is what economists have termed the *costs of misallocation*.

That cost is the following. When a monopolist raises its price, its quantity produced falls. This means too few of the monopolist's goods are produced (and too few consumed). Another way to describe this: there are too few resources, like labor and capital, being devoted to producing the monopoly goods. There is a *misallocation of resources*.

So, when Harberger estimated the costs of monopoly he was estimating the costs of monopoly resulting from misallocation of resources. That's it. But he assumed he was calculating *all the costs of monopoly*. He was wrong. His error was ignoring that monopolies kill substitutes, sabotage institutions generally and lower productivity in the industry. The economics profession never corrected Harberger's error. So, as a result, for the economics profession the cost of monopoly came to mean *only* the costs associated with the misallocation of resources.

Recall that Machlup (1952), even before Harberger published his seminal paper, was critical of the Cournot model as a model for economic policy. Not surprisingly, then, Machlup (1955)

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<sup>36</sup>Harberger's use of the Cournot model, of course, strengthened the model's "claim" as the consensus model. As many economists, using the model, checked the robustness of Harberger's finding, it strengthened the idea that the Cournot model was the consensus model of monopoly.

was quick to point out the errors in Harberger's estimate that the costs of monopoly were very small.<sup>37</sup>

Machlup argued that Harberger was only examining one cost of monopoly, the costs of misallocation, but that there were many others. Machlup also argued that, because Harberger was using a misspecified model, he was producing *biased* estimates of the costs of misallocation.

## 1.5 Outline of Introductory Essay

The main focus of these essays is to describe new, ongoing research by myself and colleagues, showing that monopolies inflict great harm on low- and middle-income Americans. The force of the research will be greater if the reader knows about the history of monopolies in the United States, as well as the history of how giants in economics and law attacked these monopolies. It will also have greater force if the reader is introduced to some of our prior research on sabotaging monopolies.

Essays 2 through 4, and Sections 2 through 4 of this Introductory Essay, cover the history of the Arnold-Simons model, the evidence from the first half of the 20th century that monopolies inflicted great harm and the adoption of Cournot-monopoly as the central model to study monopoly harm.

Essays 5 through 6, and Sections 5 through 6 of this Introductory Essay, covers our research on sabotaging monopolies that was begun in the 1990s. It covers the research done roughly over the period 1995-2015.

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<sup>37</sup>The 1955-reference to Machlup is under Ackley, Gordon and Machlup (1955).



Essays 7 through 17, and Sections 7 through 17 of this Introductory Essay, cover the newest research on sabotaging monopolies, that conducted in the last five years or so.

I've already introduced the reader to material in Essays 2 through 13, so I now provide a brief discussion of Essays 14 through 17.

## Discussion of Essay 14: More Lessons About Monopoly

Thus far we've focused on three types of harm inflicted by monopolies. We've learned many other important lessons about monopoly along the way, some of which we discuss in *Essay 14* (and in Section 14). Here are a few of the lessons:

### 1. When Monopolies Sabotage Low Cost Substitutes, They Inflict Great and Expanding Harm

Thus far when we've discussed how monopolies block low cost substitutes, we've argued that low-income households must replace these goods with alternatives. But there are other harms related to this initial harm, or follow-on consequences. We use the term "*expanding harm*" to emphasize the growing harms. There are at least three other related harms.

(a). Monopolies typically sabotage low cost substitutes that have *no close alternatives*, meaning the "initial" harm could not be larger. A good example is legal services, where lawyers block non-lawyers from giving legal advice of any kind.

(b). Many of the low cost substitute goods sabotaged by monopolies have an *investment component* to them. This means low-income Americans are blocked by monopolies from

making investments that are crucial for the future development of their households. That means monopolies cause these households to fall further behind in their development, pushing many households into poverty.

Some of the investments that are blocked, or frustrated, include those in health (hearing, eyesight, oral health), public education, consumer durables (in particular, used equipment of all types), and housing. Low income households, for a given amount of resources devoted to shelter, live in housing conditions vastly inferior to those that would be available if monopolies in residential construction were stopped from sabotaging factory-built homes. They live in conditions, like chipping lead paint, mold, and other toxins, that negatively impact the health of family members.

Home ownership is also discussed as a saving vehicle. Monopolies preclude savings in this manner as well (as described below), since acquiring the assets to purchase a 50 thousand dollar factory-built home is significantly easier than doing so for a 200 thousand dollar home built on-site.

(c). When monopolies block low cost alternatives, they often block the career paths of the low-income. Consider an individual in a low or middle income family. Suppose the individual considers pursuing a profession in oral health services. Given the educational investment to be a dentist greatly exceeds that of becoming a therapist, the individual might choose to be a therapist. But when therapists are banned, this career option is no longer available.

Edward Phelps (2016) makes this point more generally: “The feeling of injustice comes from a sense of unfair advantages: that those above are using their connections to stay there—or to

ensure that their children can follow them. The bar to upward mobility is always the same: barriers to competition put up by the wealthy, the connected, corporations, professional associations, unions, and guilds.”

## 2. Monopoly and Economic-Inequality: Limited Understanding of Monopoly Has Led to Errors in Measuring Economic-Inequality.

I have not yet used the term *economic-inequality*. I prefer to emphasize that monopolies inflict great harm, in fact, the greatest harm, on low-income Americans. This results in increasing economic-inequality, but that is a secondary consequence and is, I think, of secondary importance.<sup>38</sup>

For those studying economic-inequality, it’s important to recognize that the economics profession’s limited understanding of monopoly has led to serious errors in estimating economic-inequality.

Definitions of economic-inequality begin with concepts such as economic well-being, or well-being for short. As described by Amartya Sen (1997, 385-386), an individual’s well-being depends on the extent to which the person can “do things that she values doing and ... achieve states of being that she has reasons to desire.”

The well-being of an individual depends on many factors, including the state of a person’s health, the types of goods the person consumes and the amounts of the goods, the extent

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<sup>38</sup>When I say inequality is of secondary importance, I am thinking of the economic costs of monopoly. So, I need to add some caveats. One caveat is the potential political costs to inequality. Great disparities in income, well-being and wealth can threaten the very fabric of societies and democratic institutions. These are, obviously, great costs.

of criminal activity and pollution in the area where the person resides and the person's life expectancy. It also depends, of course, on all these factors in the future. With a list of such factors for an individual, we can "aggregate" them into a measure of that person's well-being.<sup>39</sup> Lastly, measures of *economic-inequality* can be constructed from the values of well-being that we calculated for individuals in the economy.

—*Monopoly Increases Economic-Inequality*

Monopolies in the United States reduce the economic well-being of Americans. They reduce the well-being of low-income Americans by far more than other groups, thereby increasing economic-inequality. First, monopolies make it *illegal to produce* certain goods, those typically purchased by low-income. Second, these goods that are made illegal to produce often have *investment components* to them, so the low-income are frustrated in making investments to escape poverty. Third, as we introduce monopolies, jobs for the low-income are destroyed by the monopolies.<sup>40</sup>

—*Income-Inequality is a Poor Proxy for Economic-Inequality*

Developing definitions of, and calculating measures of, economic well-being can be difficult. For one, it requires collecting statistics on many of the factors that determine well-being. Statistics are often not available for many of the factors.

To simplify the analysis of economic-inequality, proxies for individual or household well-being are often used. The most common proxy is an individual's income. With this proxy,

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<sup>39</sup>To make such an aggregation, we need a model. We discuss this below.

<sup>40</sup>I have not considered, of course, that the monopoly income will likely go to those in the upper end of the income distribution. This magnifies the impacts I am discussing.

income-inequality is then used as a rough estimate of economic-inequality.

While greatly simplifying the analysis, income can be a poor proxy for well-being. This is true is when economies are dominated by monopolies. Hence, when there is a significant presence of monopolies in an economy, like the United States, income-inequality is a poor estimate of economic-inequality.

For example, imagine two areas, or nations, say nations A and B. Imagine that the distribution of incomes is the same in the two nations. But imagine nation A has no monopolies, while nation B has extensive monopolies. Using income as a proxy of well being, a researcher concludes that *economic-inequality is the same in A and B*. But this conclusion is erroneous. Economic-inequality is greater in B than in A. In fact, income inequality may significantly understate inequality of well being.

### 3. Relationship between Monopoly and Poverty

The goal is to base definitions of poverty on concepts such as well-being of individuals and/or households. Poverty can be discussed in at least two ways. First, we can talk about a household being in poverty if its well being is below a certain threshold, the *poverty line*. Second, we can talk about how the poor today live relative to, say, the poor of 100 years ago. How do their well beings compare?

On the first point, as the discussion above makes clear, monopolies reduce economic well-being, thereby pushing some households below the poverty line, into poverty. On the second point, the idea that monopolies push today's households into conditions of poverty of 100 years ago might seem crazy. But I consider the idea here.

Over the last 100 years, there have been, of course, dramatic improvements in the living standards of “average” Americans. Life expectancy has dramatically increased, as has the health of individuals. New medicines, like antibiotics, and public health programs, have played important roles. The average hours worked in a week has significantly fallen, leading to many more hours of leisure. Food has become more plentiful and varied. Traveling thousands of miles in hours, not months, is now possible. Entertainment possibilities have expanded improbably. And so on.

But this truth, of dramatic improvements in average living standards, does not diminish another truth, that, in *some aspects*, the poor of today experience life as did the poor of 100 years ago.

Take legal advice. The poor of 100 years ago had very little chance to obtain legal advice on civil matters. The repercussions were dramatic and often tragic. A hundred years ago, Reginald Heber Smith (1919, 9) discussed the consequences of lack of legal protections, a description that remains accurate: “Because law is all-embracing, the denial of its protection means the destruction of homes through illegal foreclosures, the loss through trick or chicanery of a lifetime’s savings, the taking away of children from their parents by fraudulent guardianship proceedings.”

Because of monopolies in the legal profession, the same consequences are suffered by the poor today. We can add that victims of domestic violence today often have no access to legal advice.

The poor, perhaps paradoxically, need more legal services than the wealthy. One reason

was described by Smith: the poor are preyed upon as they have no legal recourse. Here is Smith: “Denial of justice . . . *actively* encourages fraud and dishonesty. Unscrupulous employers, seeing the inability of wage-earners to enforce payments, have deliberately hired men without the slightest intention of paying them” (9) [emphasis added].

Take health care, in particular, hearing care, eyecare and oral health care. The poor of 100 years ago had no way to improve their hearing if it was waning. Because of monopolies in hearing aids, neither do today’s poor, as a pair of hearing aids cost thousand of dollars. The poor of 100 years ago often could not afford eyecare and eyeglasses. Because of monopolies in these industries, the same is true for many of today’s poor.

A 100 years ago, the oral health of most Americans was desperate. Because of monopolies in dentistry, many low-income Americans today go without oral health care, or much of it, and often wind up in hospital emergency rooms for treatment of their oral infections.

Housing conditions for the poor of 100 years ago were desperate. Because of monopolies in the stick-built construction sector, some of the poor today live on the streets — conditions seemingly not much different than the desperate conditions of 100 years ago. The number of Americans living on the streets may not be large, but that’s only because the government has provided subsidies to many low income Americans to purchase the outrageously-priced housing constructed by the monopolies in today’s stick-built industry.

My knowledge of the criminal justice system of 100 years ago is limited. So, I state as a conjecture that the poor of today face aspects of that system, like cash bail, that are not much better than those faced by the poor of 100 years ago.

#### 4. The importance of developing good definitions of monopoly.

Developing a “good” definition of *monopoly* is an extremely important issue. It’s hard to imagine making significant progress on the study of monopoly without one.

Thurman Arnold defined a monopoly on the basis of what an organization did, the harm it inflicted. Below we present a list from Arnold (1943) of six behaviors that defined monopoly for Arnold.

Much of today’s literature examining monopoly does not provide a definition of monopoly. Rather they begin with a collection of industry and firm characteristics, that is, statistics. This might include, for an industry, the concentration level and the average price-cost margin. For the industry’s firms, this might include their size, profits and price-cost margins. Next the studies implicitly assume that if an industry and its firms have certain characteristics, it’s a monopolistic industry (and if not, a competitive one). If the industry has low concentration ratios and great ease of entry, if the firms in the industry are small and earn small profits, then the industry might be considered competitive.

A few studies are explicit about defining monopoly. These studies typically categorize competitive and monopolistic industries on the basis of price-cost margins. A higher price-cost margin indicates an organization (or industry) with greater monopoly power. When the idea of using a price-cost margin as a measure of monopoly was first introduced, it was widely criticized. The critics argued that price-cost margins had little usefulness as measures of monopoly.

A list of critics looks like a who’s who of economists. Some of the economists included: Peter



Bauer, Edward Chamberlin, Milton Friedman, Frank Knight, Fritz Machlup, Melvin Reder, Tibor Scitovsky, Henry Simons and George Stigler.

These critics were correct in their arguments. Moreover, there have been many more reasons given since then as to why price-cost margins are a very poor indicator of monopoly power. It's hard to imagine making significant progress on the study of monopoly using price-cost margins, or any other statistic, or combination of them, as a definition of monopoly power.

### Discussion of Essays 15 and 16: Who Is Fighting These Monopolies?

In Essay 15 and 16, I discuss what groups, if any, are fighting these monopolies discussed above. I consider two groups. The first group consists of government organizations such as the FTC, DOJ-AD (Department of Justice – Antitrust Division), and state attorneys attorney general. I also include in this group a private organization, the ACE industry introduced above. I call this group *U.S. antitrust institutions*.

The second group consists of other parts of U.S. government that fight monopolies, like DOJ-Civil Rights and DOJ-Racketeering. Some members of the U.S. Congress and state legislatures fight monopolies as well. I also include in this group the 1000s of private organizations that fight monopolies. I call this group *U.S. anti-monopoly institutions*.

I separate the organizations that fight monopoly into two groups for a few reasons. The first reason is simply to emphasize that there are organizations beyond the FTC, DOJ-AD and state attorney generals that are engaged in fighting monopolies.

A second reason is to argue that these groups have had very different commitments to fighting

many of the monopolies discussed in these essays. U.S. *antitrust institutions* have done little to combat many of the monopolies we discuss. By contrast, *U.S. anti-monopoly institutions* have been fiercely fighting all of these monopolies.

A third reason is to argue that anti-monopoly institutions have been very effective as well. They have won some of the greatest victories against monopolies in the United States, like those against organized crime and those against monopolies blocking the voting of black Americans.

There have been significant victories against organized crime in United States in last several decades. Groups playing a role in these fights included state and local police, FBI, journalists, newspapers, brave women and men on juries, DOJ-racketerring groups and local, state, and federal prosecutors.

It was anti-monopoly institutions, of course, that fought the sabotage of black voting. These anti-monopoly organizations were sometimes informal groups, sometimes of single black individuals, sometimes groups of two or three black Americans, while some were in the thousands, each protesting the exclusion of blacks from voting. More formal groups were also organized, like the National Association of Colored People. Some newspapers and journalists helped this fight as well. A major victory was won against these anti-voting monopolies with the passage of the Voting Rights Act.

As I said, among anti-monopoly institutions, there are 1000s of groups fighting monopolies. For every monopoly that I discuss, you can be sure there are 100s of groups or individuals fighting that monopoly. I have learned about many of the monopolies I discuss because

individuals and groups have contacted me to educate me about the monopolies they fight. I have been educated, for example, about the monopolies that are attempting to sabotage independent repair services.<sup>41</sup> And about the monopolies that are leading to the astronomical prices increases in insulin.<sup>42</sup>

Native American nations have battled monopolies in the oral health industry in Alaska and Washington State. Leaders of these nations, in their efforts to improve the extremely limited oral health services in their communities, have introduced dental therapists. Universities in New Zealand have provided free education to members of these nations. All the while these dental therapy programs were being developed, the ADA attempted to block them through misinformation and legislation. The leaders of these nations persisted, and successful programs are underway.

I'll discuss many more of these groups in Essay 13. But let me mention that academics from various disciplines have also been fighting these monopolies. Probably no more so than in the academic law profession, where there has been a large literature describing the legal monopoly and its consequences. Over the last few decades, Deborah Rhode at Stanford University has been a leader in the effort to roll back the legal monopoly.

I've already mentioned a few economists, like Stephen Parente and Edward C. Prescott. In addition, Boldrin and Levine (2008) stands out as a major contribution to the study of monopoly in the last several decades. It's a contribution that also stands along with those

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<sup>41</sup>A major group battling monopolies sabotaging independent repair is the group *Repair.org*. I thank Gay Gordon-Byrne, the Executive Director of Repair.org, who contacted me to describe the monopoly sabotage of the independent repair industry.

<sup>42</sup>I thank Anthony Di Franco from the Open Insulin Project ([openinsulin.org](https://openinsulin.org)) who informed me about the horrific situation with insulin in the United States; <https://openinsulin.org/author/anthony/> ; <https://www.cnn.com/2019/01/25/open-insulin-is-making-insulin-in-a-lab-to-prove-it-can-be-cheaper.html>

of Arnold, Simons and some of their colleagues from the first part of the 20th century.

## Discussion of Essay 17: Monopolies Inflict Great Harm: Summary

Here are some of the topics discussed in Essay 17.

### 1. The Consensus That Costs of Monopoly Are Small.

Above I argued there was a consensus among economists that the costs of monopoly are small. There is a long tradition in economics of using economic theory and measurement to estimate the costs of monopoly and tariffs. It's from this *quantitative analysis* that the consensus, of small costs of monopoly, emerges.

Recall that in the 1950s and 1960s, the widespread view was, after Harberger's quantitative analysis and the extensive study of the costs of tariffs, that the costs of monopoly were small. There has been much research since then, using the Cournot model and the model of monopolistic competition, that confirms the early findings. So, it's these findings that are the basis of today's consensus.

The bulk of the research since the 1950s and 1960s has been, in fact, in international trade, on the costs of tariffs. In particular, there has been a recent surge of work on the topic (see, e.g., Arkolakis, Costinot and Rodriguez-Clare, 2012). The conclusion remains the same: the costs of tariffs are small.

There has been less direct study of the quantitative costs of *monopoly* since the 1950s and 1960s. Bergson (1973) and Laitner (1982) are exceptions. Tirole (1988, p.68) cites Harberger (1954), briefly mentioning that the costs of monopoly are small. It's not clear why the field

of industrial organization more or less abandoned the study of the costs of monopoly. But the field still employs the Cournot-oligopoly model. So, the workhorse model implies the costs of monopoly are small, whether or not those using the model know this, or discuss it.

## 2. Different Types of Quantitative Analysis

Obviously, we need many different types of quantitative analysis to understand the costs of monopoly. The analyses of Harberger (1954) and Arkolakis, Costinot and Rodriguez-Clare, (2012), where an economic model is calibrated and used to derive estimates of the costs to society, is one type. Though this is perhaps the ultimate goal of any analysis, we cannot limit ourselves to such analyses. For one, some problems may be too hard for economic theory to solve at this point.

As for other types of quantitative analysis, one type is that discussed above. Showing that monopolies in the stick-built construction industry were able to introduce staggering weapons to reduce the share of factory production in the United States, from 60 percent in the early 1970s to only 10 percent today, is a quantitative statement. And it certainly indicates that great harm was inflicted on low income Americans as a result.

Developing a model to estimate the costs to society of this sabotage of factory-built homes is not too difficult. Colleagues and I are extending the model in Holmes and Schmitz (1995) for this purpose.

Showing that, as a result of monopoly actions, the vast majority of the poor in the United States consume essentially zero civil legal services is also a quantitative statement. As we discuss in Section 8 (and Essay 8), low income families are eligible for free civil legal aid, if

available in a state, only if their household income is less than 125% of the poverty level.

But then, among those that qualify, the vast majority seeking this aid are turned away.

It's also clear that this lack of legal aid has a tremendous negative impact on their well-being.

There is current research attempting to assess the various costs of not having access to civil legal advice (see below). What are the consequences for those that are victims of domestic abuse?

### 3. Assessing the Costs of Monopoly

In Essay 17, we assess how much the well-being of individuals or households can be increased if we eliminate some of (or most of) the monopolies discussed above, as well as other monopolies I now introduce. The goal of this section is to provide the reader with enough background to understand (and evaluate) an important argument about public policy toward monopoly, one we make in the next section.

In this section, we go through a list of monopolies, asking how much household well-being would increase if that monopoly was eliminated. The answers will depend on the particular household. Some of the household characteristics that matter include the income of the household and the color of the household's members. Here I focus on household income.

For the purposes of this section, I focus on only parts of the income distribution. This will be enough to make our point about public policy. One part I focus on is the lower half of the household income distribution. Households below the median include, working up from the bottom of the distribution, low-income households, up through those at the median income, who are among the middle-income. Where we designate the move from lower-income to

middle-income in this range is somewhat arbitrary. Let's make the break at the first quartile. For 2015, U.S. median household income was \$54,516 (see Donovan, Labonte, and Dalaker (2016)). Household income at the 25th percentile is approximately \$28,000.<sup>43</sup> I'll also focus on the top 5.0% of household incomes, breaking this into two groups, the one-tenth of one percent, those above 0.001 in the distribution, and the remaining 4.999%.

I break the monopolies into two groups. Group A are monopolies such that, if we eliminated one of them, the well-being of low-income Americans would significantly improve. Another feature of these monopolies is that the well-being of the high income would not improve much at all if they were eliminated. The monopolies I discussed thus far are in this group.

Group B are monopolies where, if we eliminated one of them, the well-being of low-income Americans would improve only slightly or not at all. The well-being of the high income would improve more than when eliminating a type-A monopoly, but still not much at all. I have not discussed these monopolies thus far.

#### *Group-A Monopolies (Low-income benefit tremendously from elimination)*

We've already discussed many monopolies in this group, including those in bail bonds, pharmaceuticals, legal services, dental services, public education, housing and credit cards.

Consider eliminating the monopolies in construction that block and sabotage the production of factory-built homes. The low-income would benefit tremendously from such a development (see Section 9, and Essay 9, for many of the reasons they would greatly benefit). Their well-being would significantly increase.

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<sup>43</sup>The Federal poverty line in 2015 was \$11,770 (family of one), \$15,930 (family of two), \$20,090 (family of three) and \$24,250 (family of four).

In contrast, the well being of the high income would increase little, if at all, if these monopolies were eliminated. It's not that factor-built homes are not manufactured for the high income. There are, of course, multi-million dollar factory-built homes manufactured in the United States each year. But the monopolies in traditional construction don't sabotage these homes, but rather those that are much smaller, and much less expensive. See the discussion in Section 9.

Suppose we wanted to develop a single estimate of the increase in well-being that could be achieved if we rolled back these construction monopolies. How would we aggregate the gains from all households into a summary measure? One way is to treat all households equally. In particular, we average the gains across all households in the economy. The average across all households would be

$$(0.25)(\textit{signif}) + (0.25)(\textit{signif}) + \dots + (0.0499)(\textit{trivial}) + (0.001)(\textit{trivial}), \quad (1)$$

where we have only displayed that part of the formula for the four groups we've been discussing, that is, the first-quartile in the distribution, the second-quartile and the two highest income groups. The first term in the formula corresponds to the gains for the low-income, which is the multiple of (0.25), that is, the 25% of households that are low-income, with (*signif*), the "significant" gain each household experiences.

What is the size of the term (*signif*)? Its potential values are the percentage gains in well-being that the low-income would experience by eliminating these monopolies. For economists, any loss from monopoly that is even 1.0% is held with great suspicion. But



economists have not studied the monopolies I am considering here, not least because they are not aware of them. Nor have they spent much time considering how the harm inflicted by monopolies varies by household income (among many other important dimensions, like household color).

A recent paper on credit card monopolies by Herkenhoff and Raveendranathan (2019) estimates that introducing competition into that industry would increase a measure like household well-being by roughly 2.0-3.0%.<sup>44</sup>

Eliminating monopolies in construction that sabotage factory-built homes likely increases well-being for the low-income by much more. Spending by low-income households on shelter often amounts to 40% of their total expenditures. Allowing factory-built houses would reduce that spending by half and more, clearly an important gain. As I said above, we are now in the process of formally calibrating a model to make formal estimates of the gains in well-being.

This same “profile” of gains in formula (1) applies to many of the monopolies we’ve discussed. Consider eliminating the lawyer monopoly, so that paralegals and other non-lawyer professionals could offer legal advice.<sup>45</sup> The low-income would benefit tremendously from such a development (see Section 8, and Essay 8, for many of the reasons they would greatly benefit). Their well-being would significantly increase. In contrast, the well being of the high income would increase little, if at all.

Dentists block the independent practice of hygienists. This leads to higher prices for teeth

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<sup>44</sup>According to Herkenhoff and Raveendranathan (2019), “Transitioning from 1970 to 2016 levels of competition yields welfare gains equivalent to a one-time transfer worth between 1.87 and 3.20 percent of GDP.”

<sup>45</sup>Some professionals would offer free legal advice as they worked with clients, such as advocates for victims of domestic violence.

cleaning, which is of little consequence to those in the top 5.0% of the income distribution. But it leads to significant problems for the low-income, as many areas where the low-income reside are without a dentist, so don't have access to these teeth-cleaning services. The same issues arise when dentists block therapists.

There are other types of monopolies in Group-A that have a different profile than that in equation (1). For these monopolies, the middle-income (in particular, those in quartile two of the income distribution) do not gain as much as the low-income from elimination of the monopolies.

Consider the bail bond market. Monopolies block the elimination of *cash bail*, where bail amounts are often \$500 or less. So, for example, those jailed for driving under the influence (DUI), or small possession of drugs, or failure to pay parking tickets, and charged with a crime, are required to post a small amount of bail.

Hundreds of thousands of low-income Americans cannot post such small bail amounts each year, meaning they stay in jail, lose jobs, and have family life disrupted. Many of the crimes for which they cannot post such small bail amounts are of this variety just described. If these monopolies were eliminated, the well-being of low-income Americans would significantly improve. For the high income, these monopolies are not a problem. Posting such small bail amounts pose no issue. Bail can easily be met for driving under the influence (DUI), or small possession of drugs. They can pay parking tickets, and won't be jailed for not paying them. The formula might look like

$$(0.25)(\textit{signif}) + (0.25)(\textit{small}) + \dots + (0.05)(\textit{trivial}) + (0.001)(\textit{trivial}) \quad (2)$$

where the difference between 1 and 2 is in the second quartile.

*Group-B Monopolies (Low-income don't benefit from elimination)*

In this group I include monopolies such as those in airlines and cable TV, both of which are widely discussed. There is also a whole collection of monopolies in luxury goods, it seems, including in luxury cars, Gem-quality diamonds, auctioning of high-end art and luxury watches (see, e.g., Crane (2015)).

The low-income benefit a very small amount, if at all, for eliminating one of these monopolies. Eliminating monopolies in airlines benefits the low-income very little. The vast majority don't take flights during the year. The benefit of rolling back the airline monopoly is

$$(0.25)(\textit{trivial}) + (0.25)(\textit{small}) + \dots + (0.05)(\textit{small}) + (0.001)(\textit{trivial}). \quad (3)$$

Note that the gains from eliminating the airline monopoly is trivial for both the lowest and highest income households in the distribution. For the low-end, these households don't consume airline services. For the highest end, the monopoly prices reduce their well-being a trivial amount, as their income (and consumption) is so very great. Other monopolies with this profile likely include those in cable TV.

The benefit of eliminating monopolies in luxury goods, like auctioning of high end art, is

$$(0.25)(none) + (0.25)(none) + \dots + (0.05)(none) + (0.001)(small). \quad (4)$$

All households, except those at the extreme upper end of the income distribution, receive no benefit from eliminating these monopolies. The highest income receive some benefit, as compared to eliminating a Type-A monopoly, but again it's small. This follows from such concepts as declining marginal utility of consumption.

## Economy-Wide Estimate

To arrive at an economy-wide estimate of the benefits from eliminating monopolies, we would add up the gains from eliminating these monopolies. In particular, we would take the value calculated in formula (1) for each monopoly that had this profile, then add the values together, arriving at a grand total for these type of monopolies. We would follow the same procedure for monopolies that had the profile in (2). And so on.<sup>46</sup>

There is another approach to calculating the costs of monopoly (or the benefits of reducing them) that gives us the same answer (in particular, it involves the same calculation). This involves calculating the costs of monopoly from “behind the veil of ignorance,” a social justice concept introduced by the philosopher John Rawls. We ask an individual what is the cost of monopoly to them if they faced equal probability of being born into any percentile of the income distribution. That is, they make this decision being ignorant of their actual place in

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<sup>46</sup>There is a technical issue that the sum of the benefits from eliminating monopolies one-by-one will not equal the gains from eliminating them all at once. But that is a small issue at this point.

the income distribution.

#### 4. Public Policy: What Monopolies Should We Be Concerned About?

The analysis above delivers an important lesson. From the perspective of public policy, there are some monopolies that should be the focus of our efforts to roll back monopolies. And there are some that we should not be concerned about.

The benefits from eliminating a monopoly of Group-B, one that has a profile in equation (3), is small, and the summation of them is small. The benefits of eliminating the monopolies corresponding to the formula in equation (4) are trivial. So, the benefits from eliminating monopolies from Group-B are very small. If these were the only monopolies we considered, Harberger's conclusions about monopoly would be correct. In contrast, the benefits from eliminating monopolies in Group-A are significant.

From a public policy perspective, then, we need to be concerned about monopolies in Group-A. Those in Group-B need not concern us.

With this statement I have not set up a straw man. In particular, there seems to be plenty of antitrust enforcement directed toward monopolies in Group-B. And there seem to be antitrust experts who agree with this direction of enforcement.

On antitrust enforcement, Crane (2015) states: "One can readily identify examples of antitrust violations in industries producing goods or services sold primarily to the wealthy; for example, gem-quality diamonds, stock brokerage services, auctioning of high-end art, and luxury watches. Picking on just one market, anticompetitive actions have a storied history

in the luxury automobile industry. Recently, federal prosecutors in New York recommended the indictment for price fixing of Mercedes-Benz dealers in New York, New Jersey, and Connecticut; while Chinese competition officials mulled bringing price fixing charges against BMW and Audi.”

Crane mentioned these monopolies not because he thought they should be ignored by policy makers, but because he was saying we shouldn't forget that monopolies harm the extremely wealthy (in addition to the rest of us). So, Crane, a renowned antitrust expert, presumably disagrees with my arguments in this section.

Moreover, discussions of monopoly in the popular press, and in academic economics journals, often center around those in airlines and cable TV, monopolies that we should, in my view, ignore from a public policy concern (obviously, from a research stance, we may be highly interested in them).

## 5. Are The Costs of Tariffs Also Large?

If the costs of monopoly are large, and not small, could the same be true about the costs of tariffs?

As we said, monopolies are organizations that require significant investments of time and resources to develop. For some monopolies, like those producing tradeable goods, protection from foreign producers can greatly reduce the cost of constructing a monopoly. So, it's possible that a group will work to develop a monopoly if tariffs are very high, but will not if there are no tariffs.

Hence, one cost of tariffs is the cost of letting domestic monopolies emerge in industries protected by tariffs. If the costs of domestic monopoly are large, as we've argued they are, then the costs of tariffs can be large.

This force was often discussed before the 1950s. Henry Simons argued that "drastic tariff reduction is an important and perhaps indispensable element in a program for eliminating private monopoly." (1946, 69)

When Thomas Holmes and I were thinking about monopolies in the 1990s, we saw that the power of domestic monopolies, like union-management monopolies in manufacturing, were considerably weakened by the great surge in foreign competition faced by U.S. manufacturing industries in the 1980s.

Our model of sabotaging monopolies (Holmes and Schmitz (1995)) was developed, in part, to examine the role of tariffs in the development of domestic monopolies. The potential sabotaging monopoly, in fact, would only decide to make investments in developing the monopoly if the tariff was high. If the tariff was low, investments might not be made. The paper illustrated one cost of tariffs, one not considered in the literature.

## 6. Is the Harm Inflicted By Monopolies Growing?

Whether the harm inflicted by monopolies is growing in the United States is obviously a central question to those interested in monopoly. It's of more than academic interest. Suppose the harm has been growing considerably. Then monopolies might be responsible for a part, maybe an important part, of the increases in inequality and poverty that we've

been witnessing in the United States.<sup>47</sup>

Our focus over the last few decades has been on a narrower question: Do monopolies inflict great harm? When we began thinking about monopolies in the 1980s, the Arnold-Simons model was not being used to study monopoly. It had been long forgotten.

Given the Cournot-monopoly model was clearly, to us anyway, a very limited way to think about monopoly, we asked questions such as: What are monopolies? Do they inflict great harm? If so, how do they inflict great harm? First things first, as they say.<sup>48</sup> We first had to understand monopoly before we could assess if it was growing.

Turning to the question of whether monopoly harm has been increasing, showing monopolies inflict great harm is one thing, but figuring out whether the harm has been increasing over a long period of time initially seemed daunting. But, in fact, it's not that hard a question. I should say it this way: Given our work on monopoly over the last few decades, it's not that hard a question.

We have to address two questions:

1. Have the number of monopolies, and monopolized industries, been increasing over time?
2. For a given monopoly, has the harm it inflicts been increasing over time?

Consider the second question. Consider monopolies in residential construction, those blocking factory-built homes. The harm created by these monopolies is growing, and at a rapid

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<sup>47</sup>There are commentators who argue poverty is falling in the United States. Unfortunately, they know nothing about monopoly and the issues discussed in these essays. See discussion below.

<sup>48</sup>Really, first things first would have meant an historical study of the giants in economics and law that studied monopoly. We'd have found that are questions had already been answered.



rate. One way to see this is the divergence in productivity between the traditional construction sector (with monopolies) and the factory-built home sector. Productivity estimates are available for the traditional residential construction sector, but not the factory-built sector. We can proxy productivity growth in the factory-built sector with that in the manufacturing sector producing durable goods. Figures 4-a and 4-b show that productivity in the residential construction sector (the on-site sector) has been flat, or even falling, over the last few several decades, while productivity in the durables goods manufacturing sector has shown strong productivity growth. The divergence in productivity is evidence of the growing harm inflicted by monopolies in the traditional construction sector. The harm will, of course, continue to grow as long as the monopolies are allowed to continue to sabotage the factory-built home industry.

Above we argued that monopolies lower productivity in an economy by crushing low-cost substitute products, and the innovation that would have occurred in these industries. Figures 4-a and 4-b are, again, a summary of that effect in construction.

It's not hard to imagine that we would have the same type of pictures in many other industries, if data were available, where monopolies have sabotaged low-cost substitutes. There is every reason to believe that productivity growth in the "traditional" dental industry in Alabama badly lags the productivity growth by Sarrell Dentistry, the great innovative Alabama practice that has brought dental care to the poorest people, in the poorest counties, in one of the poorest states (see discussion below). And the same would be true in the oral health industry throughout the United States, if Sarrell had not been blocked from expanding its innovative practices.

Next, consider the first question, Has the number of monopolies, or monopolized industries, been increasing over time? This may be the harder of the two questions to answer.

With the Cournot-monopoly model as a guide, there are many monopolies that are undetected, that fly under the radar of the model. So, a current assessment using the model certainly understates the extent of monopoly. There is good reason to expect that the understatement has grown over time, that is, that the extent of (undetected) monopoly is increasing. Recall the warnings of those in the 1930s that monopolies used devious means to hide themselves. That they form power relationships of infinite complexity. Their ability to do so has likely significantly increased in the many decades since these warnings were issued. It follows that the incentives to monopolize, and actual monopolies, have increased as well.

# An Overview of the Essays

## 2 In the beginning: Sabotaging Monopolies

Essay 2 discusses how, in the beginning, the word “monopoly” had a very broad meaning for economists. The term "in the beginning," of course, usually is a reference to Adam Smith. West (1978) describes that Smith, not surprisingly, had very broad views of monopoly, their behaviors and the harm they inflict. When discussing the costs of the East India monopoly, Smith included the very high costs of using naval resources to protect the monopoly’s assets overseas. West describes how Smith anticipated some of Tullock’s work on monopoly (e.g., Tullock, 1967).

Smith also anticipated the views of Thurman Arnold and Henry Simons on monopoly exploitation of the poor. West quotes Smith saying industries producing goods for the poor were often oppressed: “It is the industry that is carried on for the benefit of the rich and powerful, that is principally encouraged by our mercantile system. That which is carried on for the benefit of the poor and the indigent that is often either ignored, or oppressed.”

But I won’t focus on Adam Smith here, rather jumping ahead a century, and consider "in the beginning" to be the late 19th century. In this period, the word "monopoly" had a very broad meaning for economists and the general public. As Kenneth Lipartito argues, “Nineteenth century antimonopolists . . . used the term [monopoly] freely to attack any concentration of capital and power that threatened the opportunities and independence of the small producer” (Lipartito 2013, 992-993).

The word "monopoly," then, was a shorthand for all the various organizations, both formal and informal, that developed into significant concentrations of power to pursue their goals of enrichment, using extra-legal means. It continued to be a shorthand through the first half of 20th century. Recall Frank Knight's and Jacob Viner's broad use of the term, as well as the many other economists mentioned above.

In the introduction to his history of the New Deal and monopoly in the United States, Hawley (1966) discussed the various uses of the terms "monopoly" and "the monopoly problem" during the first-half of the 20th century.<sup>49</sup> Here is Hawley on the economic problems of monopoly: "Some have used it [the term monopoly problem] to describe the *classic evils of monopoly*, the alleged tendency, in other words, of market controls [by monopoly] to result in economic inefficiency, misallocation of resources, technical stagnation, and the exploitation of unorganized groups." (emphasis added).(p.3)

In Hawley's description, monopolies are sabotaging monopolies. The classic evils of monopoly are those of sabotaging monopolies – exploiting the unorganized, leading to technical stagnation, and to reductions in economic efficiency.<sup>50</sup>

Hawley's use of the word "*some*" in the sentence above was meant to emphasize that many thought the political problems of monopoly were as important as the economic ones, and not to suggest that the concern about monopoly was not widespread. Hawley's next sentence was: "For the most part, however, those who have used the term [monopoly problem] have been concerned with questions of power, with the development, in particular, of pri-

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<sup>49</sup>By "the monopoly problem" I take Hawley to roughly mean the costs of monopoly.

<sup>50</sup>Hawley's list of economic problems associated with sabotaging-monopolies also includes the *misallocation of resources*. Again, this is the only cost of monopoly in the Cournot-monopoly model (and its cousin, the Cournot-oligopoly model).

vate concentrations of economic power and with the implications of this development for a democratic society.”(p. 4)

In his discussion, Hawley did not reference particular writings or individuals. These views were widely shared among academics (in many fields, including history, political science, economics and law), public intellectuals and the general public.

During the economic and political crises of the 1920s and 1930s, many of the giants in economics began to recognize that the philosophy of laissez faire, of free markets, that is, markets where government has little involvement, had led to the majority of the problems faced by capitalist nations. The philosophy of laissez faire may have produced prosperity at one time. Free markets may have led to competitive markets for most of the 19th century. But that was no longer the case. As organizations grew in size, starting at the end of the 19thc century, the possibility for exploiting concentrations of power grew. Free markets were now tending to monopoly markets, not competitive markets. Economists who shared this view included Frank Fetter, Irving Fisher, Henry Simons and Jacob Viner.

Large swaths of the U.S. population lost faith in the capitalist system, in laissez faire, during the 1930s. The general public saw the failures of the capitalist system and often looked elsewhere for answers. One place they put their faith was fascism (i.e., single-party states, with private monopoly control of the economy); another was communism. But the economists above, and others, sought another path: Updating the laissez faire system to the modern realities of large organizations and monopolization.

Here is Frank Fetter (1933), Professor of Economics at Princeton University and President

of the American Economic Association in 1913. He begins by talking about how the 19th century philosophy of laissez faire was now being hijacked by large organizations of all types to build monopolies.<sup>51</sup> “It is not individuals but great associated groups of business men and giant industrial combinations which are now asking to be let alone, which are clamoring for the right to conspire in restraint of commerce, and to control the conditions of production and the prices paid by the people. This is the ominous new philosophy of laissez faire, that has begun to charm some of the impressionable brothers of our economic guild. We are now being told that each organized industrial group should be free to pursue its own monopolistic interest as it sees that interest, and by divine dispensation the result will be in harmony with the best interests of the exploited community. This is the new philosophy of laissez faire.”<sup>52</sup>

Fetter concludes that laissez faire must be updated: “I would add this brief disclaimer on behalf of those economists who, like myself, still hope to rescue capitalism from the snares of monopoly. They hold no discredited laissez faire philosophy of public policy toward private business. They believe in competition socialized and regulated for the public good.”<sup>53</sup>

## Henry Simons, Jacob Viner and Irving Fisher

Henry Simons stood out among economists in his concerns about the economic crises of the 1930s and his attempts to forge solutions to them. Simons wrote his influential pamphlet, *A Positive Program for Laissez Faire: Some Proposals for a Liberal Economic Policy*, to

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<sup>51</sup>The reference is under Clark and Fetter (1933).

<sup>52</sup>Note how Fetter shows some frustration with some economics brethren for not seeing the world as it was. Henry Simons showed this frustration as well, even questioning what he saw as the indifference shown by Frank Knight, his great mentor, to the crises at hand and the role economists could play in resolving them (we discuss this briefly below).

<sup>53</sup>Frank Fetter was said to have greatly influenced Henry Simons. I need to learn more about this.

alert society to, among other threats, the great harm caused by monopolies, both economic harm and political harm. Henry Simons' quote above, on (p. i), was taken from *A Positive Program*, and from this passage: “Thus, *the great enemy of democracy is monopoly, in all its forms*: gigantic corporations, trade associations and other agencies for price control, trade-unions—or, in general, organization and concentration of power within functional classes” (emphasis in original; Simons 1948, 43-44). Simons continues “Effectively organized functional groups [monopolies] possess tremendous power for exploiting the community at large and even for sabotaging the system.”<sup>54</sup>

The purpose of Simons' pamphlet, he called it a propaganda tract, was to provide proposals to save the system of laissez faire. His proposal to restrict monopolies was the most critical part of the program, though he had other significant changes he hoped would be adopted. We discuss these other proposals after we discuss his proposals for monopoly, and some of the economists who supported them.

Discussing Henry Simons view of monopoly, Hardey (1948, 306) wrote: “[Simons] did not share the faith of the fathers that that government is best which governs least, largely because he saw that only through the exercise of a governmental monopoly of force can a network of privately organized monopolies be prevented from devitalizing the free market.”

Simons listed five major proposals to save the capitalist system, giving them in descending order of importance. The first was his proposals on monopolies:

#### I. Elimination of private monopoly in all its forms

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<sup>54</sup>A copy of the *Positive Program* is at my website, in particular, at: [https://drive.google.com/file/d/1t7nBFBVTu3lNBVILJj\\_LrOIPLmg\\_1-Ud/view](https://drive.google.com/file/d/1t7nBFBVTu3lNBVILJj_LrOIPLmg_1-Ud/view)

1. Through the drastic measures of establishing and maintaining effectively competitive conditions in all industries where competition can function as a regulatory agency (as a means for insuring effective utilization of resources and for preventing exploitation), and
2. Through gradual transition to direct government ownership and operation in the case of all industries where competition cannot be made to function effectively as an agency of control.<sup>55</sup>

Irving Fisher, after reading *Positive Program*, sent Simons a letter expressing his support for Simons' plan to "save" laissez faire by putting significant restrictions on monopolies. Let me begin with Fisher's praise for the great learning contained in the pamphlet. Fisher started his letter: "I have now had a chance to read your 'A Positive Program for Laissez Faire.' It rather takes my breath away as you cover so much ground with which I am not familiar and on which I do not feel competent, without further study, to pass."<sup>56</sup> It's not that Fisher had little knowledge about the issues raised by Simons in his *Positive Program*. Fisher, in fact, was deeply interested in these issues and had written about them. He had written an article on laissez faire for *Science* more than 25 years before Simons' *Positive Program* (Fisher (1907)). In his AEA Presidential Address (Fisher, 1919), Fisher discussed monopoly and inequality issues.<sup>57</sup> So, Fisher's comment that he was "not familiar" with the material

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<sup>55</sup>He goes on to give more details: "Legislation must prohibit, and administratively effectively prevent, the acquisition by any firm, or group of firms, of substantial monopoly power, regardless of how reasonably that power may appear to be exercised. The Federal Trade Commission must become perhaps the most powerful of our governmental agencies; and the highest standards must be maintained, both in the appointment of its members and in recruiting of its large technical staff. In short, restraint of trade must be treated as a major crime and prosecuted unremittingly by a vigilant administrative body." (pp. 57-58)

<sup>56</sup>Letter dated December 14, 1934. In Simons' archives at the University of Chicago, Box 2, Folder 66.

<sup>57</sup>For monopoly, Fisher used the words "autocracy" and "speical interest." Here is Fisher: "An efficient autocracy in industry is as suicidal in the end as an efficient autocracy in politics has shown itself to be. Either is unstable because unrepresentative." (p14) And on inequality, "There is evidence to show that this striking inequality of distribution of capital and income is increasing and that it is greater in cities than in the country." (p8)



was more a comment about Simons' great knowledge than Fisher's lack of knowledge.<sup>58</sup>

Later in his letter, Fisher acknowledges that laissez faire had become unpopular, and applauded Simons for attempting to save it, though he would recommend even greater restrictions (on monopolies and concentrations of power, presumably) than Simons did. "I am greatly interested and pleased to think that you are courageously reverting to the unpopular laissez faire. I was brought up under laissez faire and while I have partly repudiated it I think there is a lot of sense in it for the most part and it should be the basis for an economic system but with perhaps more exceptions than you would have."<sup>59</sup>

Jacob Viner shared many of Simons' concerns about monopoly. He, too, thought free markets tended to monopoly. Writing twenty years after his AEA Presidential address, which we mentioned above, Viner (1960, 67) thought monopoly had become more widespread and entrenched in the United States (and the Western world). "Monopoly is so prevalent in the markets of the western world today that discussion of the merits of the free competitive market as if that were what we were living with or were at all likely to have the good fortune to live with in the future seem to me academic in only pejorative sense of that adjective."

Viner shared Simons' policy prescriptions: "[G]iven the prevalence or the danger of sub-

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<sup>58</sup>One finds other, similar comments praising Positive Program. In his memorial tribute to George Stigler, W. Allen Wallis (1993) wrote about how he and Stigler had written a letter to the editor of the New York Times (December 4, 1934) critical of some proposals for addressing the economic crises of the time, and referencing "concrete and practical proposals for social policies, such, for example, as that contained in Professor Henry Simons's brilliant and suggestive 'A Positive Program for Laissez Faire.'" Wallis also mentioned how later, when Milton Friedman had arrived at Chicago (in 1946), the three of them, Wallis, Stigler and Friedman, would often eat dinner together and, when not discussing what Frank Knight had "said," would sometimes discuss the Positive Program, "a pamphlet that, although small, was inexhaustible."

<sup>59</sup>Fisher and Simons corresponded regularly during Simons' lifetime. After Simons' death, Fisher wrote a letter to Simons' estate, which included this: "Professionally Professor Simons and I were not only well acquainted but warm friends and I esteemed his work more highly than that of any other economist of his generation." Fisher went on to say that he recently had sent an appreciation to Fortune Magazine, which, unfortunately, I have not found. (Letter from Fisher to Estate of Henry Simons, September 19, 1946. Simons' archives at University of Chicago, Box 10; Folder 1).

stantial intrusion of monopoly into the market, the logic of the laissez faire defense of the market against state-intervention collapses and there is called for instead, by its very logic, state-suppression or state-regulation of monopoly practices, which one may wish to call, as Henry Simons called it, an instance of ‘positive laissez faire’ or, as I prefer, as an instance of deliberate departure from laissez faire.”<sup>60</sup>

As we said, Simons’ had five major proposals. The second was for a sound monetary policy. The third was about taxation:

III. Drastic change in our whole tax system, with regard primarily for the effects of taxation upon the distribution of wealth and income. p. 57

He later wrote more specifically: "Our proposal with reference to taxation is based on the view (1) that reduction of inequality is per se immensely important; (2) that progressive taxation is both an effective and, within the existing framework, the only effective means to that end; ....." (p.65)

## Thurman Arnold

Thurman Arnold also had a very broad view of monopoly, seeing them as destroying and sabotaging monopolies.<sup>61</sup> Consider the following model of monopoly presented by Thurman

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<sup>60</sup>See Cole and Ohanian (2004) for a model of New Deal policies impact on U.S. growth.

<sup>61</sup>For a brief discussion of Arnold’s life and career, see W. Kolasky, "Thurmond Arnold: An American Original," 27 Antitrust 89 (2012-2013), <https://files.arnoldporter.com/aba%20-%20antitrust%20sum13-kolaskyc.pdf>

Arnold (1943) in *Cosmopolitan Magazine*.<sup>62</sup> His model is a detailed list of how monopolies behave and the costs they inflict on society. Arnold starts: “Whenever a small group of individuals, uncurbed by legal authority, is permitted to dominate any important part of the production or distribution of the necessities of life, these results will inevitably follow:

- (1) They seek to consolidate their power by destroying existing independent enterprise;
- (2) They prevent new enterprise from entering the field;
- (3) They restrict production and raise prices;
- (4) They stop the introduction of new and more efficient methods in industry in order to maintain obsolete ways of production in the continuance of which they have a vested interest;
- (5) They set up an arbitrary and despotic control over the industry and exploit members of their own group;
- (6) They enter into politics using money and economic coercion to maintain themselves in power, making alliances with other powerful groups against the interests of consumers and independent producers. In short, they will become a sort of independent state within a state, making treaties and alliances, expanding their power by waging industrial war, dealing on equal terms with the executive and legislative branches of the government and defying governmental authority

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<sup>62</sup>Thurman Arnold often published pieces about monopoly in “popular” periodicals. See below where I discuss a piece published in *Look Magazine* on monopolies in the construction industry.

if necessary with the self-righteousness of an independent sovereign.”<sup>63</sup>

With this list, Arnold defines an organization to be a monopoly based on *what the organization does*. This list provides some of the key elements of the *Arnold-Simons model of monopoly*. Again, I suggest this name not because Arnold and Simons were among a small group of scholars employing models with the elements above. As Hawley’s discussion makes clear, the opposite was true: these elements were part of the general view of monopoly. Rather, Arnold and Simons most clearly and forcefully stated the view.

Recall above where I listed the harm inflicted by sabotaging monopolies under three headings: (A) Destroying markets, typically low cost substitutes for the monopoly product (B) Sabotaging non-market institutions and (C) Exploiting members of the monopoly itself, leading to lower productivity and innovation in the monopolized industry. Looking at Arnold’s list, his harms under 1, 2, and 4 roughly fit under category “A.” Arnold’s harm in point 5, exploiting members, roughly fits under category “C.” Arnold’s knowledge of this exploitation was based on experience. One imagines that in these cases of exploitation there were resulting productivity losses in the monopolized industry. But we have not found anything written by Arnold describing such losses, though he may well have discussed them.

Not explicitly mentioned in this list, but something Arnold emphasized, was that monopolies inflicted the greatest harm on low-income Americans. Arnold opened his book on monopolies, *Bottlenecks of Business* (2000, [1940]), with a figure depicting the incomes of households in the United States. The figure shows the vast number of households living in extreme poverty.

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<sup>63</sup>A copy of *Labor Against Itself* is available on my website, at: [https://drive.google.com/file/d/10WyN9E-4\\_hizA4fMpDIChZ6tvPqJOPUY/view](https://drive.google.com/file/d/10WyN9E-4_hizA4fMpDIChZ6tvPqJOPUY/view)

His point was clear: monopolies were responsible for much of this poverty. The figure also showed the vast disparities in incomes, the large inequality, but that was secondary to the poverty.

Arnold frequently discussed how monopolies exploited the poor. Here are comments by Arnold from his Robert La Follette Memorial Address of 1942.<sup>64</sup> Arnold discussed many of the evils of cartels and monopolies, and then turned to the one area where there was growth due to monopolies: “We found that our only expansion had been in luxuries – following the fundamental axiom that in a monopoly economy luxuries expand while the necessities of life contract. We had to subsidize the distribution of food and housing and medical supplies, while even those on relief had automobile and radios. The exploitation by monopolies is always most dangerous in the things that people cannot do without.” (p. 3)

Note well that Arnold says the poor are able to purchase the luxuries of the day — like autos and radios — yet are unable to purchase some of the necessities of life. The same, of course, is true today. Low-income households can purchase high end TVs for a few hundred dollars. But that money would not buy an hour of lawyer’s time. There are some commentators who point to purchases of “luxuries” by low-income households as evidence supporting the view that poverty is overstated.<sup>65</sup>

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<sup>64</sup>Robert LaFollette served the state of Wisconsin as Governor and U.S. Senator. I lived in Madison, Wisconsin for a couple of years and it was not long after arriving that I began to hear about “Fighting Bob” LaFollette, and the great regard he was held in in Wisconsin. He fought, among other things, for more democratic institutions (such as a replacing a caucus sytem with a primary system) and against the power of monopolies. Arnold’s memorial address (and notes on the address) can be found in Thurman Arnold’s archives at the University of Wyoming, Box 4, Folder 1.

<sup>65</sup>Some of these commentators are from the Heritage Foundation and Cato Institute (see, e.g., Robert Rector and Rachel Sheffield, “Air Conditioning, Cable TV, and an X-box: What is Poverty in the United States Today?,” Heritage Foundation, July 2100 and John Early, “Reassessing the Facts About Inequality, Poverty, and Redistribution,” Cato Institute, April, 2018). They need to read Thurman Arnold.

Our argument, then, that monopolies inflict great harm on the low-income was anticipated by Thurman Arnold, and Simons, more than 75 years ago.

Turn back to Arnold's list, in particular, point 5. While Arnold did not explicitly lay out a model for why monopolies lowered productivity, Melvin Reder (1947) did. Reder recognized that monopoly power in firms led to internal conflict and competition over profits, and that this reduced productivity.

Reder began in a general way. Reder questioned the assumption of profit maximization: "It is not always appreciated that it was the assumption of perfect competition that gave the profit maximization hypothesis its great a priori plausibility. When economists, at the beginning of the thirties, developed the theory of monopolistic competition, they carried over, rather uncritically, the assumption of profit maximization." (p. 454)

Reder then turned to specifics. He discussed literature that examined the alliances that arose in monopoly firms, and the conflict that emerged between them, as the groups pursued their own objectives. He understood how this could lead to lower productivity in firms enjoying monopoly profits. He defined a productivity index which was the ratio of a firm's productivity if it were a monopoly producer to its productivity if it faced competition.<sup>66</sup>

Arnold's *Bottlenecks of Business* had significant impact on those fighting monopolies. It was also an important book for those doing research in monopoly, for it presented new evidence on monopoly developed by Thurman Arnold and his colleagues as they prepared their antitrust cases.

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<sup>66</sup>The reader will notice that our ideas on why monopoly leads to lower productivity within organizations were in Reder (1947).

Henry Simons (1941) starts his review of *Bottlenecks* with this: “THURMAN ARNOLD’S ‘The Bottlenecks of Business’ may be the important political tract of its time. Broadly interpreted, it is an earnest plea for restoration of free markets in the United States for preserving our democratic way of life and preserving free internal trade as the basis of our political liberty. Proximately, it is a plea for larger appropriations to finance enforcement of the Sherman Act and, tacitly, for sparing the act, the Anti-Trust Division of the Department of Justice, and Mr. Arnold from the assault of collectivists whom the New Deal and the Defense Commission have drawn to Washington from the Left and from the Right.”

As I suggested above, the book provided extensive *new evidence* on monopoly sabotage of low cost substitutes and monopoly reductions in productivity. Frank Fetter (1941), in his book review of *Bottlenecks*, praised Arnold’s intellect and character, his work at DOJ, and the evidence he uncovered about monopoly. “Mr. Arnold’s mental processes are not slow; he is honest—precious qualities in his present office. His education therefore progressed apace. In a few months he knew more about the real nature and possibilities of his job than he or his predecessors had ever dreamed of.” (p. 161) He concluded: “All in all, this is a very human book. As a rallying cry to consumers of the nation, it should have a wide influence. It is more than exhortation; it is filled with facts and illustrations of business practices and frustrations of fair competition little known to the public and to many students of economics.” (p. 162)

Fetter was also surprised Arnold had survived so long in his job. “It is a puzzling question how an Assistant Attorney General seriously striving to enforce the anti-trust laws could have survived two years in the fetid atmosphere of special privilege which always hangs over the District of Columbia—and not less under the New Deal. Group pressures, increasing through

the years, have loaded our staggering capitalistic system (ostensibly one of free enterprise) with a crushing burden of subsidies, bounties, and gifts, to tariff favorites, farmers, coal producers, sugar growers, silver miners, labor groups, and what not. Our national economic system is honeycombed with these monopolistic elements.” (p. 161)

In his review of *Bottlenecks*, Dexter Keezer (1941, 728) wrote “Mr. Arnold’s estimate of what might be done through anti-trust law enforcement is entitled to extraordinary respect in the light of the extraordinary record he has made. Because he is essentially a very modest man, his book does not spell out in simple terms the story of how he took a moribund organization and a neglected statue and gave the ‘Antitrust Division (of the Department of Justice) an instrument to maintain a free market which it never had before.’ That story is to be gleaned from the book, however, and it is an impressive story of personal accomplishment, made interesting by a salting of shrewd and striking observations, some of which would have to be put down as very courageous politically, if there were any evidence that Mr. Arnold is aware of such a thing as political danger.”<sup>67</sup>

Twenty years after Arnold’s tenure at DOJ, Gene Gressley (1964, 230-231) pondered the motivation of Thurman Arnold in his vigorous attacks on monopoly. He argued “...it is difficult to accuse Arnold of courting popularity; the wide-ranging indictments against industry and labor alike belie any attempt to be among the political elect. The only clear rationale is that Arnold was sincerely convinced that proper enforcement of the antitrust laws provided the means for economic and social justice.”

In a brief tribute to Arnold after his death, Edward Levi (1970, 983-984) ended by writing

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<sup>67</sup>Keezer was an economist. When he wrote the review, he was President of Reed College.



that Thurman Arnold was “one of the great lawyers and human beings of his time.”<sup>68</sup>

## The Relationship between Arnold and Simons

Henry Simons, it seems, had a deep respect for Thurman Arnold. Simons (1941) praised Arnold in his review of *Bottlenecks of Business*, which was a wide ranging discussion of Arnold’s early tenure at DOJ. It was not praise from start to finish. Simons starts one paragraph questioning whether he actually trusts Arnold’s motives in fighting monopoly. But by paragraph’s end, after some back and forth with himself, he concludes that, alright, I can trust him. Simons clearly wanted Arnold to be more aggressive against monopolies, to support legislation putting greater restrictions on monopolies. But, like Fetter and Keezer, he was surprised he had not been kicked out already.<sup>69</sup>

Simons’ respect for Arnold was mutual. When Arnold was the Assistant Attorney General for Antitrust, he invited Simons to serve as an “expert witness” for the DOJ (see below). Arnold and Simons, it seems, enjoyed each other’s company. They socialized when Simons visited the DOJ in Washington, D.C.<sup>70</sup>

Arnold attracted other remarkable talents and public servants to the DOJ during his tenure.

Edward Levi, who we just introduced, was a DOJ employee during Arnold’s tenure. The

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<sup>68</sup>When Edward Levi wrote this review, he was President of the University of Chicago. He was previously a Professor of Law and Dean of the Law School at the University of Chicago. After serving as the President of the University of Chicago, he served as Attorney General of the United States.

<sup>69</sup>After reading the reviews of *Bottlenecks of Business* by Fetter, Keezer and Simons, it’s a disappointment to read the review by Joe Bain (1941b). Bain has very little understanding of what Arnold was up to, in his law, and his economics. Arnold talked about how monopolies sabotaged substitutes and destroyed productivity. Bain discusses none of this. It’s also disheartening to read as one knows that Bain will go on to be a leader of research in industrial organization for the next few decades.

<sup>70</sup>Here is the text of a telegram from Thurman Arnold to Henry Simons, on April 4th, 1941, just prior to a visit by Simons: WIRE ME TIME OF YOUR ARRIVAL. WANT YOU TO GO TO COCKTAIL PARTY WITH ME. This telegram is in Arnold’s archives at the University of Wyoming, Box 23.

image of Arnold, Levi and Simons working together to fight monopolies is a powerful one. While it's hard to imagine that such a group will ever again be assembled at the DOJ to fight monopoly, this history should be more widely known.

## Robert Brady, Theodore Kreps, and Dexter Keezer

Most of the economists discussed so far in Section 2 have been from the East Coast and Midwest. But there was a strong West Coast contingent as well, also discussed in Essay 2, including Robert Brady, Professor of Economics at UC-Berkeley, Theodore Kreps, Professor of Economics at Stanford University and Dexter Keezer, President of Reed College. Let me briefly mention Brady's intellectual background and contributions.

Brady extensively studied Fascism in Germany and the rise of the Nazi's. A big part of his research concerned the economic system created by the Nazis and which supported them. It was primarily a system of private monopolies. Brady was, given his study of monopoly in the Nazi economy, and his extensive knowledge of U.S. monopolies, as knowledgeable as any U.S. economist about the workings of, and harm created by, monopolies.

We've already mentioned in the introduction how Brady knew very well, as did Wendell Berge, that monopolies made themselves difficult to detect.

He also saw them as sabotaging monopolies, like Arnold and Simons: "Cartels exercise power to fix prices, to divide markets, to control total output, to limit quality improvements, to eliminate services, to retard technical change, to hold back new ideas and inventions, to prevent the establishment of new firms, to channelize the flow and control the volume of

business within a country or between nations, to hold back the industrialization of new countries." (p. 314)

Brady may have been a bit of a spitfire. Recall his criticism of those thinking the Cournot-monopoly model (and its offshoots) or the model of monopolistic competition could be useful for studying the behavior of actual monopolies: "Only the historically untutored or politically and philosophically naive could suppose that the power phase of coordinated monopoly controls would be handled in terms of "duopoly," "oligopoly," "imperfect competition," and the like."

## Concerns About Monopoly in Other Disciplines

Concerns about monopoly and their harm were, as I said, spread throughout the public and the academy, in economics, political science, history and more.

I'll discuss these other academic disciplines in Essay 2. But let me mention Bernhard Stern, a Professor of Social Sciences at Columbia University, who was a sociologist and anthropologist, and who wrote a collection of articles in the 1930s on technology. He discussed how different groups, often monopolies, attempted to block technologies. In Stern (1938, 30), he cites George Westinghouse Jr., who describes how in the competition among technologies (and companies) to supply lighting to the United States, great efforts were deployed to block and sabotage rival companies and technologies: "Four large corporations were started almost simultaneously upon a career of competitive business [of supplying lighting]. The energy and money since expended by each of these corporations in efforts to thwart the progress of

the others has mutually embittered the interested parties to a degree that can with difficulty be comprehended by those not immediately concerned in the strife."<sup>71</sup>

In Holmes and Schmitz (2001a), which extended Holmes and Schmitz (1995), we develop a model with just these features described by Westinghouse. Firms conduct research in order to develop their technologies. But they also devote resources to blocking and sabotaging the advance of technologies of other firms. These resources devoted to blocking other firms can be those spent on misinformation and deceit about the safety of a rival's technology. The resources can be spent in legal ways, or extra-legal ways.

Essay 2, then, establishes that in the first half of the 20th century, economists and the general public had a very broad view of monopolies, of the actions they took, and the harm they inflicted. The consensus model of monopoly was the Arnold-Simons model of sabotaging monopoly. What led to this consensus? It was evidence. During the first half of the twentieth century, many types of evidence were developed showing that monopolies inflicted great harm on the low- and middle-income. The evidence was of many forms. Some was in academic journals, including those in economics, law, history and political science. Some evidence was in books, like Arnold's *Bottlenecks of Business*. The consensus also stemmed, of course, from the experience of Arnold and others that fought monopolies.

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<sup>71</sup>George Westinghouse, Jr., "A Reply to Mr. Edison," *North American Review*, Vol. 149 (1889), p. 655.

### 3 Evidence: Monopolies Inflict Great Harm

Essay 3 discusses contemporary evidence, that developed in the first half of the 20th century, showing monopolies caused great harm during the period. We present evidence on three types of harm created by monopolies: (A) destroying markets; and (B) sabotaging non-market institutions and (C) destroying productivity in the monopolized industries.

#### A. Destroying Markets

I discuss two industries in this section, oral health services and residential construction. In oral health services, evidence was presented showing how monopolies *blocked low cost substitutes*. Consider one case where, following WWII, public health officials in Massachusetts introduced an experimental program to train dental therapists (also called dental nurses) to treat low-income children who had severe dental problems. Therapists are dental professionals who can, among other services, fill cavities.

After the program was underway, the American Dental Association (ADA) discovered it and tried to kill it.<sup>72</sup> The ADA sent a letter to the Commissioner of Health in Massachusetts stating: "... the American Dental Association deplores the apparent failure of the Massachusetts State Legislature to approach the Massachusetts State Dental Society preparatory to inaugurating this program without the knowledge and the endorsement of the American Dental Association." And, further, "... all such programs concerning the development of sub-level personnel, whether designed for experimental purposes or otherwise, should be planned and

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<sup>72</sup>All references in this section are to: "House of Delegates Action on Dental Nurses Program; Questioned by Massachusetts Commissioner of Health." The Journal of the American Dental Association 40.3 (1950): 363-6.

developed only with the knowledge, consent and cooperation of the respective state associations and the American Dental Association for the purpose of protecting the public health and welfare” (p. 364)

This, of course, is Arnold’s “independent sovereign” at work. The sovereign, the ADA, proclaims nothing should be planned before receiving the consent of the sovereign.

The Commissioner of Public Health responded to the ADA, addressing the absurdity of its claim to “sovereignty”: “As an official agency of State Government, the Department cannot seek consent from any private agency. The Department acts on behalf of all the people of the Commonwealth. It, nevertheless, has constantly sought the advice and guidance of the various professions and arts in its efforts to better the health of the people.” (p. 365)

The ADA decided there should be no program to train therapists: “The Council, after considering the matter, has expressed its concern over the implication that children’s dental needs can be cared for by dental personnel less well trained than those qualified to care for the dental needs of adults. The Council feels that the care of children’s teeth requires skill equal or superior to that given to adults and for that reason anyone who attempts to care for the dental needs of children must take the same training required of those expecting to be licensed as dentists.” (p. 363).

When the ADA said “no child should receive dental care by anyone less trained than a dentist,” what they really meant, but could not say, was this: “rather than have therapists with two years of training treat low- and middle-income children, which would involve potential risks to our dental monopoly, we’ll kill the program and let the children go untreated.” The

risk, of course, was significant: the public would soon realize that dental nurses were highly competent at filling cavities, as was known then, and has been demonstrated many times since (see below).

The state legislature backed down under the ADA's pressure, rescinding its prior legislation. Based on ADA resistance, the therapist program in Massachusetts was killed.

Cases like these involve a balancing of (1) insuring public access to oral health care and (2) protecting patients from incompetent providers. In this case, greater access to care meant filling the cavities of low-income children. It also meant permitting dental nurses, who had undergone two years of training at a high quality dental school, to provide the care. One would think the balance would be struck for permitting therapists to treat the children. But the ADA said no. Because of the ADA, these low-income children in Massachusetts were not treated by non-dentists. But, of course, they were not treated by dentists either.

Unfortunately, how the Massachusetts case was handled continues to be the norm today. That is, the ADA (and state dental associations) adamantly argue that they are the bodies to determine these trade-offs. And society has acquiesced — it treats them as independent sovereigns.<sup>73</sup>

If a monopoly is allowed to make such trade-offs, it's straightforward to predict the result. One expects the monopoly to block all substitutes. This, in fact, is what the ADA has continued to do, unabated, since the end of WWII.

Consider next the residential construction industry. There is extensive contemporary evi-

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<sup>73</sup>See discussion below for an argument as to how the ADA and other professional groups have manipulated public opinion so as to achieve this independent sovereign status.

dence showing monopolies in the traditional sector of this industry, that is, the sector producing homes on-site, with traditional craft methods, *blocked low cost substitutes* for traditional construction. These monopolies attacked producers of factory-built homes throughout the first half of the 20th century. These factory-homes were a low-cost substitute to the traditional homes constructed on-site.

Monopolies began blocking homes produced in factories as early as the late 1910s. We know this was true in Chicago. When Judge Kenesaw Mountain Landis helped broker a truce of sorts between warring monopolies in the Chicago construction sector (which was short-lived), producers of factory homes in Iowa saw this as a chance to ship factory houses into Chicago. Figure 1 presents an advertisement in the *Chicago Tribune* from 09/21/1921 saying factory-built homes could now be brought into Chicago.<sup>74</sup>

When Thurman Arnold was Assistant Attorney General for Antitrust, he and his colleagues sought to protect manufacturers of factory-built homes from the onslaught of monopolies in traditional construction. Corwin Edwards (1941), Arnold's chief economist, described one such effort: "A first step in the protection of the prefabricator was taken in September 1940 by an indictment which charges a conspiracy to prevent the sale of prefabricated houses in Belleville, Illinois. Local building materials dealers, contractors, officials of the carpenters' and building laborers' union, and the chief of police are charged with a series of efforts to prevent the erection of a prefabricated house by concerted refusals to perform the work and by violence to prevent others from performing it. Before the indictment there had been repeated riots at the construction site; thereafter the work proceeded without further

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<sup>74</sup>It's not clear if these factory homes from Iowa were ever shipped to Chicago. (I thank Sara Brandel for finding this advertisement.) Factory built homes continue to be blocked in Chicago today.



violence”(339).

When Arnold left the DOJ, he did not stop challenging monopolies in traditional construction. He did not stop trying to protect producers of factory-built homes. In “Why We Have a Housing Mess,” Arnold (1947) began with a picture of a homeless Pacific War veteran, with his wife and five children, sitting on the street with their belongings (see Figure 2). The caption said: “This Pacific War veteran and his family are homeless because we have let rackets, chiseling and labor feather-bedding block the production of low-cost houses.”

Arnold began his text this way: “Why can’t we have houses like Fords [i.e., automobiles]? For a long time, we have been hearing about mass production of marvelously efficient post-war dream houses, all manufactured in one place and distributed like Fords. Yet nothing is happening. The low-cost mass production house has bogged down. Why? The answer is this: When Henry Ford went into the automobile business, he had only one organization to fight [an organization with a patent] . . . But when a Henry Ford of housing tries to get into the market with a dream house for the future, he doesn’t find just one organization blocking him. Lined up against him are a staggering series of restraints and private protective tariffs.”

When Edward Levi returned to the University of Chicago after serving with Thurman Arnold at the DOJ, he created a new program at the Law School, the Legal Research Program (LRP), whose purpose was to conduct research on important legal issues of the day.<sup>75</sup> An initial project was to study the post war housing shortage. Levi secured university funding to hire new faculty at the Law School who had expertise in housing issues, including E. Huston

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<sup>75</sup>I thank John Levi for granting me access to Edward Levi’s files on housing (Edward H. Levi. Papers, Special Collections Research Center, University of Chicago Library).

Hersha and William H. Speck.<sup>76</sup>

Levi's group at the Law School produced evidence showing monopolies in traditional construction blocked factory-built housing, including the work of Hersha (1947), Hersha and Speck (1947), and Speck (1947).<sup>77</sup>

Consider the work by Speck (1947). He starts by stating that, regarding high housing costs, the consensus is that these costs are the result of the construction industry not adopting factory production: "from most students of the problem [housing shortages] there is general agreement that the high costs of houses result from the failure of the building industry to abandon handicraft, custom building and *to adopt large-scale, machine production*" (51).

And what stopped adoption? The methods were blocked by monopolies in traditional construction. Speck focused on how building codes were used to block factory-built housing.

Speck knew that overcoming the restrictions on factory-housing in the codes would not be easy: "At the outset it should be made clear that the straightforward exclusion of prefabricated houses and new building materials has never been attempted in any code. Such a practice by any of the interest groups would be poor public relations and afford a clear ground for attacks by opponents. Such outright exclusion would also be clearly illegal under the doctrines discussed below. The exclusion is accomplished by devious means cloaked

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<sup>76</sup>It appears that Levi assembled a group of approximately 15 economists and lawyers at the University of Chicago Law School to look at the housing problem in the United States. I say this based on distribution lists used by Levi to circulate material on the project.

<sup>77</sup>In Professor Levi's files at the University of Chicago archives there are a number of documents and research papers produced by members of the housing project. I have found some of the research documents produced by the group in a manuscript on the HUD web page, "Preliminary Housing Memoranda, NOS I, II, III, IV" August, 1947). I will use this manuscript to cite some of the work of Levi's group. I don't know the history of this document, nor how it ended up on HUD's web page. The link is: <https://www.huduser.gov/portal/sites/default/files/pdf/PRELIMINARY-HOUSING-MEMORANDA-NOS.pdf>.

under a beneficent purpose of protecting the public health and welfare” (53).

Speck’s “devious means” sound a lot like Berge’s “artful weapons.”

But overcoming the restrictions was the point of Speck’s and the LRP’s work. Speck devised strategies to overcome the barriers: “The thesis of this paper is that restrictive provisions in building codes are now illegal upon one or several grounds and that these provisions can be, and have been, successfully attacked in the courts. Wider recognition of these avenues of attack may make special groups more cautious in attempting to bolster their economic positions by resort to building codes and may inspire more widespread attacks upon palpably restrictive provisions.”<sup>78</sup>

While Speck focused on building codes, he knew well that monopolies employed a wide range of tactics to block factory production.<sup>79</sup>

## B. Monopolies Harm Non-Market Institutions

Consider, next, the contemporary evidence and accounts that *monopolies harmed non-market institutions*.

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<sup>78</sup>Speck continued: “The possible sources of authority for overthrowing restrictive code provisions are as follows: (1) The rules of reasonableness and ultra vires as applied to municipal ordinances. (2) The provisions of state constitutions. (3) The due process, equal protection, and commerce clauses of the federal constitution” (54). The term “ultra vires” above roughly means “acting or done beyond one’s legal power or authority.”

<sup>79</sup>Here is Speck: “Interlaced and interacting with these governmental restrictions [building codes] to form almost a seamless web [sic] are numerous private restrictions. Building contractors and building material dealers often by agreements or concerted action block intrusion of new materials and methods into their bailiwicks. Financial institutions with large investments in loans on existing houses refuse to make favorable advances on less expensive prefabricated houses. Building unions see prefabricated houses and manufactured materials as a threat to their skills and livelihood and often either refuse entirely to work on them or require useless redoing of work. The combination in house building of perhaps the most complete and widespread local government regulation, restraint-of-trade minded builders and material dealers, and some of the strongest, most conservative labor unions in the country has proved in many localities an insurmountable obstacle to the use of new methods. *Prefabricated builders have simply confined themselves to those areas where restraints are not serious*” (52). Emphasis added. Note we will come back to this final observation by Speck when we talk about monopoly sabotage in the 1970s.

Here, we simply add a bit more to the contemporary discussion pointing out that housing subsidies to stick-builders enabled their monopolies to survive with their inefficient methods.

We already mentioned Arnold's critique (1940, p. 45), that subsidies to inefficient residential construction builders made housing crises worse: "[Y]ou can't spend money in a relief market [housing] like that without subsidizing inefficiency and thus raising both prices and taxes."

Arnold (1939) made a related point in a speech to the New York Building Congress: "The building industries are unique in that they have frankly given up half of their job. They take for granted that it is impossible, as things are today, for them to build houses without public aid and sell them cheaply enough that the lowest paid half of the population can afford to live in them."<sup>80</sup>

Henry Simons (1938), in a speech on monopoly at the Art Institute of Chicago, makes a similar point: "Urban housing conditions become worse and worse, largely because labor costs prohibit new construction; and the widespread demand for governmental housing projects is mainly a demand for government subsidies to offset excessive building costs."<sup>81</sup>

### C. Lowering Productivity within the Monopolized Industry

We now turn to contemporary evidence showing monopolies reduced productivity *within the monopolized industry itself*. We discuss the medical, construction and manufacturing industries.

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<sup>80</sup>From speech at the New York Building Congress, 6-21-1939. I found this speech in the paper's of Edward Levi. Found in: Edward Levi papers, University of Chicago, Box 75, Folder 3.

<sup>81</sup>Lecture on Monopoly, at the Art Institute of Chicago. Henry Simons papers, University of Chicago, Box 9, manuscript #148.

Evidence was presented showing monopolies in the medical industry led to *reductions in productivity and productivity growth* in the industry. As early as 1900, groups of doctors were experimenting with new methods to deliver health care to the low- and middle-income, such as group health plans. The AMA opposed these efforts and sought to squash them. This was *doctors fighting doctors*. By blocking these efforts, the AMA obviously blocked experimentation and innovation, as well as the productivity growth that ensues from them. A large academic literature was critical of the AMA for blocking innovation (see, e.g., Garceau (1940, 1941) and Shryock (1938)). An article in the Yale Law Review (1938) was devoted to studying how the AMA was sabotaging group medical practices.<sup>82</sup> Ward (1989) discusses the large literature before WWII that documents the AMA's effort to block new methods and innovation.

The AMA's efforts to crush experimentation included intimidation of doctors in the District of Columbia who had formed a group health plan, Group Health Associates (GHA), Inc.. The plan sought ways to provide less expensive health care to lower-paid federal employees. The AMA led a campaign to shut down GHA, threatening to expel GHA doctors from the District Medical Society and revoke their hospital privileges. When GHA sought help from the DOJ in 1938, Thurman Arnold, who had recently started at Justice, quickly took up the cause. The DOJ filed, and won, an antitrust lawsuit against the AMA (see Arnold (1938) for a discussion of the lawsuit).<sup>83</sup>

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<sup>82</sup>The article is cited in the references under "the letter G," as "Group Practice versus the American Medical Association." Yale Law Journal 47.7 (May 1938): 1193-1201.

<sup>83</sup>Below we discuss how Arnold often chose antitrust challenges based on the extent that monopolies were harming the poor. The AMA blocking of health plans for the low-income were obviously one such case. Arnold (1938) describes the need to find new methods of delivering health care for the poor, noting that "infant mortality is five times higher in families with less than \$500 a year [in income] than it is in families with \$3,000 or more a year."

Just as with the ADA, the AMA considered itself a sovereign nation and was treated as such. A Yale Law Review (1954, p. 959) article on the AMA states: “As a consequence of its monopoly position, financial resources, and political strength, organized medicine is able to maintain a quasi-legal status in medical affairs. In many states, laws authorize state and local medical societies to appoint or recommend members of regulatory bodies. AMA standards in medical education, training, and practice are usually adopted by law. In addition, AMA inspection to determine whether its own standards have been satisfied is seldom subject to judicial review. Thus the political authority of the state itself has in effect been delegated to organized medicine.”<sup>84</sup>

We turn next to the residential construction industry, in particular, the traditional construction sector (i.e. on-site construction), discussing contemporary evidence on how monopolies reduced productivity in this industry.

Recall Corwin Edwards’ discussion above relating that many organizations in this sector, like the carpenter’s union and contractors, worked together to block prefabricated housing. In this regard, these groups were part of the same monopoly: a concentration of power to destroy prefabricated homes. We might call this monopoly, the *fighting-prefabricators* monopoly.

Groups can belong to more than one monopoly at a time. The carpenters, for example, belonged to the fighting-prefabricators monopoly and also the carpenter’s union, which was also a monopoly. The contractors also had formed a concentration of power among themselves.

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<sup>84</sup>The article is cited in the references under “the letter T,” as “The American Medical Association: Power, Purpose, and Politics in Organized Medicine.” Yale Law Journal 63.7 (May 1954): 937-1022.

The organizations belonging to the fighting-prefabricator monopoly often fought among themselves, leading to lower productivity within the traditional construction sector itself.

Here we briefly focus on conflict between groups of workers, between monopoly-unions. The carpenter's union and the laborer's union were often in conflict with each other. They argued over, among other things, "jurisdictions." A jurisdiction is *a collection or set of tasks* that need to be completed on the construction site.

Groups of workers, like the carpenters, sought a jurisdiction as large as possible. They would fight with the laborers union over tasks such as who would carry materials onto (and around) the construction site. The laborers would argue this was low skill work and they should have the right to the work.

Jurisdictions are established on job-sites, through union contracts and other means, in the hopes of avoiding disputes among groups of workers over work. Even if jurisdictions are successful at limiting disputes, they lower productivity. Rigid jurisdictions slow down the construction process. Construction work is often temporarily delayed when job tasks are required but no workers "within this jurisdiction" are available. Construction is delayed until the "correct" staff can be deployed on the tasks.<sup>85</sup>

The clauses in union contracts that implement jurisdictions are often described as *wasteful (or restrictive) work rules*. So, one often hears that "restrictive work rules lead to lower productivity," though it might also be described as "jurisdictions lead to low productivity."

We now turn to contemporary discussions of how jurisdictions (i.e., restrictive work rules)

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<sup>85</sup>See my discussion of Knox and Hennessy (1966) below on the negative impact of job jurisdictions on productivity.

and jurisdictional disputes lowered productivity.

*Jurisdictional disputes.*

Before turning to contemporary discussion of how jurisdictional disputes lowered productivity, we mention that these disputes were a core problem for the existence of the union monopolies. Samuel Gompers, the president of the American Federation of Labor (AFL), argued that “beyond doubt the greatest problem, the danger which above all others threatens not only the success, but the very existence of the American Federation of Labor, is the question of jurisdiction” (cited in Whitney 1914, 124-5).

These disputes were widespread in the first half of the 20th century and had significant negative consequences for industry productivity. This conclusion comes from various sources. Whitney (1914) studied jurisdictional disputes in construction in localities across the country, concluding they caused lower productivity in the industry.

In 1925, U.S. Secretary of Labor James Davis’ concern with jurisdictional disputes in construction was so great that he addressed the issue in a lead article of the *Monthly Labor Review*. He wrote: “The fact is these jurisdictional disputes have become a matter of grave concern to the public” (Davis 1925, 2).

Davis argued: “The contractor, the subcontractor, the architect, the owner, the financial organizations paying the bills are all innocent losers in a situation [jurisdictional disputes] not of their own making. I know many men who are anxious to build, but are afraid to, because of these jurisdictional disputes. They know full well they have only money enough to complete the building, and can not afford to pay interest charges caused by delay when



two or more building trades are at loggerheads over which of them shall perform some item of work. Such a situation also affects bond sales, and maybe after a time we shall not be able to finance a building because of these disputes” (2).

*Jurisdictions and wasteful work rules.* Let’s return to Chicago, in the 1920s, to examine jurisdictions and work rules. Judge Landis, after agreeing to arbitrate wage disputes between some of the monopolies in the Chicago construction industry, examined in detail the union contracts with employers. Landis concluded that major sources of the “disease in housing construction” were not high wages but that: “The real malady lurked in a maze of conditions artificially created to give parties a monopoly, and in *rules designed to produce waste* for the mere sake of waste; all combined to bring about an insufferable situation, not the least burdensome element of which was the jurisdictional disputes between trade-union members of the same parent organization” (Montgomery 1926, 273).(emphasis added)<sup>86</sup>

Here Landis mentions both restrictive work rules (i.e., jurisdictions) and jurisdictional disputes. Landis saw how the rules produced waste (i.e., inefficiency), but didn’t quite see that the rules played a purpose: they were to *enforce* monopolies, that is, jurisdictions, on the job-site.<sup>87</sup>

Landis strove to eliminate waste on the job-sites. In his wage-arbitration decision, he produced a wage schedule that tied a craft’s wage to the extent its work rules and practices led to waste. *The more waste, the lower the wage.* Here is Landis: “Other things being equal,

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<sup>86</sup>Landis called the Chicago construction industry “a thing diseased” (reported in Montgomery 1926).

<sup>87</sup>Landis, obviously, can be excused for not clearly seeing that restrictive work rules were part of the institutions to limit conflict among members of the monopoly-unions. He saw the *harm they created*. Very few economists since Landis have recognized this harm, much less the role they play in reducing conflict in monopolies. An exception is the great labor economist, Herbert Northrup.

trades having rules or conditions that produce or permit waste should have a lower wage, or a wage lower than the average rate.”

Landis listed a number of features of contracts which caused waste, and therefore would reduce a craft’s wage, including: “(1) Rules that limit in any way the amount of work per man, consistent with reasonable comfort and well-being; (2) Rules requiring skilled men or high-rate men to do work that less skilled or lower-rate men could do, or that other trades could do more economically; (3) Rules that expressly or by inference interfere with the manager or foreman in the dispatch of the work or the use of new and improved methods; (4) Rules that require work to be done by hand that could be done better or more economically by machinery, tools, or other improved methods; (5) Rules that require work to be done on the building that could be done better or more economically in the shop; (6) Rules requiring unnecessary helpers or assistants.” Montgomery (p. 272-273)

Landis not only studied the union contracts in Chicago, he also visited the construction sites to determine how the sites actually operated. So, the types of rules he describes were not only written in contracts but were followed on the work sites.

We’ll not venture to discuss these rules in any detail, but offer two examples. Contract feature (2) above, for example, referred to work rules like those of carpenters, and other highly skilled workers, that gave them jurisdiction to work, like moving materials around the work-site, that laborers were able to perform. Contract feature (5) above, for example, referred to work rules like those requiring windows to be *glazed on the job-site* and not in factories.

Landis knew it was not only monopoly-unions that led to low productivity in the traditional construction industry. Speaking of Landis, Montgomery stated (pp. 279-280) “The acute housing situation in Chicago he attributed, in large measure, to the ‘vicious practices’ on the part of both organized labor and organized employers, and to the monopolistic practices between them.” He also recognized the large waste inflicted by materials producers in Chicago.

Shortly after World War II, Lee Loevinger (1947), the future Assistant Attorney General for Antitrust for President John F. Kennedy, reviewed the state of the U.S. housing construction industry. He discussed how monopolies in the traditional sector lowered productivity, including the problem of jurisdictional disputes

On trade unions, Loevinger observed, “There is no doubt that the building trade unions do exert a powerful influence in opposition to the introduction of labor saving methods” (Loevinger 1947, 49). He continued, “Closely allied to the resistance against labor saving methods is the strong insistence on keeping as much work as possible within the ‘jurisdiction’ of each union . . . a policy which inevitably results in clashes between various unions. The details and evils of the ‘jurisdictional dispute’ within the ranks of labor are much too well known to require any elaboration. To expatiate on them at any length is rather like inveighing against sin” (50). And, he argued, “the consequences of such disputes are inefficiency, unnecessary expense, and a decrease in labor productivity” (51).

He also understood, as had Judge Landis, that building employers engaged in the same activities as trade unions. They resisted new methods: “As building trade unions frequently oppose labor saving devices and methods, so the building trade employers generally oppose

any methods or materials that will save expense and threaten to reduce profit” (Loevinger 1947, 53). They had jurisdictional disputes: “These units (firms) group themselves together into innumerable small functional segments, much like craft unions, and each small segment guards its own small area of business jurisdiction as jealously as any of the unions” (55).

Comparing the monopoly behavior of employee and employer organizations, he wrote: “The jurisdictional disputes between business groups are usually *not so well known* as those between unions, for they are not carried out in public. Nevertheless, such business tactics are probably more important than the corresponding policies of labor as far as increasing the cost to the consumer is concerned” (Loevinger 1947, 55).<sup>88</sup>

## A New Significant Source of Monopoly Harm

Toward the end of the 1930s, concern emerged among giants in economics and law about an emerging group of monopolies — those of the management groups that represented organized labor. A union is a combination of a management group and the organized workers they represent. These management groups were becoming monopolies — one group would represent all the workers in an industry. I sometimes call them *union-management* monopolies. As monopolies, these groups would be expected to behave as other monopolies, in particular, to inflict the same three harms that have been discussed in this section.

Before describing the contemporary evidence on the harm caused by these monopolies, I take a brief detour to describe developments in labor legislation and labor organizing in the

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<sup>88</sup>Loevinger concludes the paper by stating, “This is not a pleasant picture. The anatomy of the construction industry reveals handicraft methods, restraints of trade and restrictive practices, inefficiency, greed and graft.” (Loevinger 1947, 72).

1930s.

## Detour: Labor Legislation and Labor Organizing in 1930s

### Right to Collective Bargaining

In the mid 1930s, organized labor won significant legislative victories. Thurman Arnold (1943) described the victories this way: “When the history of our time is written the recognition of the right of organized labor to bargain collectively will be numbered among the great achievements of the Roosevelt Administration. It took a long time for Congress to accept the simple idea that unless industry is compelled by law to deal with labor as an organized group, workmen will be powerless to protect themselves against exploitation... The principle of collective bargaining expressed in the Wagner Act, in my opinion, is here to stay and every thinking American should be glad of it.”<sup>89</sup>

While Arnold praised these legislative victories, he was concerned about other developments that he saw threatening organized labor.

### Antitrust Exemptions for labor

One great concern of Arnold’s was that the organizations that represented workers, the union-managements, were being permitted to form monopolies. If these management organizations developed into monopolies, Arnold knew they would behave as any other monopoly. In fact, Arnold’s (1943) list of how monopolies behaved was presented in a paper about union-

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<sup>89</sup>This text is from the first paragraph of Arnold’s paper.

management monopolies. He saw how union-management monopolies in the construction industry had hurt labor, and now saw the monopolies spreading into the broader economy.

One development that was permitting these monopolies to form was Supreme Court decisions essentially granting union-managements an exemption from antitrust laws. Here is Arnold: “Labor acquired its present extensive power as a result of a series of Supreme Court decisions which suddenly and completely reversed the Department of Justice in the interpretation which it had previously put on the law. These decisions fell like a bomb on the Department’s policy of prosecuting indefensible labor restrictions. The Department’s attempts to free the building industry from the indefensible labor practices which made cheap housing impossible in many cities was sunk without a trace. Its program to protect independent unions from the aggressive attacks of labor leaders who sought personal domination against the desire of the workers ended at the same time.”

He continued: “Prior to these decisions the Department of Justice had believed that unions were subject to penalty under the Antitrust law when they used their power coercively for an illegitimate labor objective. It had thought that the special legislative privileges granted labor were intended to be used only to protect such things as wages, hours, safety, working conditions, the right of collective bargaining, and so on. It interpreted the law to mean that when labor power was used to destroy independent competing businesses, to prevent the use of efficient materials and machines or to destroy competing unions which were the free choice of the workers, those responsible could be prosecuted if the result was to restrain interstate commerce.”

Arnold concluded the paper with this: “

If present labor management succeeds in maintaining this power to destroy competing unions, to restrict production, and to handicap new enterprise, it may feed the present popular resentment against unions until the cause of collective bargaining itself is in danger. If we want to preserve strong unions, free to bargain without government interference or control, we must reestablish the power in the Department of Justice to prosecute those who abuse the privileges of organized labor to gain ends which are not only against the public interest but against the interest of labor itself.”

There were many other leading scholars that expressed concern with the growing monopoly power of union-managements, including Simons (1944), Wolman (1940,1948) and Stone (1947).<sup>90</sup>

Let me now turn to discuss some of the contemporary evidence on harm caused by these union-management monopolies that were emerging in the late 1930s/early 1940s.

## Harm Caused by Union-Management Monopolies

Union-management monopolies created the same harm as other monopolies. Here I focus on the harm of reducing productivity in the monopoly industry.

As union-managements began to form monopolies, the potential profit for members of management and of the organized workers significantly increased. Conflict among workers began to emerge in many of the industries. Just as groups on the construction site banded together to push for greater job jurisdictions, the same was starting to happen in the 1930s and 1940s on factory floors. These jurisdictions, and disputes over them, led to lower productivity.

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<sup>90</sup>For a review of Wolman’s (1948) book, see Underhill (1949).

Consider some manufacturing industries. Gaffey's (1940) Ph.D. thesis presents an interesting history of productivity growth in the *U.S. tire manufacturing* industry. Productivity soared in the early 20th century, but then slacked off in the mid 1930s. During the mid 1930s, a strong union-management team emerged, the United Rubber Workers (URW), which gained close to monopoly control. Gaffey (1940, 1941) points to poor labor relations as an important cause of declining labor productivity.

One of Gaffey's arguments supporting his view of poor labor relations leading to deteriorating productivity was changes in the location of the industry. The U.S. tire industry had been highly concentrated around Akron, Ohio, before mid 1930s. But with the emergence of the URW, it soon began to move to other parts of the country. Gaffey argued that this movement was initiated to escape the dulling impacts on productivity that accompanied the poor labor relations atmosphere in Akron, where the URW was strongest.

In a very nice analysis, Sobel (1954) shows that, over the period from 1935 to 1947, and consistent with Gaffey's hypothesis, the productivity of Akron tire plants significantly deteriorated relative to the productivity of tire plants in the rest of country (18, Tables 4-6).<sup>91</sup>

A few years after Sobel's work, Kuhn (1961) produced a major study of the labor relations environment at U.S. tire plants, in particular, those represented by the URW. He documented great conflict between workers in the plant. He argued this conflict, which he called factional disputes, and which I've called jurisdictional disputes, led to low productivity.

Other manufacturing industries experienced the emergence of a union-management monopoly during the 1940s, including the U.S. steel industry and the U.S. cement industry. Rose (1998)

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<sup>91</sup>See Greenwood and Weiss (2018) for a discussion of Sobel.



discusses how changes in labor relations in the steel industry in the 1940s and 1950s led to strong jurisdictions, and to declining productivity.

## 4 Economists Embrace Cournot ... Then Change View on Monopoly Harm

Essay 4 discusses how economists changed their consensus model of monopoly in the 1950s. It also discusses how, given the change in the consensus model, the profession changed its consensus view of the harm inflicted by monopoly in the 1950s. Over the course of perhaps two decades, centered roughly in the middle 1950s, economists completely changed their view about monopolies: At the start of the period, monopolies were thought to cause great harm; at the end of the period, they were thought to be of little concern.

### Economists Change Their Consensus Model of Monopoly

While the Arnold-Simons model of monopoly was the consensus model of monopoly in the first half of the 20th century, it was not the only model. In fact, the first model of monopoly was developed in the 1830s by Cournot (see Fisher (1898)). In the 1920s and 1930s, as mathematical economics began to develop, there was a great interest in the work of Cournot.

As we mentioned, the interest in the Cournot-monopoly model was *not* driven by the idea that it might be employed to help understand the 1930s crisis or, more generally, the great harm caused by monopolies. Here is J.R. Hicks: “The preoccupation of contemporary theorists with problems of monopoly does not appear to be due, as might perhaps be expected,

to their consciousness of the increased urgency of these problems in the modern world . . . [Rather,] the widespread interest in monopoly theory is much easier accounted for on grounds inherent in the development of economic theory itself” (1).

The Cournot model, then, was *initially* not seen as a model developed to understand the harm caused by monopolies. It was initially not seen as a competitor to the Arnold-Simons model as a way to understand the harm.

I have no particular insight into why the profession elevated the Cournot model to the consensus model to study monopoly harm.<sup>92</sup> An important reason, presumably, is that the model is easy to use. It’s likely that its repeated use and its increasing familiarity played an important role in the model gradually being considered the consensus model.

As I mentioned above, there were some economists that objected to the using the Cournot model for policy analysis. Writing in 1952, Machlup pointed out the Cournot model was a poor one to analyze monopoly policy. He pointed out the model had an embarrassing policy implication: Letting all firms in the economy be monopolies would eliminate all harm from monopolies. The cost of monopoly in the Cournot model arises because some firms (i.e., the monopolists) charge prices (relative to costs) that are higher than other firms. This leads to a misallocation of resources. If all firms were monopolies, then all firms charge the same price (relative to costs). The misallocation is eliminated.

Here is Machlup (1952, 34): “A comment of a different nature concerns the unequal distribution of monopoly power in the economy. If relative prices are the significant thing in

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<sup>92</sup>Above I did discuss a series of mistakes that were made along the way to adopting the Cournot model as the consensus to study monopoly harm.

the economic allocation of resources and if deviations of the competitive price relationships are the causes of misallocation, would not matters be improved by measures to equalize all monopolistic (bargaining) power? Would not relative prices then be more nearly the same as relative prices under universal competition? In other words, if the nation cannot reach its full economic potential when it is half monopolistic and half competitive, and if it is apparently too difficult to ‘demonopolize’ the monopolistic half, would it not be the best solution to monopolize the competitive half? ..... The idea of equalizing monopoly power ... is bad economics.”

Machlup knew this was bad economics because there were costs of monopoly not included in the Cournot-model. Here is Machlup (1952, 32): “One must be on guard against the widespread misunderstanding that the effects of monopoly power are always visible in the form of ‘exorbitant prices’ being charged to buyers .... Where the monopolistic restrictions lead to inefficient use of resources, it may be the economic costs that are excessive, not the profit margin.”

Though Machlup and others, like Robert Brady, objected, the Cournot model became the consensus model to study monopoly harm. It would soon be used by Harberger to estimate this harm.

Henry Simons was not involved in the debates over the usefulness of the Cournot model as one to study the harm caused by monopolies. Sadly, Simons died in 1946. I believe that, had Simons lived, he would have squashed the adoption of the Cournot model as the profession’s workhorse model to study monopoly harm.

Machlup and others deserve our recognition and great respect for their efforts to question the wisdom of using the Cournot model to study monopoly harm. But Simons was different. It was not only that his stature in the profession was unmatched. Or that he was one of the recognized leaders at one of the greatest economics departments at that time, that at the University of Chicago.<sup>93</sup> He rivaled Thurman Arnold in his deep knowledge of the workings of monopolies in the U.S. economy. And he added to all this a great concern, perhaps also unmatched among economists, though, again, matched by Thurman Arnold, for the economic and political future of the United States (and even the world).

Kasper (2010) writes of an episode where Simons was frustrated with, what he saw as, Frank Knight's lack of concern about the onslaught of monopolies and their threat to the liberal order during the 1930s. He wrote F.A. Hayek about this. Here is Kasper

It is interesting to note that Simons became quite disillusioned with Knight at this time, because he perceived that Knight had given up the fight for classical liberalism. He expressed these concerns in a letter to F.A. Hayek about the 'Positive program': "If my proposals seem, as a whole, too drastic, let me explain that both the religion of freedom, and intellectual interests along liberal lines, seem dead here than in England. One must struggle as hard with friends as with enemies; the competent people are mainly, like Frank Knight, ready to abandon all their hope and faith, and to occupy themselves largely with explanations of why the deluge is both imminent and inevitable." (Henry C. Simons to F. A.

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<sup>93</sup>Simons, in fact, started in the economics department and then moved to in the Law School. But his influence spread throughout the university.

Hayek, 18 December 1934, Henry C. Simons Papers, Box 3, Folder 40, p. 2)<sup>94</sup>

Simons wrote *Positive Program*, of course, during the Great Depression, when such passion and concern were desperately needed. Simons provided this when so many others did not. One often sees the word “courageous” used by contemporaries in describing his work.

I have not read anything like the *Positive Program*. It’s a mix of great passion and concern, but also great learning and knowledge.<sup>95</sup>

## Economists Change Their Consensus About Costs of Monopoly

As economists began to consider the Cournot-monopoly model as the consensus model, *they did not change their view that monopoly was costly*. They had switched their model, but not their view that monopoly was costly. The widespread consensus remained that monopoly was very costly. This is clear when we consider the reaction to the seminal paper by Harberger (1954).

As mentioned, Harberger (1954) asked: What is the cost of monopoly? Using the consensus model, that is, the Cournot-model of monopoly, Harberger found that the costs of monopoly in the United States, during the years 1924-28, were very small.

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<sup>94</sup>To be fair to Knight, it seems he always had less concern about monopolies than his economics peers of the early 20th century. He wrote in some places that the concern about monopoly was greatly overstated. He was in debates with non-economists like Bertrand Russell over “power,” so some of his writing may have been for this philosophy audience. Because Knight did mention, as discussed above, that the biggest monopolies in the late 1930s were farmers and labor unions, two groups that were not small.

<sup>95</sup>Simons writes succinctly about the harms inflicted by monopolies. Sometimes he summarizes a harm in a single sentence, making his great learning not easy to appreciate. Each time I read *Positive Program*, I see more of his learning. When I visited Simons’ archive, and looked at his notes, I would sometimes see one of these succinct sentences. In his notes, Simons sometimes added a few more sentences. As I suspected, his additional sentences revealed more of his great learning. I’ll give an example or two of this bellow.

Also mentioned was the widespread skepticism over Harberger's findings. The vast majority of the skeptics *did not question* the Cournot model. They did not argue that Harberger used the "wrong" model (as Machlup would, see below).

Some skeptics wondered if his results would hold for other time periods in the United States, or for different countries. Robustness studies on these counts confirmed Harberger's findings (see, for e.g., Schwartzman 1960). Other researchers questioned whether the results were robust to different assumptions about the elasticity of demand, and so on. After some back and forth, it was concluded that Harberger's findings were robust to these issues as well (see, e.g., Worcester (1975) for a review and summary of this literature).

The upshot was that Harberger's findings that the costs of monopoly were small became the consensus view. The profession had completely flipped its view of the costs of monopoly.

Recall Harberger's error. When Harberger estimated the costs of monopoly in the Cournot-monopoly model, he was estimating the costs resulting from *misallocation of resources*. But he assumed he was calculating *all the costs of monopoly*. He was wrong. His error was ignoring that monopolies kill substitutes, harm institutions more generally and lower productivity in the industry.

Harberger was using the wrong model.<sup>96</sup> Not surprisingly, when Harberger published his findings that monopoly had small costs, Machlup (1955) was quick to point out that Harberger had the wrong model, that monopolies have costs beyond misallocation.<sup>97</sup> Again Machlup: "Some of the economic consequences of monopoly excluded from Harberger's esti-

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<sup>96</sup>By "wrong" model, I mean he was using the Cournot model when a much better model was available.

<sup>97</sup>The 1955-reference to Machlup is under Ackley, Gordon and Machlup (1955).

mate of its welfare cost . . . [include] high production cost behind monopolist barriers, such as tariffs, patents, building codes; ...”

The economics profession ignored Machlup and others writing in the 1950s. It also ignored the evidence produced during the first half of the 20th century. And, of course, it ignored Thurman Arnold and Henry Simons, among other giants in economics and law. The saying goes “We stand on the shoulders of giants.” But not if we ignore them.

The economics profession never corrected Harberger’s error. As a result, for the economics profession the cost of monopoly came to mean the costs associated with the misallocation of resources. The profession has repeated Harberger’s error for 65 years.

## Harberger’s Contribution and Its Long-Lasting Influence

The costs of monopoly in the Cournot model are similar to the welfare costs of commodity taxation. Such taxation leads to “price distortions,” that is, to some firms charging prices (relative to their costs) that are different than other firms. Commodity taxation, then, just like monopoly, leads to misallocation of resources.

These tax-distortions were well understood when Harberger began his monopoly paper. But the “size” of the losses from the distortions, from the resulting misallocation, was not known. Harberger’s contribution was being one of the first to show how to estimate the size of the losses, whether they be from taxation or monopoly pricing. It was a significant contribution.<sup>98</sup>

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<sup>98</sup>For excellent discussions of Harberger’s contribution, from which I heavily borrow, see Hines (1999, 2001).

Harberger's work quickly drew the interest of many economists in other applied fields that had integrated the ideas of commodity taxation into their research. These included public finance and international trade.

His work drew great interest for a number of reasons. First, again, Harberger showed the possibility of using the theory to calculate the size of losses, from taxes, tariffs and other policy instruments. Second, given his surprising results of very small costs, economists in other applied fields wondered if the results applied widely. Were the costs of tariffs small?

Work in international trade showed that, indeed, the costs of tariffs were small (see, e.g., Harry Johnson (1960) and Robert Stern (1964)).

Harberger's findings opened up new research on monopolies in other fields of economics, like labor economics. Albert Rees (1964), employing a Cournot type model, asked what was the costs of a union-management monopoly choosing a wage as a monopoly supplier of labor. He found the costs were very small, roughly the same findings as Harberger, a loss of \$600 million or 0.14 percent of national output. (pp. 70-71).

Rees' work led, at least in part, to the consensus view in labor economics that union-management monopolies have small costs to society.<sup>99</sup>

But it's important to note that Rees recognized that his model of union-management monopolies, his Cournot-type model, missed key costs of these monopolies, like the killing of substitutes, the harming of non-market institutions and the lowering of industry productivity. He briefly considered other losses, in particular, the costs from productivity losses in

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<sup>99</sup>Again, the only labor economist that I know who was aware of the great costs of union-management monopolies, and wrote about them, was Herbert Northrup.



railroads from *restrictive work rules*. He notes that management in railroads estimated that obsolete work rules amounted to “deadweight losses” of \$500 million. This loss was nearly the same as the entire costs from elevated monopoly wages (again, \$600 million).<sup>100</sup>

The criticism of the Cournot model, and Harberger’s result, did not end with Machlup and others that wrote in the 1950s. There were critics in the 1960s and 1970s as well, including Robert Mundell, Harvey Leibenstein, Gordon Tullock and Mancur Olson.

Robert Mundell (1962, p. 622) responded to the finding that the costs of tariffs were small in a way similar to Machlup’s reaction to the monopoly results. He didn’t quite say that “the model was wrong,” but argued the model needed to be thoroughly re-examined. Here is Mundell: “... there has appeared in recent years studies purporting to demonstrate that the welfare loss due to monopoly is small, that the welfare importance of efficiency and production is exaggerated, and that gains from trade and the welfare gains from tariff reduction are almost negligible. Unless there is a thorough theoretical re-examination of the validity of the tools on which these studies are founded, and especially of the revitalized concepts of producers’ and consumers’ surplus, some one inevitably will draw the conclusion that economics has ceased to be important!”

In fact, there were “theoretical tools” available when Mundell wrote his review. These tools showed the costs of tariffs were much broader than those arising from misallocation of resources. These tools were those of the Arnold-Simons model of monopoly. We discuss this below when review Essay 18.

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<sup>100</sup>In the 1960s, there were tens of thousands of “firemen” on diesel trains. Presumably, the wages of these firemen were part of the overall estimate of deadweight losses.

Twenty years after Reder (1947) argued that monopolies don't maximize profits, Harvey Leibenstein (1966) published his famous paper on X-efficiency, "Allocative efficiency vs X-efficiency." Leibenstein argued that monopolies don't maximize profits and were inefficient, but he never really explained why. Stigler (1976) attacked Leibenstein in his paper "Xistence of X-efficiency." It's too bad Stigler did not discuss Reder's work, for it provides a convincing argument of why monopoly reduces productivity. It's too bad because if Stigler had introduced Reder's work into the debate on X-efficiency, which received lots of attention, Reder's work would have gained a wider readership.

Gordon Tullock (1967) criticized using the Cournot model of monopoly as the workhorse for studying monopoly harm. He argued that the Cournot model missed important losses that were inflicted by monopolies, so that Harberger badly underestimated losses from monopoly. His idea was that monopolies are often "granted" by governments and that groups expend significant resources to "acquire" ownership of these government-monopolies. These are "wasted resources," he argued, and should be counted as costs of monopoly. Anne Krueger (1974) and Richard Posner (1975) further elaborated these ideas.

Tullock's theory told him these wasted resources were of great magnitude. He searched his whole life for evidence of these wasted resources. Tullock (1997) admitted his frustration at having found no losses of any substantial size.

But Tullock came close to finding large losses from monopoly. The losses were not, in fact, directly related to his original theory, but Tullock seems to have been expanding his ideas over time. In particular, Tullock (1997) mentioned a fight between GM management and the UAW, which he assumed might lead to wasted resources. But he noted peace was achieved,

so that the losses were minimal. He didn't consider the possibility that peace came at a steep price. The peace treaty — the union contract and other documents — had significant side-effects. Peace came at a cost of lower productivity.<sup>101</sup>

Mancur Olson was deeply concerned about monopolies and their impact on national economic health. In *The Rise and Decline of Nations*, Olson (1983) developed a theory to explain the stagnation, in fact, the stagflation, that had enveloped so many developed economies in the 1970s. He mentioned Harberger's (1954) seminal paper in a positive way, but noted that such an analysis was ill-equipped to address these much bigger issues of stagnation (p. 149). The monopoly losses of the theory were too small.

Olson's theory was based around the idea of *special interests* that organized themselves into concentrations of power to promote their economic and social goals. Such promotion might include, for example, the blocking of new technology that would lower the earnings of members of the group. Olson's theory was much more general than Tullock's.

Olson did not, in fact, use the word monopoly to describe these special interests, but clearly they are. If we look at his index, say, under *cartel*, and then under “*see also*,” we find such groups as business associations, farm organizations, labor unions, and professional associations, all groups that we have characterized, and others have characterized, as monopolies.

I find Olson's main ideas to be closely related to the ideas about monopoly discussed in these essays. I find them similar to Arnold's and Simons' ideas on monopoly. Simons argued

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<sup>101</sup>I imagine that Tullock didn't know Reder's (1947) work. Recall that Reder argued that groups within monopoly firms fight over the monopoly profits, leading to reduced productivity. It's too bad Tullock did not know Reder's work, for if he did, he may have explored this conflict between GM and the UAW in more detail, and found some of the large losses he had searched for.

that free markets tended toward monopolies. Here is Olson's view: "As I read it, the ark and covenant of laissez-faire ideology is that the government that governs least governs best; markets will solve the problem if the government only leaves them alone." ..... "If the .... theory in this book is right, there will often *not* be competitive markets even if the government does not intervene. The government is by means not the only source of coercion or social pressure in society. There will be cartelization of many markets even if the government does not help." (pp 177-178)

Toward the end of his book, as Olson summarizes his thoughts, he argues: "The most important macroeconomic policy implication is that the best macroeconomic policy is a good microeconomic policy. There is no substitute for a more open and competitive environment." (p. 233) Olson continues: "If combinations dominate markets throughout the economy and the government is always intervening on behalf of special interests, there is no macroeconomic policy that can put things right." (p. 233)

Again, all this sounds a lot like Thurman Arnold, Henry Simons and other giants of the 1930s. I say this, of course, as a compliment of the highest order.

## **5 Theories of Sabotaging Monopolies: 1995-2015**

In Essays 5 and 6, I discuss research on sabotaging monopolies over the period 1995-2015. The research is both theoretical, including the development of models, and also factual, that is, historical studies of how monopolies behave and how they harm the low-income. These two strands of research, the theoretical and the historical, progressed at the same time, with each

strand supporting the other. New theory suggested new ways to look at actual monopolies; new historical findings led to new ideas about theory. While the strands developed hand in hand, we'll artificially separate discussions of them, with Section 5 discussing the theory and Section 6 the historical studies.

The titles of both Sections 5 and 6 include the dates "1995-2015" to emphasize that the material in these sections is about studies that were begun prior to the most recent research that is presented in Essays 7-17.

## 5.1 Theories of Sabotaging Monopolies: Killing Substitutes

As already mentioned, Thomas Holmes and I developed a model of a sabotaging monopoly in Holmes and Schmitz (1995). When we began our research, the dominant model of monopoly was the Cournot-monopoly model (and its cousin the Cournot-oligopoly model). We assumed, mistakenly, that this had "always" been the case. So, we imagined our research on sabotaging monopolies was a significant contribution. Of course, the contribution had been made at least a half century earlier, by Arnold, Simons, and their colleagues.<sup>102</sup> The model is of a monopoly that has the option to destroy a new, low-cost substitute if enough resources are devoted to the task. We leave the type of investment unspecified, so it could be lobbying expenses to declare the new substitute unsafe, spending on disseminating misinformation and deceit about the substitute, other investments in sabotage, or combinations

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<sup>102</sup>As I just indicated above, Olson's (1983) work shared much with Arnold, Simons and others, and preceded our work. We cited his work in Holmes and Schmitz (1995), but only briefly. It's hard to remember but, looking back, I'm pretty sure we didn't fully understand the importance of Olson's contribution. Still, when we corresponded with Olson about our paper he was nothing but gracious in his comments, saying nice things about our work.

of them.

We did not stumble upon a model like the Arnold-Simons model. It was not luck. Rather, we developed it for the same reasons Arnold, Simons and others did: Evidence. Just as they saw sabotage of substitutes in the 1920s, 1930s, and 1940s, Thomas Holmes and I saw it in the 1980s. Our model was motivated by evidence of monopolies sabotaging substitutes in construction, dairy manufacturing and car manufacturing. Our extension of these ideas, Holmes and Schmitz (2001a), was motivated by sabotage in other industries (including banking, communications and transportation).

## **5.2 Theories of Sabotaging Monopolies: Destroying Productivity**

We also developed a model of why sabotaging monopolies reduce productivity. We've already described the theory in various parts of this Introductory Essay. The theory is ideas in narrative form (see discussions in Schmitz 2012, 2016). With large monopoly profits, there is conflict among members of the monopoly. To limit this conflict, monopolies use rules to limit competition, like jurisdictions. These rules often reduce productivity.

Of course, this contribution had also been made at least a half century earlier, by Reder (1947). We did not stumble upon a model like the Reder-model. It was not luck. Rather, we developed it for the same reason as Reder: Evidence.

Let me now turn to discuss the factual studies of monopolies we conducted while simultaneously developing the models. Here, again, we discuss factual studies that were begun in the 1995-2015 period, that is, prior to the factual studies that are in Essays 7-17.

## 6 Evidence About Sabotaging Monopolies: 1995-2015

Most of our initial factual studies were about the impact of monopolies on productivity. So, we start there.

### 6.1 Evidence that monopolies destroy productivity

Given our work in the middle 1990s, Thomas Holmes and I knew that the consensus model of monopoly, the Cournot model, missed important aspects of what monopolies did, like sabotage low cost alternatives. But what else did the Cournot monopoly model miss?

There was a widely held view among the general public that monopolies produced inefficiently, that they led to low productivity. We wondered if this was true.

It was certainly not the predominant view of the economics profession. The long-held view was that monopolists *produce efficiently and maximized profits*. There is an economic logic to support this assumption, sometimes posed as questions: Why wouldn't a monopolist produce efficiently? or maximize profits? George Stigler makes this argument: “[T]he goal of efficiency is pervasive in economic life, where efficiency means producing and selling goods at the lowest possible cost (and therefore the largest possible profit). This goal is sought as vigorously by monopolists as by competitors...” (1988, p. 162-163).

How did Stigler know that monopolists produced as efficiently as competitive firms? His claim was solely based on introspection — on his logic. He gave no evidence.<sup>103</sup>

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<sup>103</sup>Stigler makes this claim in his autobiography, where there is no expectation that claims be backed up by sources. But to my knowledge he presents no such evidence in any of his publications.

When, in the 1990s, we looked for evidence on this issue, we found no convincing evidence. So, we set a goal of developing evidence about the impact of monopoly on productivity. Developing convincing evidence, of course, would be difficult. So, our first goal was to develop such evidence for a few industries. If we were successful, our next goal was to develop evidence on a wider scale.<sup>104</sup>

To achieve the first goal, we set some parameters to guide us. We wanted to study organizations that had been monopolies for long periods of time and that then experienced very sharp, quick increases in competition.<sup>105</sup> We wanted the behavior of the members of the monopoly to be easily observed, both before and after the increase in competition. And we wanted the monopolies to be in industries where productivity could easily be measured.

This led us to industries in transportation and manufacturing. In the industries we identified, there was typically more than one monopoly. In many of them, there was a strong union-management monopoly. We initially focused on these union-management monopolies because the behavior of these monopolies was more easily followed than the others, as publicly available union contracts and other documents provided details on behavior.

Some of the industries where we began historical studies included: U.S. water freight-transportation, that experienced a surge in competition with the development of railroads in the mid to late 19th century (Holmes and Schmitz (2001b)); U.S. iron ore manufacturing, which experienced foreign competition for the first time, in the 1980s, and from Brazil, in

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<sup>104</sup>As we worked on these productivity studies over the 1995-2015 period, we slowly found, of course, that there is convincing evidence of monopolies reducing productivity produced *before WWII*. There is also such evidence developed in the 1950s, 1960s and 1970s. Most of this latter evidence is found in studies of the construction industry with, again, Herbert Northrup leading the way.

<sup>105</sup>Of course, the opposite situation would also work: an industry that had been competitive for long periods that had suddenly been overcome by monopolies.



the Great Lake ports where steel was manufactured (e.g., Gary, Indiana, and Cleveland, Ohio) (Galdon-Sanchez and Schmitz (2002) and Schmitz (2005)); U.S. cement manufacturing which experienced surges in competition, also in the 1980s, from producers across the world (Dunne, Klimek and Schmitz (2010, 2014)); U.S. tire manufacturing, that had an experience like that in cement; and U.S. sugar manufacturing, that experienced a dramatic increase in domestic competition once a domestic cartel was abolished in 1974 (Bridgman, Qi and Schmitz (2009, 2015) and Bridgman, Qi, Schmitz and Teixeira (2019)).

*Achieving First Goal: Some Monopolies Don't Produce Efficiently*

Essay 6 discusses how we achieved our first goal with the studies started during 1995-2015. The studies mentioned directly above show that, in these manufacturing and transportation industries, monopolies weren't producing efficiently, and were not maximizing profits. When these industries were subjected to dramatic increases in competition, productivity soared in a short period of time.

*Pursuing Second Goal: Wider study of monopoly and productivity*

With the first goal achieved, we sought to expand our study to a broader range of industries. This new research, conducted roughly after 2015, is presented in Essays 7-17.

As suggested, we were aided by theory when we expanded the range of industries we studied. When we discovered that productivity was destroyed in transportation and manufacturing industries by monopolies *building jurisdictions and restrictive work practices to limit competition* within the monopoly, we looked for the same behavior in other industries. It took some time but we finally realized the same behavior we were observing in manufacturing was

occurring throughout the economy.

That it was happening in construction was fairly easy to see. But then we realized, as the essays below show, it's true in legal services, oral health services and so on. The restrictions that lawyers and dentists place on themselves to limit competition are just like those of cement and tire manufacturing workers.

## **6.2 Evidence that monopolies sabotage substitutes**

In the initial industries we studied to examine the link between monopoly and productivity, again, mostly manufacturing industries, substitute products, here foreign manufactured goods, were often blocked by tariffs and/or anti-dumping actions. In many cases they were blocked by “natural” barriers, that is, high transportation costs in local U.S. markets from overseas.

As we began to expand our study of monopoly and productivity into a broader range of industries, like oral health and legal services, we realized that these monopolies were also blocking substitutes. The monopolies aren't blocking substitutes through tariffs and the like, as in manufacturing industries, but through laws that make substitutes illegal, through deceit, and so on.

## **6.3 Why was there a surge in competition in these industries?**

We mentioned above that we looked for industries that experienced surges in competition. The sources of the surges is obvious now, but we still state it. When a monopoly reduces

productivity and its growth in an industry, the industry's productivity will fall further and further behind similar industries where there are no monopolies. The monopolistic industry will ultimately be threatened by these competitive industries unless, of course, members of the monopoly find ways to block the competitive industries (with tariffs, for example). In all the transportation and manufacturing industries mentioned above, monopolies significantly reduced productivity growth. It's not surprising, then, that at some point these U.S. industries would face significant competition from producers in these same industries in other countries where there were no monopolies (or they were not as strong).

# Today, Monopolies Inflict Great Harm

In the rest of the essays, we turn to our most recent evidence on sabotaging-monopolies, showing that they are inflicting great harm across the United States, in markets and non-market institutions. Most of the material that we present from these essays will be the factual part of the essays, that is, the historical analysis of the monopolies and the harm they create. We won't spend much time discussing the models in these essays that are being employed to estimate the harm monopolies are inflicting. Most of the models are extensions of the sabotaging-monopoly model in Holmes and Schmitz (1995).<sup>106</sup>

In the next five sections we discuss the essays on monopolies in oral health services, legal services, residential construction, hearing aids and eyeglasses. In these five industries, many low and middle income Americans are simply unable to purchase the good or service produced by the industry.

*Hearing aids* and *legal services*, as discussed below, are beyond the means of nearly all low-income (and many middle-income) Americans. The same is true for *eyecare and eyeglasses*, though not to the same extent.

For *oral health services*, low-income Americans may receive insurance from the government. But many live in areas with little or no access to dentists (and often areas with little public transportation), areas called Health Professional Shortage Areas. These areas are in both rural and urban regions. In areas with dentists, the low-income must find dentists who will

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<sup>106</sup>The Holmes-Schmitz model descends from the work of Arnold, Simons and many of their colleagues. There is a literature in industrial organization that discusses “exclusionary conduct” and “raising rival’s costs.” The reader can easily find some of this work, if interested. But the Arnold-Simons model predates this literature, and is complemented by a very large literature that discusses extensive historical evidence on monopolies that *sabotage* and *destroy* rivals.

accept their insurance. Many middle-income Americans don't have insurance, and face little access to oral health care.

As far as *housing services*, while the great majority of low-income Americans have shelter, it's only through subsidies (which ultimately support stick-builders) that they are able to rent their shelter. Even with growing subsidies, homelessness and eviction are growing. Moreover, the threat that families face these outcomes each month is growing.

Because of the importance of these goods for economic well being, when consumers can't buy these goods, the cases are often described as economic crises.

In all these industries, monopolies have blocked low cost substitutes that the low- and middle-income would have purchased. The monopolies, then, clearly *play a role* in the crisis. I think many readers, perhaps most, after reading the material in these essays, would not object to my characterizing their role as *the overwhelming reason* for the crisis.

## 7 Oral Health Services

Let me begin by showing nothing has changed in the ADA's behavior since the late 1940s. Recall our discussion above of how the ADA destroyed the program in Massachusetts in the late 1940s to train therapists to treat low-income children. A similar program was launched in the early 2000s to train dental therapists to practice in Native American villages in Alaska. The villages were extremely isolated, meaning they received little dental care. Oral health was very poor. Just as in Massachusetts, when the ADA learned of this program in Alaska,

it attempted to kill it.<sup>107</sup>

The program to train dental therapists in Alaska was a joint effort of Native Americans in Alaska and Universities in New Zealand. Since there were no programs to train therapists in the United States, the New Zealand Universities agreed to train, at no cost, members of the villages. By 2003, the first class was sent to New Zealand “where they received training to provide oral examinations, preventive services, simple restorative services [filling cavities], stainless steel crowns, simple extractions and radiography.”

Once they learned of the program, the Alaska Dental Association (ADS) and ADA attempted to block the program. The ADS and ADA brought lawsuits against, among others, the state of Alaska and the individuals who had been trained and certified as dental therapists in New Zealand.

An ADA press release during the fight stated: “We cannot and will not stand by while non-dentists perform irreversible dental surgery [filling cavities] on Alaska Natives and others, procedures that other Americans receive only from fully trained, licensed dentists who operate under the safety and accountability standards set by state dental boards.”<sup>108</sup>

These ADA statements closely mirror those it made in Massachusetts more than half a century earlier. In this case, the Native American tribes ultimately asserted their independence, ignored the ADA, and continued the program.

I now briefly discuss the oral health crisis. I then discuss the low-cost substitutes blocked

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<sup>107</sup>Much of this discussion is based on “A Brief History of the Development of Alaska’s DHAT Program and the American Dental Association’s Strong Opposition,” by Ronan Brooks.

<sup>108</sup>This is from "Lawsuit Puts Alaska Native Dental Care at Risk." Cultural Survival. Cultural Survival, Dec. 2005.

by monopolies. Finally, I discuss how the oral health monopolies, because of conflict and fighting among members, lowered productivity in the monopolized industry itself.<sup>109</sup>

## 7.1 There is an oral health crisis in the United States.

Many low-income and middle-income Americans have very poor oral health. One measure of poor health is untreated caries (cavities). Consider data provided by the Centers for Disease Control and Prevention (2017). Over the period between 2011 and 2012, and among those aged 45-64, the fraction of individuals with untreated caries was 51.6% for those at or below the poverty level. For those whose income was four times or greater than the poverty level, the fraction was 11.7% (Table 60).

Other information comes from the Department of Defense (DoD) which conducts oral health surveys of new recruits at time of entry. Of the 2008 recruits, 72% required a dental restoration (“2008 Department of Defense (DoD) Recruit Oral Health Survey” 2011, 14).<sup>110</sup> Of the 2008 recruits, 54.9% required a tooth extraction (21).

The DoD uses such measures of dental health to assess whether the new recruit is ready for a worldwide deployment. For the year 2008, 52.5% of new recruits were considered not ready for a worldwide deployment (“2008 Department of Defense (DoD) Recruit Oral Health Survey” 2011, 9). Their oral health was too poor. These are the recruits given dental readiness classification 3, the lowest (worst) dental classification.<sup>111</sup>

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<sup>109</sup>research with shi qi, kyle herkenhoff

<sup>110</sup>A dental restoration or dental filling is a treatment to restore the function, integrity, and morphology of missing tooth structure resulting from caries or external trauma. Dental restoration also refers to the replacement of such structure supported by dental implants.

<sup>111</sup>For a discussion of the classifications, see Appendix B in Department of the Army Headquarters (2009,

## 7.2 Monopolies in oral health services block substitutes

There are non-dentist professionals who offer low-cost substitutes to services provided by dentists. These professionals include hygienists, denturists and therapists. Hygienists are professional who clean teeth and provide education. Therapists are oral health care professionals who can treat and fill cavities. Denturists can mold and fit dentures.

Strong monopolies, including state dental associations and the American Dental Association (ADA), block these professionals offering low cost substitutes. These monopolies are instrumental in having state laws passed that block the practice of the professionals. Hygienists must work in dentist offices, and then many states limit the number of hygienists that can work in the office (often one or two).<sup>112</sup> Therapists are outlawed from providing services in nearly all U.S. states. The same is true for denturists.

Blocking these low cost substitutes not only means that some Americans face higher prices for oral health services than they otherwise would. It means many low-income households have little or no access to oral health care.

## 7.3 Costs of Blocking Large, Benefits of weakening monopolies

### Great

To understand the *costs* of blocking substitutes, lets consider the *benefits* of breaking these monopolies, of allowing these low-cost substitutes. I argue it would lead to large increases

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B-1).

<sup>112</sup>An exception is Colorado where hygienists can practice independently.



in the well being of low and middle income Americans. I present the argument in two ways: from the logical perspective and then from the experience of allowing the low cost substitutes.

The logic for allowing these non-dentist professionals to practice is clear. Imagine dental therapists initially are banned. The benefits for allowing them include:

1. *There is no need that a person be trained to perform root canals in order to be trained to treat cavities.* Allowing substitutes would save significant resources, from society's perspective, on investment (i.e., educational investment).

2. *Allowing these substitutes would expand the markets for oral health services.*

Define a *market* by three items: a *location*, a *day of the week* and a *time of day*.<sup>113</sup> So, a market might be, say, *{50th Street and 2nd Ave, Mondays, between 3-4 pm}*, where we denote a market by brackets, that is, *{.}*. Let's call this *market - 1*.

Imagine that when therapists were banned, dentists were offering services in market-1. Allowing dental therapists to practice would lead to lower prices for filling cavities in this market. That is, if we let  $p_{dent}$  denote the price for a dentist filling a cavity when therapists are banned, and  $p'_{dent}$  and  $p'_{ther}$  denote the prices of filling cavities by a dentist and therapists when therapists are permitted, respectively, then in *market - 1*, we expect  $p_{dent} > p'_{dent} > p'_{ther}$ .<sup>114</sup>

But likely this would be only a small part of the overall gains from allowing therapists to practice. Bigger gains would come from the creation of new markets for oral health care,

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<sup>113</sup>In Essay 7, we develop a formal mathematical model in order to estimate the gains from allowing therapists. In this section, we've used some of the notation from that model. Hopefully this notation helps the reader.

<sup>114</sup>There are many reasons both dentists and therapists would operate in a market even if their services for filling cavities were close substitutes.

and the ability of the poor to access oral health care in these markets.

If therapists were permitted, markets would likely expand at *existing locations*. Dentists have limited hours. They typically have no evening hours, nor do they provide services on weekends. Therapists could be expected to expand markets at existing locations in both these dimensions — hours of service on given days, and more days of the week.

A new market might be *{50th Street and 2nd Ave, Mondays, between 7-8 pm}*. Let's call this *market – 2*. The only difference from *market – 1* is that its an evening hour.

Therapists would also be expected to offer services in *new locations* that are not currently served by dentists, such as low-income neighborhoods in urban areas and rural areas. A new market might be *{50th Street and 32nd Ave, Mondays, between 3-4 pm}*. The only difference from *market – 1* is that it's located at *50th Street and 32nd Ave*, which we imagine is a low-income neighborhood where there were no dentists in the surrounding area when therapists were banned.

That there are large welfare gains associated with allowing dental therapists to practice in Native American villages in Alaska is not hard to imagine. Perhaps not as obvious, but also true, is that large gains would result from allowing therapists to practice in poor areas throughout the United States, in both rural and urban areas. A resident of a Native American village in Alaska might be hundreds of miles from a dentist. But for a resident of a rural town that has no dentist, with the nearest dentist in a town 10 miles away, the impact is often the same. Getting to the dentist is not economically feasible. Travel to and from the dentist may take large amounts of time. The time requirement may preclude an individual to

leave work for an appointment (during dental hours). If the household is headed by a single parent, children must be brought along or cared for by someone else. And these problems are for those that have decent transportation options. Allowing hygienists and therapists to operate in such areas would lead to significant increases in well being in many rural areas.

Moreover, the situation may be similar for a poor person living in an urban area where a dentist may be a mile away. This situation has been known at least since the 1970s, when a large literature examined the use of free health clinics in New York City and found that many eligible poor households were not using the free services available. Researchers found that a variety of factors played a role: the number of children in the family, the ability of a parent to take time off work, the distance to the clinic, and the transportation options available to the parents (see, for example, Acton 1975).

### *3. Experience shows therapists are effective and have greatly helped the poor.*

There are different types of evidence showing that therapists provide competent care, and disproportionately serve the low-income.

3-i. University studies. Studies at U.S. universities have shown over and over that therapists can provide services like filling cavities at a comparable quality level to those of dentists (see Nash et al 2012).

3-ii. Experience in Alaska. In the United States, therapists first practiced in Native American villages in Alaska. These were low-income areas with little, if any, access to dental services. Great improvements in dental health have been achieved since therapists began practicing (Chi et al. 2017).

3-iii. Other countries. Therapists are permitted to practice in many countries throughout the world. In these countries, we can see the great benefits they bring to the poor. Two countries which provide among the most liberal practice opportunities are Australia and New Zealand. Consider the fraction of therapists making up the combined dentist and therapist workforce in these countries.<sup>115</sup> In Australia, the share is 11.4%; in New Zealand, it's 27.5%. Therapists, then, make up a not insignificant share of the oral health workforce in both countries. Moreover, note that the share of cavities filled by therapists is greater than the therapist share of employment as dentists also provide more complex procedures, like root canals.

If we look at the populations that therapists serve, we see that they disproportionately serve the poor and low-income in these countries. One proxy for low-income patients are patients at public clinics. The therapist share in public clinics is 40.6% in Australia; in New Zealand, the share is 84.6%.<sup>116</sup>

Denturists are also allowed to practice in Australia and New Zealand. In Australia, there are three denturists for every 100 dentists in the entire country. In Tasmania, the poorest region, there are 23 denturists per 100 dentists.<sup>117</sup>

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<sup>115</sup>I am considering the ratio of “number of therapists” to “the number of therapists plus the number of dentists.”

<sup>116</sup>For Australia, the source is Teusner, Dana N., Sergio Chrisopoulos, and David S. Brennan (2007): p. 48, 83. For New Zealand, the source is New Zealand Dental Council. “Dental Council Workforce Analysis 2013-2015.” (July 2017): p. 46, 100.

<sup>117</sup>Tasmania is the poorest state in Australia, with a Gross State Product per capita (GSPPC) equal to AU\$55,056 (equivalent to \$39,390), compared to the Australia Gross Domestic Product per capita (GDPPC) equal to AU\$69,402 (equal to \$49,653). The ratio of GSPPC to GDPPC for Tasmania is 0.793.

## 7.4 Monopolies in oral health services lower productivity within the industry

As mentioned above, monopolies exploit their own members, often leading to lower productivity and its growth. This is certainly true with dental monopolies.

As always, it's the availability of profit opportunities within the monopoly that leads to conflict among members of the monopoly. And within the dental monopoly, there are great profit opportunities. One source of the profit opportunities, as with most monopolies, is the sabotage or destruction of low cost substitutes. But the dentist monopoly has done much more. Dentists have been successful at erecting significant barriers to becoming a dentist.<sup>118</sup>

Blocking all low cost substitutes, and erecting tremendous barriers to entry, has meant there are large *potential* profits for dentists. These large profit opportunities present great incentives for individual dentists to expand their practices, leading to potential cutthroat competition among dentists. They can expand by, for example, hiring other dentists, hiring non-dentist professionals or introducing new types of capital and equipment.

To limit this competition, dentists are instrumental in passing laws that limit the extent to which dental practices can compete with each other. They limit the number of hygienists a dentist can hire. They also limit the number of therapists (by outlawing them). Other laws limiting expansion include those prohibiting non-dentists from owning or managing a dental practice, thereby limiting financial and managerial inputs. By limiting the size of dental practices, these laws limit competition.

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<sup>118</sup>Contrast this with the legal monopoly. While the legal monopoly has blocked all low cost substitutes, it has not created overwhelming barriers to entry.

There are, of course, side effects: *productivity is reduced*.

But matters are worse: the laws also reduce the *incentive for innovation*, for experimenting with new forms of organization. A new organizational innovation may well be at odds with the existing laws proscribing the behavior of dentists. Therefore, the diffusion of an innovation may be blocked. This, of course, reduces incentives to find innovations in the first place.

Consider what happened to Sarrell Dentistry, an innovative dental group in Alabama.<sup>119</sup>

Sarrell saw a great need for oral health care among the poorest children in the poorest counties of a very poor state – Alabama.<sup>120</sup> It developed a plan to serve these children.

Sarrell’s patients are overwhelmingly children, with roughly 90 percent having insurance through Medicaid or CHIP. That means the reimbursement rates are low. But Sarrell realized that they could achieve high volumes, given that access to care was so limited. That was their business plan, then: low reimbursement rates but high volumes.

It achieves high volumes by having many clinics and many chairs at each clinic. It also keeps the chairs filled most of the day.

Different groups of employees work to achieve high rates of chair utilization.

*Outreach workers* venture into the “field” to give free dental screenings, at locations such as Head Start programs. The next step is the responsibility of *call center workers*. They contact the parents of children that had a free dental screening, asking the parents if they

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<sup>119</sup>Much of this discussion is based on Thomas (2015).

<sup>120</sup>I borrow this language from Thomas. See below for her quote in this regard.

followed up with their own dentists, or if they had no dentist, ask the parents if they wished to make an appointment with Sarrell. These workers receive some bonuses for the number of appointments they close. Since Sarrell's patients are children, and the clinics are full of energetic children, another group of workers, *runners*, are staffers who keep the clinics running smoothly.

Thomas described one woman who was able to schedule concurrent appointments (both dental and eye) for her six children.

As Thomas summarized Sarrell's practice: "Sarrell provides the poorest children in the poorest counties of a poor state with top-quality dental care."

One might expect that Sarrell would be praised by Alabama dentists and the Alabama Dental Association. But not those reading along with this essay. They would expect what happened: Sarrell faced fierce opposition from Alabama dentists (see, for example, Harrison 2011). These were *dentists fighting dentists*. Sarrell also attempted to expand into other states. Dentists in other states blocked Sarrell's entry (see Thomas 2015). As a result, these other states where dentists blocked Sarrell's entry did not enjoy the increased productivity growth Sarrell (and imitators) would have provided.

## 8 Legal Services Industry

The ABA, and state bar associations, just like the ADA and state dental associations, consider themselves as sovereign nations. They consider themselves the authority to determine what's in the public interest regarding the market for legal advice.

Here is Barlow Christensen (1980) commenting on this: the “interest of the public is one that has been defined, articulated, promulgated, and enforced not by the public but by the legal profession. And nowhere, in all of the literature or in any of the court decisions, is there evidence of a public voice with respect to this supposed public interest.” (201)

And, just as with the ADA, the ABA always decides for a complete banning of substitutes. It defines the public interest to be having the most highly trained practitioners possible. Lawyers, that is, those that have passed state bar examinations, are the only individuals that can give legal advice of *any kind*.

Once again, here is Christensen: “From the very beginning the effort against lay practitioners [non-lawyer professionals] has been justified as necessary for the well-being of the public. Suppression of the practice of law by non-lawyers has been proclaimed to be in the public interest, a necessary protection against incompetence, divided loyalties, and other evils.”

Christensen continues: “Even more significantly, nowhere, in all of the literature or in any of the court decisions, has there been, until very recently, any serious suggestion that any other interest of the public might be involved” (201).

Here is Denise Johnson (1998), the first woman on the state Supreme Court in Vermont, arguing that the public interest should include other factors besides having the most highly trained practitioners possible: “The consistent rationale is that consumers need protection against their own ignorance, and that only by regulating lawyers will the public be protected from the unscrupulous. But ... it is difficult to sustain the argument that the poor are being protected by not receiving any legal advice at all. ... Thus, it is possible to agree



with the premise that consumers need protection without concluding that giving lawyers an exclusive right to provide service is a necessary safeguard” (484-5).

## 8.1 There is a legal crisis in the United States.

The costs of legal services are beyond the reach of the vast majority of the poor and many in the middle class. While there are some guarantees of legal representation in criminal cases, there are none in matters of civil law.<sup>121</sup> If a poor American seeks legal advice on a civil matter, the individual has two choices. One option is attempting to access legal advice from some of the institutions that provide free lawyer services (they are described below). To qualify for such a lawyer, one’s income typically must be at or below 125% of the federal poverty level. If one meets the income qualification, one can then attempt to access the *very limited funds* available for free civil legal advice. It may take lots of time to seek these funds, and then there is only a small chance of success.<sup>122</sup>

Otherwise, the person must search the private market for a lawyer.

So, families that have incomes of 125% or greater than the poverty line, must search the private market. With the official poverty line for a family of four in the United States, in 2019, being \$25,750, that means a family of four with income greater than \$32,188 must

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<sup>121</sup>In fact, this right to counsel in criminal proceedings is not being met in many misdemeanor cases throughout the country (see discussion below on the Sixth Amendment Center).

<sup>122</sup>The Boston Bar Association (2014) has collected evidence on measuring the “unmet” demand for the very few Civil Legal Aid attorneys (CLAs) in Massachusetts. They write: “In Massachusetts, civil legal aid programs turn away 64% of all eligible cases” though this number does not count “many eligible Massachusetts residents with critical legal needs [that] never even reach the turn-away stage because they give up when faced with long waits for service or fail to seek assistance because they do not know their problems may have a legal solution.” There is the group, of course, that knows they have a legal need but don’t bother attempting to gain access to the limited legal counsel offered free of charge. The Massachusetts CLA program is, not surprisingly, one of the best in the country.

search the private market.. Hourly lawyer charges are, then, beyond the means of most low-income Americans.

It's more difficult to measure the need for legal services than oral health services. In the case of oral health, we can look at objective measures of oral health to determine need. It's not as easy here. That said, there are projects attempting to move in this direction for legal services. Recently, the Legal Services Corporation (LSC) has contracted with NORC<sup>123</sup> to conduct a survey of the civil legal needs or problems of over 2,000 individuals whose incomes are at or below 125% of the federal poverty line. Seventy-one percent of participants report having had a civil legal need over the past year; 54% report having had two legal needs (LSC 2017, 21). I'll discuss this NORC survey below.

There are significant impacts of having no access to legal advice. The consequences for the poor are severe. A hundred years ago, Reginald Heber Smith discussed the consequences of lack of legal protections, a description that remains accurate: "Because law is all-embracing, the denial of its protection means the destruction of homes through illegal foreclosures, the loss through trick or chicanery of a lifetime's savings, the taking away of children from their parents by fraudulent guardianship proceedings" (9).

The poor, perhaps paradoxically, need more legal services than the wealthy. One reason was described by Smith: the poor are preyed upon as they have no legal recourse. Here is Smith: "Denial of justice . . . *actively* encourages fraud and dishonesty. Unscrupulous employers, seeing the inability of wage-earners to enforce payments, have deliberately hired men without the slightest intention of paying them" (1919, 9) [emphasis added].

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<sup>123</sup>NORC is a non-partisan and objective research organization at the University of Chicago.

A study of the legal needs of low-income New Yorkers points out the great need of the poor for legal advice: “Our society has evolved in a way that makes access to legal services increasingly crucial to handling the emergencies which routinely beset poor persons. Whereas people of means can regard the service of a lawyer as an optional convenience to be availed of only in certain relatively well defined circumstances, the poor paradoxically live in circumstances in which they need legal services more but can obtain them less. Typically, their needs for legal services are not in any sense optional but rather deal with access to essentials of life” (Marrero 1991: 771).

## **8.2 Monopolies in Legal services Block Substitutes**

Monopolies in legal services, including state bar associations and the ABA, are instrumental in passing Unauthorized Practice of Law (UPL) statutes that prohibit a non-lawyer from giving legal advice of *any kind*. Bar associations have blocked books that give legal advice. Clerks in courts cannot tell visitors what documents are appropriate for their cases. Paralegals are not permitted to practice independently. Below, I’ll discuss other professionals that are blocked from giving legal advice.

These UPL statutes, and the corresponding prohibition of non-lawyers from giving any legal advice, means that low-income Americans have essentially no access to legal advice.

### 8.3 Costs of Blocking Substitutes Large, Benefits of weakening monopolies Great

To understand the *costs* of blocking substitutes, lets consider the *benefits* of breaking these monopolies, of allowing low-cost substitutes to lawyers. I argue it would lead to large increases in the well being of low and middle income Americans. I present the argument in two ways: from the logical perspective and then from the experience of allowing the low cost substitutes.

The logic for allowing non-lawyer professionals to practice is clear. Consider allowing paralegals to practice independently of lawyers.

1. *There is no need that a person be trained to be a lawyer to make name changes, or many other simple and routine tasks.* Paralegals are more than competent for many of these tasks. Allowing substitutes would save significant resources, from society's perspective, on investment (i.e., educational investment).

Here is Denise Johnson (1998) on the logic for allowing non-lawyer professionals: "I am not suggesting that poor people do not deserve competent representation, but rather that not every case that comes to court requires an adviser with the full range of skills possessed by an attorney. A far more useful approach is to think about ways to expand the universe of potential counselors to the poor by reducing or eliminating the lawyer's monopoly in some areas, without compromising important legal rights" (485).

2. *Allowing these substitutes would expand the markets for legal services.*

This is obvious. Low-income Americans receive very little, if any, legal advice from lawyers. If paralegals could offer legal advice on simple but important matters, at a fraction of the cost of a lawyer, this type of market would almost surely grow to significant size.

In fact, there are large groups of professionals, *already trained and working*, that could give *free legal advice* to low-income Americans. Such professionals, like advocates for victims of domestic violence and social workers, often find themselves helping clients when simple legal matters arise. Most of these professionals are well versed in the legal issues that arise. And their clients may not be able to afford legal advice if they are low income. Yet the professionals are barred from offering any advice to their clients. UPL statutes forbid them from giving legal advice.

As it stands now, these professionals must be silent.<sup>124</sup> Allowing these professionals to provide legal advice in these settings would greatly help poor Americans who have no access to such advice.

3. *Experience shows allowing non-lawyer professionals to practice would greatly benefit low- and middle-income Americans.*

As far as examining the experience of non-lawyer professionals giving legal advice, there is little experience to guide us. Since lawyers enforce UPL statutes, there is limited experience of non-lawyers providing legal. But we have a round-about way of assessing how helpful non-lawyers would be in many of the legal situations that confront low-income Americans.

In particular, we examine the experiences of low-income households that were lucky enough

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<sup>124</sup>See, for example, the discussion in Brown (2001) regarding advocates for victims of domestic violence and their fear of UPL statutes.

to receive the very limited free legal advice of Legal Services Corporation (LCS) funded lawyers. From their experiences, as we describe, we establish: (1) the lawyers provided help on extremely important family matters and greatly helped the households and (2) the help the lawyers provided *did not require a law degree*. So, the conclusion is that professionals like paralegals, acting independently, could offer great help to America's low-income households.

Throughout the LCS report mentioned above, stories are presented of those who had received services of lawyers from LCS-funded groups to address legal problems. I have gathered these stories, printing them as Figure 3, so that the reader might understand the nature of help being received. When one reads through these cases, notice that, as mentioned above, LSC-funded lawyers provided legal help on many important issues, including domestic violence, housing and income maintenance.

Note as well that most of these problems did not involve complicated legal issues. A non-lawyer professional that has experience in these matters would likely do as good a job. A lawyer was required only because of UPL statutes that lawyers have so fiercely defended.

#### **8.4 Monopolies reduce productivity within the industry**

We mentioned that dentists were instrumental in passing laws to limit the extent to which dental practices could compete with each other. Much the same kind of restrictions are put on law practices, with the similar results that productivity within the industry is lowered. Posner (1993) mentions many of these practices that lower industry productivity.

## 9 Residential Construction

As I already mentioned above, in the residential construction industry, two basic technologies are employed. The most extensively used technology, by far, is often called the *stick-built technology* because sticks (two by fours) visually dominate the construction sites. This technology has been used for centuries. Homes are built outside, with a highly *labor-intensive* technology. It also requires *highly-skilled-labor*. The other technology is *factory-production* of homes. This technology substitutes capital for labor and also semi-skilled workers for highly skilled workers.

Today, monopolies in the stick-built industry greatly harm the factory-built housing sector. Recall the discussion in Essay 3, where we presented evidence from many contemporary sources in the first half of the 20th century, including Federal Judges and Assistant Attorney Generals for Antitrust, showing that monopolies in traditional residential construction sabotaged factory-built housing. This sabotage, then, has been going on for over 100 years. Nothing has changed in that regard. What has changed is the *recognition* of this sabotage. Today, the hundreds of economists currently studying the housing industry have no idea about the sabotage.

How is this possible? That is, how was it once well known that monopolies sabotaged factory-built homes but now nobody knows? The “devious means” and “artful weapons” of the monopolies clearly play a role. But monopolies employed devious means in the first half of the twentieth century, as Berge and Speck told us. *What has changed is the consensus model of monopoly*. Whereas monopolies were once seen as sabotaging monopolies employing

devious means, now, with the Cournot model, *monopolies are toothless*. They simply decide on prices. The Cournot model has numbed us to the great harm inflicted by monopolies.

While the sabotage of factory housing has been going on for 100 years, there was a dramatic surge in the ferocity of this sabotage in the middle 1970s. During this period, laws were passed, and regulations implemented, that sent the factory-built housing industry into a tailspin. These regulations, and additional harmful ones introduced since the 1970s, remain on the books and mean the industry is a shell of its former self.

When this new sabotage was unleashed in the middle 1970s, the producers of factory homes were well aware of it, of course. They fought the HUD and NAHB monopolies to reverse the sabotage but lost the fight. Today the members of the factory-built housing industry are unaware of this history.

What is quite amazing is that only a few years after these sabotaging-regulations were implemented in the 1970s, President Reagan's housing commission produced "Report of the President's Commission on Housing (April 1982)," that recommended that these sabotaging-regulations be dropped. Those writing the report clearly saw the regulations made no sense and were detrimental to factory-built housing.

I read President Reagan's housing report a few years ago. When I familiarized myself with it in the last few weeks, I was shocked with what I found. When I initially read the report, I did understand the importance of the recommendations, as I was only beginning to learn about how monopolies were sabotaging the industry. I discuss some of these recommendations below.



## 9.1 There is a housing crisis in the United States.

Many U.S. households face great difficulties in finding and keeping decent housing. Some experience homelessness. Other households face evictions, so that they must move homes (and, often, their children must change schools). Still other families face continual threats of homelessness and evictions. These and other problems facing families have often been called a housing crisis, and rightfully so.<sup>125</sup>

We can look at the crisis through another lens, from the perspective of how well the residential construction industry is performing. One measure of performance is the industry's productivity record. Another measure is the industry's record at adopting new technology.

For the last 100 years, the industry has been a laggard at adopting technology: its performance has been a disaster. So, too, has been its productivity record. Productivity statistics, which are available only for the last several decades, show the industry's performance has been dreadful. We call this a crisis at the industry level.

Over the last few decades, the productivity of the residential construction industry has badly lagged nearly all other industries. In Figure 4A we plot labor productivity in the single family residential construction sector from 1987 through 2016 (from Sveikauskas, et al, 2018, see their Figure 3). Looking at Figure 4A, labor productivity barely grew over the period, roughly 15 percent in total, an annual compound rate of growth of less than 0.5 percent.<sup>126</sup>

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<sup>125</sup>Families face other major housing obstacles. For example, because of high housing costs, households cannot pursue better jobs and opportunities in new locations. These obstacles are not of the same order facing homeless families and those undergoing eviction, and while we might not label them as crises, they are serious problems nonetheless.

<sup>126</sup>Sveikauskas, et al report that labor productivity grew at an annual rate of 1.1 percent (e.g., on page 5).

In Figure 4A we also plot labor productivity in durable goods manufacturing. One expects that, everything else equal, productivity growth in construction should closely mirror productivity growth in durable goods manufacturing, which includes industries like automobiles. But labor productivity in durable goods increased much faster, roughly 250 percent over the period, an annual compound rate of growth of 3.2 percent.

In Figure 4B we plot multi-factor productivity (also known as total factor productivity (TFP)) for the construction industry and durable goods manufacturing. TFP is declining in construction. There is a great divergence between TFP in the two sectors.

## 9.2 Strong monopolies in stick-built industry block substitutes

Like our discussions of monopolies in the oral health and legal services industries, we begin by asking: who are the monopolies?; and how do they block the substitutes? In the case of monopolies in the oral health and legal services industry, we could introduce the monopolies and the weapons they employed in a few pages. That is not the case here, as explaining the sabotage requires extensive effort.<sup>127</sup>

Recalling our discussion from Essay 3, a scorecard is needed to keep track of the monopolies that operate in the traditional residential construction industry. In the first half of the 20th century, monopolies included associations of small contractors, the unions of various

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They arrive at this number by running a regression of log labor productivity on time and the level of housing starts (in logs) (see Table 1 for the regression results). This is not the standard way labor productivity growth is reported.

<sup>127</sup>The material for Section 9 is taken from two papers by Schmitz, Teixeira and Wright (2019 a, b). The first paper establishes that monopolies in the stick built industry have sabotaged and harmed the factory built industry for the last 100 years, focusing particularly on the 1970s. The second paper argues that this sabotage is a significant reason for the current U.S. housing crisis.

skilled workers, architects, building inspectors, producers of specialized building materials, and the local politicians that supported these groups in creating monopolies (and that were, in turn, supported by the private monopolies). There were also various alliances between these monopolies – like the fighting-prefabricators monopoly mentioned above.

Many of these monopolies continue to operate. Also, new, powerful monopolies emerged over the last several decades. A large national association of building contractors, the National Association of Builders (NAHB), developed over the post WWII period. And, in 1965, when the Department of Urban Housing and Development (HUD) was established, a powerful new monopoly was created. When we say that HUD is a monopoly, we mean, as mentioned above, that there are groups in the organization that use the power of that organization to enrich themselves. These groups have invariably enriched themselves by forming alliances with NAHB to block factory-built housing.

Different types of substitutes for on-site production are blocked and sabotaged. One type is prefabricated parts that are manufactured in factories and brought to construction sites. Another type is factory-built homes, where the whole structure is produced in a factory. Here we focus on the sabotage of factory-built homes.

We focus, in particular, on the sabotage of a type of factory built home that we'll name "modular homes of one or two pieces." Examples of the types of factory-built homes that are sabotaged are given in Figures 5A and 5B. These homes are very nice. They are built to a rigorous code. But they draw the wrath of local builders and their monopolies because they are built in factories, at a small fraction of the cost to build them outside. These homes are illegal to place in most localities in the Northeast and Midwest, for example.

### *Some definitions of factory-built homes and background*

We define a house as a structure built for shelter that, once situated, remains at a given location. It could be built at that location, or built in a factory and transported to that location.<sup>128</sup>

We divide factory homes into two types: panelized homes and modular homes. Panelized homes refer to homes delivered from the factory to the home's permanent location in *panels*, typically a large number of panels, that require significant on-site work to finish as a house.<sup>129</sup>

Modular homes are those delivered from the factory to the home's permanent location in a small number of *fully-formed* pieces or modules.

We further divide modular homes into two types: those composed of one or two pieces and those of many pieces (three or more). In order to economize on words, I use the convention that “mod[1,2]” means “modular homes of one or two pieces” and “mod[3,+]” means “modular homes of three or more pieces.” The homes in Figures 5A and 5B are mod[1,2]. Mod[1,2] are sometimes called *mobile homes* though, of course, all modular homes are mobile. That is, all modular homes are transported to their permanent housing sites.

It's important to note some peculiarities of U.S. statistics on housing. The most widely cited statistics on housing investment, like *housing starts* or *building permits*, don't include production of mod[1,2]. This fact is actually not widely known, so that much analysis of housing investment misses a large portion of it. Though production of mod[1,2] is a much smaller part of national housing investment than it once was, it's still a large part of

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<sup>128</sup>Of course, all houses are subject to being moved, even those built on-site. So, we should say they are structures with low probability of being moved.

<sup>129</sup>We include include “kit homes” in our definition of panelized homes.

investment in some local housing markets (see discussion below). Also, the statistics on *new home sales* don't include sales of mod[1,2].

Modular homes differ along some important dimensions. Let's start describing some technical and economic distinctions. Then we describe differences in how they are impacted by regulations and monopolies.

Modular homes differ according to: (1) the extent of machine work they undergo in factories; (2) how the homes are transported to their permanent housing sites; and (3) how much work is needed on-site to finish assembly of the house.

Mod[1,2] represent the least expensive way to produce a modular home (of a given size and quality of materials). Making it one-piece saves on factory costs, as cutting and fabricating are kept to a minimum. It also saves on transportation costs. Mod[1,2] are typically towed to their housing site by attaching a *temporary chassis and wheels* to the bottom of the modules. The chassis and wheels are removed at the housing site, and the house is then placed on a foundation. Modular homes of many pieces are delivered on flatbed trucks, where cranes are used to unload the pieces at the housing-site.

Making it one piece also saves on the on-site costs of assembling the house. With a home of one piece, and one-story, cranes are not needed for assembly. With many pieces, and in particular, with homes of two-floors or two-stories, cranes are used to stack the pieces. Highly skilled labor and capital (e.g., cranes) are needed to situate the home.

The costs of making factory homes is therefore minimized when producing mod[1,2].

The U.S. Census Bureau reports these statistics for modular homes (of one-piece) and single family homes built on-site, in 2007:

\*\*Modular (One-piece): Average Price of Structure: \$37,300; Average cost per square foot: \$33.91; Average square footage: 1,100 sq. ft..<sup>130</sup>

\*\*Single-Family (On-Site): Average Price of Structure: \$229,332; Average cost per square foot: \$92.51; Average square footage: 2,479 sq. ft..<sup>131</sup>

Below, I argue these differences in costs per square foot between factory-built and on-site built homes actually understate the advantage of factory production of providing low-cost housing.

As for areas where they are sold, mod[1,2] are typically sold in small towns and rural areas, and typically in the South or the West. Mod[3,+] are typically more expensive, and are sold in upscale suburban locations and cities.

Both types of homes are attacked and sabotaged by monopolies. In this paper, we focus on the monopolies sabotaging mod[1,2]. The monopolies sabotaging mod[3,+] are often different, such as construction unions in the cities, as well as the city's building inspectors.

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<sup>130</sup>These statistics can be found at <https://www2.census.gov/programs-surveys/mhs/tables/time-series/sitebuiltvsmh.pdf>

<sup>131</sup>In 2013, the same statistics for modular homes of one piece were: Average Price of Structure: \$42,200; the average cost per square foot was \$38.36; Average square footage: 1,100 sq. ft.. For single family homes built on-site: Average Price of Structure: \$249,429; the average cost per square foot was \$93.70; Average square footage: 2,662 sq. ft..

### 9.2.1 Monopolies block mod[1,2] in late 1940s and 1950s

Mod[1,2] first began to be produced shortly after World War II. From the very beginning, they were a large threat to stick-builders, especially those making homes in the lower price ranges. Monopolies used *local zoning regulations* and *local building codes* to block the growth of mod[1,2].

*Local zoning regulations.* From the very beginning, monopolies, employing deceit and misinformation, claimed mod[1,2] were trailers. This deceit, as we explain, allowed the monopolies to block mod[1,2] from many, if not most, local areas.

Trailers were used extensively during the Great Depression by individuals and families that were constantly on the move searching for work. House trailers were primitive forms of shelter that were towed behind vehicles. The shelter was placed on a chassis and fitted with wheels so that it could be moved on a daily basis. The chassis and wheels were never removed. Because most were not equipped with sanitation facilities, local zoning ordinances were often adjusted to ban trailers and other vehicles (with primitive shelters) from local jurisdictions.

Mod[1,2] were not trailers. In contrast to trailers, they typically were not moved after delivery. When delivered from the factory, their wheels and chassis were removed. They were put on foundations. In testimony before Congress, Levitt and Sons stated that “Mobile homes, 90 percent of them, end up on a foundation and are not mobile at all” (United States 1969, 388). Bair (1967, 287) provides one description of how doublewides (a type of mod[1,2]) were placed on foundations: “The doublewide unit is a stranger to wheels except

during its journey from factory to site. Two 12-foot wide sections are ‘slid’ onto an already prepared foundation, with or without basement, and permanently joined. The result is a house 24 feet wide, up to 56 or more feet in length, and in most respects indistinguishable from the conventionally built or prefab one-story dwelling.”

Nonetheless, monopolies often succeeded in having mod[1,2] designated as trailers. These designations were determined at the local level. Local zoning officials, who were often builders of stick-built homes themselves, or had close connections to local stick-builders, used the local zoning ordinances that blocked trailers to also block mod[1,2]. If these zoning rulings were challenged, local judges, also with close connections to the local stick-built industry, would acquiesce.

Two important consequences of designating mod[1,2] as trailers were (1) it contributed to the prejudice against the homes (2) it meant they were blocked, that is, “zoned out,” from many local areas.

In localities where stick-builders were unable to outlaw mod[1,2] by claiming they were trailers, other methods of blocking were used. Local zoning regulations often included a minimum floor size restriction. This hurt mod[1,2] relative to stick-built homes because the greatest cost advantage of factory homes is in smaller homes.

*Local Building Codes.* Local building codes differed significantly from location to location. There was no harmonization between them. This was obviously a setback for factory builders relative to stickbuilders. If building codes are local, a factory producer must change her “production line” numerous times in order to meet each local code. This diminishes the benefits



of mass production. There were many attempts to harmonize codes but, not surprisingly, these efforts were blocked by monopolies in the stick built industry.

### 9.2.2 A Note on Language and Its Power

When I first began studying the factory-built housing industry, I found the industry-terminology extremely confusing. I gradually came to realize the terminology was meant to be confusing. Many monopolies have strived to make it so.

Monopolies first labeled mod[1,2] as trailers. When that terminology faced push-back, the term mobile home was employed as well, since this could easily be confused with trailers. In the 1970s, HUD introduced another name for mod[1,2], namely, *manufactured home*. But this only applied to mod[1,2] built after 1976, the other mod[1,2] now officially called mobile homes by HUD.

Nowhere will you see mod[1,2] called what they are: modular homes. This would be a disaster for the monopolies that are sabotaging them. They put great effort into creating an artificial distinction between mod[1,2] and mod[3,+]. Mod[1,2] are called trailers, mobile homes and manufactured homes, while mod[3,+] are called modular homes.

The symbols mod[1,2] and mod[3,+] are language I introduced. This terminology may prove not to be useful. Better language would be greatly appreciated.<sup>132</sup> The symbols are my attempt, as I study the industry, to break free from the confusion so expertly created by the monopolies.

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<sup>132</sup>The terms “small modular homes” and “large modular homes” may be better, for example.

### 9.2.3 Producers of Mod[1,2] begin to break through the sabotage in 1960s

As mentioned, by successfully designating mod[1,2] as trailers in many localities, and through other means, like minimum square footage restrictions, monopolies limited the production of mod[1,2] during the late 1940s and 1950s. But producers of mod[1,2] began to overcome this sabotage in the late 1950s. There were at least two important reasons.

*1. Construction Costs of Stick-built homes (relative to factory homes) grows over time.*

Recall Section 6, where we discussed how industries with significant monopolies, and poor productivity as a result, ultimately faced surges in competitive threats from other industries.

Many housing industry observers noted that stick-builders were facing such threats from factory-built home producers in the 1960s. Though they did not have direct measures of productivity, they compared the costs and prices of new, site-built homes to the costs and prices of other consumer durables.

Alexander Pike (1967), an architect, compared the prices of new homes and the prices of new cars from the 1920s. Though he did not have productivity statistics, his point was clear: the productivity of construction badly lagged that of the car industry.

At roughly the same time, the research department of Morgan Guaranty Trust Company (1969) wrote about this productivity divergence when discussing the potential for industrialized housing (including mod[1,2]) in “Factory-Built Houses: Solution for the Shelter Shortage?” They noted the serious problems facing the stick built industry as its productivity lagged. They showed that, over the period 1948-68, the prices of consumer durables rose

roughly 22 percent, while residential construction costs rose roughly 100 percent (see their Figure on page seven).<sup>133</sup>

2. *Producers of mod[1,2] focus on local areas where houses not blocked.*

There were parts of the country where mod[1,2] were not blocked. Recall William Speck told us: “*Prefabricated builders have simply confined themselves to those areas where restraints are not serious.*” (1947, 52)

With factory producers permitted in some areas, and with their productivity growing, we’d expect them to take larger shares of these markets. Twenty years after Speck, James Price, CEO of National Homes, tells us as much. National was the largest producer of factory-built homes in the United States, with a capacity of 100,000 units in 1970. Price testified to Congress<sup>134</sup>: “I want to deal with mobile homes. I think it has to be mentioned at this time because insofar as the consumer is concerned, 65 percent of the people have to either look to a mobile home or low rent apartment for shelter. The spectacular rise in the mobile home industry is because mobile homes are placed primarily in an area beyond where code and zoning requirements are exercised. Their construction techniques allow *far less space than the accepted housing standards for the Federal Government.* . . . ”<sup>135</sup>

Note well that when Price mentions “their construction techniques allow far less space,” he is referring to the fact that in a factory, homes can economically be made much smaller than

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<sup>133</sup>For full disclosure, I worked at the research department of Morgan Guaranty Trust Company in 1978-79. It was an impressive research group, so I’m not surprised they were aware of these issues (as so many other economists were not and still are not).

<sup>134</sup>National Homes produced three types of factory-built homes: panelized homes, modular homes, that is, mod[3,+] and mobile homes, that is, mod[1,2]. Their total capacity in 1969 was 72,800 (panelized–46,000; modular–10,800; mobile–16,000) and in 1970 was 98,000 (panelized–46,000; modular–28,800; mobile–24,000).

<sup>135</sup>When Price refers to Federal standards on size, this has to do with subsidies.

those made outside. What matters for factory costs is the *capacity utilization* of the factory, not the size of the house.

Price continued his testimony: “Two years ago, I resisted entering the mobile home market because I felt I could outcompete them with my regular line which meets traditional housing standards. The short version of my story is that when I couldn’t lick them, I joined them—but with some misgivings about what it meant for future housing patterns in the country. . . . As building standards, space requirements, zoning regulations, labor costs, land costs and material costs have priced our low and moderate income families out of single family housing markets, the mobile home industry has provided housing for a substantial percentage of our population” (U.S. Senate, Housing and Urban Development Legislation of 1969, 306; emphasis added).

#### **9.2.4 Sales of Mod[1,2] Soar in late 1950s/1960s**

Sales of mod[1,2] began to soar in the 1960s. Annual shipments of mod[1,2] increased from roughly 100,000 units to 600,000 units (see Figure 6). The share of factory production of *single-family* residential homes began growing in the mid 1950s, rising from about 10 percent of home production to nearly 60 percent of home production by the beginning of the 1970s (where total home production equals stick-built production plus factory production) (see Figure 7).

Factory-built homes, and especially mod[1,2], were dramatically out-competing stick-builders, especially in the lower price ranges. In 1966, mod[1,2] accounted for 67% of total homes sales

(stick-built plus factory sales) under \$15,000, while by 1970 they accounted for 95% of the same market. In 1970, they accounted for 72% of home sales under \$20,000.<sup>136</sup>

If we look at the distribution of home sales by price for *stick-built homes* in the same period, the percentage of homes with a selling price under \$15,000 fell from 21.0 percent to 2.0 percent. The percentage of homes with a selling price under \$20,000 fell from 50.0 percent to 19.0 percent.<sup>137</sup>

Who knows how high the factory share would have risen if new sabotage of factory production would not have commenced in 1968. At that time, a national subsidy program was started for households buying stick-built homes (see below). Under these programs, households purchased 430,000 stick-built homes (per year) in the early 1970s.

The success of the mod[1,2] industry did not go unnoticed. Here is future president Gerald Ford, in a speech to producers of mod[1,2]: “You are entrepreneurs in the best tradition of the free enterprise system. Your industry fulfills a definite need. Statistics show that virtually all of the housing purchased by the \$15,000-and-under income group is supplied by your industry.”<sup>138</sup>

Ford called the producers “entrepreneurs in the best tradition” because they were not receiving government subsidies (as opposed to the stick builders, see below).

Ford also discussed how quality was increasing. “You are to be congratulated for turning out a steadily improving product.” ... “There is no question that the mobile home industry took

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<sup>136</sup>These statistics are from “Flash Facts on Mobile, Sectional and Modular Homes,” Mobile Home Manufacturers Association, June 1971. They appear on pg 8.

<sup>137</sup>These statistics are from Miles and Robinson (1973), Table 2.

<sup>138</sup>Ford Congressional Papers: Press Secretary and Speech File (1973: Box D34).

a big step forward with the adoption of the American national Standards Institute A-119.1 standard and the National Fire Protection Associations standard 501.B.”<sup>139</sup>

### **9.2.5 Monopolies in stick-built sector double their efforts to kill factory-built homes: National regulations, Subsidies and More Deceit**

Faced with a threat to their very existence in the late 1960s, monopolies in the stick-built industry had to develop new, staggering weapons to sabotage mod[1,2]. The local methods of blocking, like using local zoning regulations, that worked during the late 1940s and early 1950s, were failing.

The monopolies had to find a way to block factory homes in areas where they were permitted, or faced the least resistance. They had to develop a way to sabotage them in areas with no restrictions on smaller houses, in particular, and with no local codes, in general.

Monopolies developed new weapons and restrictions that were constructed at the *national level*, meaning all areas would be subject to sabotage. They developed ingenious, yet, of course, despicable, means to harm factory housing nationwide. The monopolies involved included, but were by no means limited to, the Department of Housing and Urban Development (HUD) and the National Association of Home Builders (NAHB).

These new weapons delivered a staggering blow to the factory-built industry, leaving it a shell of its former self. Production of modular homes of one or two pieces fell from 600 to

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<sup>139</sup>Again, Ford: “I am not here to promote the sale of monile homes. But there is no question that the mobile home industry holds revolutionary potential for future advancement in the field of housing. Mobile homes have become a major segment of the nation’s housing supply. They are here to stay.”

200 thousand units over a short period (see Figure 6). Production remains in an atrophied state today, with less than 100 thousand units being manufactured annually (see Figure 6). Total factory production accounts for barely 10% of the total industry today.

The history of how monopolies in the stick-built industry decimated the factory-built housing industry in the 1960s/1970s is complicated. Many artful and devious weapons were needed. It was not as simple as passing laws prohibiting the factory-built houses, as dentists and lawyers were able to outlaw substitutes. Speck already told us it was complicated. I will break the weapons into three parts: Regulations, Subsidies and Misinformation.<sup>140</sup>

## Weapons: Regulations: HUD Creates National Building Code

A major weapon was regulations that grew out of HUD-sponsored *legislation* concerning mod[1,2], the National Manufactured Housing Construction and Safety Standards Act of 1974 (MHCSS Act). The regulations created a *national building code (Nat-BC)* for mod[1,2]. This Nat-BC is sometimes called the *HUD-code*. The Nat-BC was a devious and artful weapon to sabotage the producers of mod[1,2]. I present four reasons, listed under *Regulations-1* through *Regulations-4*, for why the Nat-BC was devastating to factory-producers.

### Harm From Regulations-1: Many Areas Have No Local Building Code

We mentioned above how a harmonized building code was a great benefit for factory producers. But these regulations did not introduce a harmonized building code. The *Nat-BC*

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<sup>140</sup>As mentioned, we focus our study of the sabotage of factory built housing on period of the late 1960s and 1970s. There is much work to be done on the history of sabotage since then, for example, the sabotage that is contained in new legislation that has been passed since the 1970s.

applied only to mod[1,2]. Local building codes were not changed at all.

What did this mean in practice? First, some areas had no *local building code (Loc-BC)*. If an area had no Loc-BC, then the Nat-BC was, obviously, stricter.

We already know there were such areas. Speck and Price told us. Statistics collected at the time showed an important percentage of local areas had no code. In particular, as part of Paul Douglas' massive report on housing, Manvel (1968) collected much information on local building codes. He showed that as many as 25% of local areas had no building code.<sup>141</sup>

The first reason the Nat-BC was devastating, then, is because in the *areas* where producers of mod[1,2] *actually competed* with stick builders, typically small towns and rural areas, there were often *no local building codes*. Factory builders had to meet a strict code; stick builders faced no code. This feature of the regulations by itself meant great sabotage.

## Harm From Regulations-2: HUD-Code Stronger than Some Local Codes

Even in areas with a local building code, the Nat-BC for factory homes was often stricter than the Loc-BC. Consider the energy and fire-safety features of the codes.

*Energy features of HUD-code and local codes.*

1. As for energy features of local codes, some areas don't have energy requirements. Some states have not *adopted* a mandatory statewide residential efficiency code. These include

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<sup>141</sup>Bruce Butterfield, vice president of the Manufactured Housing Institute, mirrored this fact when saying "This is the only housing [modular homes of one and two pieces] in America always built to a code. At least 25% of all jurisdictions have no code at all." This is reported in: Catherine Collins, "Legislation for Factory Homes Debated," LA Times, September 2, 1990.



Alabama, Arizona, Colorado, Hawaii, Illinois, Kansas, Oklahoma, Mississippi, Missouri, North Dakota, South Dakota, and Wyoming (Hutton 2010, 129).

Even in states with mandatory energy codes, they are often ignored. As Hutton states, “Enforcement is an integral part of the law. Just as code adoption varies from state to state, the vigorousness of enforcement by state and local inspection authorities varies as well. In some states with mandatory requirements, enforcement is spotty, undermining the practical impact of the rules” (Hutton 2010, 140).

2. As for energy features of the HUD-code, officials at HUD decided to side-step the usual code setting organizations that developed model codes for states and localities. HUD wanted to develop a stricter energy code. Here was HUD’s reasoning. The HUD Secretary argued: “Energy conservation is a major national priority. As such, it was determined that none of the existing codes or standards was adequate for adoption as a Federal standard” (United States Department of Housing and Urban Development 1975).<sup>142</sup>

So, let’s add some perspective. Mod[1,2] are the smallest homes in the nation. Therefore, everything else equal, they use the least energy per home (see Hutton 2010). Nevertheless, given that energy conservation is a national priority, we are requiring these homes, overwhelmingly purchased by low-income households, to be subject to the strictest energy codes in the nation (see Bruegge, Deryugina, and Myers 2018).

*Fire-safety features of HUD-code and local codes.*

As with the energy features of the code, HUD decided to develop a stricter fire-safety code

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<sup>142</sup>Enforcement of the HUD code occurs in the factory, so it’s more difficult to ignore energy and other code features.

for HUD homes than developed by research organizations.

We are told: “The Secretary was formally requested by the National Fire Protection Association and the National Council of States and Building Codes and Standards to incorporate the Standard for Mobile Homes, NFPA 501B, by reference in the Federal Standards. This request was rejected.”

How did HUD explain this decision? The Secretary justified the decision by stating: “This request was rejected because it would convey standard writing to a third party, would not produce a self-contained document and would leave various dated standards and references in conflict or confused with Federal additions seemed necessary” (United States Department of Housing and Urban Development 1975).

States and localities convey standard writing to third parties, like the National Fire Protection Association, because they are experts on the issues. Moreover, they presumably are more immune to political pressures than government agencies. But HUD, again, wanted to write its own code, so it could further harm the mod[1,2] industry.

### Harm From Regulations-3: Nat-BC Requires Permanent Chassis

The Nat-BC required that a mod[1,2] have a *permanent chassis*. As indicated above, mod[1,2] were typically transported on a chassis that was removed upon arrival at the housing site.

*The national building code required that it not be removed.*

In areas that permitted mod[1,2], like many localities in Appalachia, the permanent chassis requirement increased (1) the costs of manufacturing, (2) the costs of installation and (3) the costs of financing.

(i). The permanent chassis immediately *increased the costs of manufacturing*, as now the house had a permanent chassis. Using a temporary chassis saved several thousand dollars, which could reduce the home price by five percent or more.

(ii). The permanent chassis immediately *increased the costs of installation at the housing site*. Before the new regulations, most mod[1,2] were being placed on a permanent foundation. Installing a mod[1,2] on a foundation, with a chassis attached, significantly increased installation costs. Even if a mod[1,2] was to be placed on a foundation with a basement, the chassis could not be removed.

Figures 8A and 8B present pictures of chasses that are in the basements of mod[1,2]. The absurdity is evident. But don't let the absurdity mask the real issue: the rule greatly increased the cost of installation. There was no reason for this requirement other than to destroy the mod[1,2] industry.

(iii). Mod[1,2] have long been financed as vehicles, as personal property. There has also been long efforts to have them financed as real estate. The requirement that a mod[1,2] have a permanent chassis threw a wrench into these efforts to finance mod[1,2] as real estate. Monopolies argued that, with a chassis, they were vehicles and needed to be financed with personal loans. Even today, when the vast majority of mod[1,2] are sited on private land, they are financed as personal property. In 2013, 70 percent of new placements of mod[1,2] were on private property, yet only 14 percent of new placements were titled as real estate.<sup>143</sup>

#### Harm From Regulations-4: Nat-BC Acts Like National Zoning Ordinance

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<sup>143</sup>These statistics can be found at <https://www2.census.gov/programs-surveys/mhs/tables/time-series/sitebuiltvsmh.pdf>

As we mentioned, as soon as mod[1,2] were introduced in the late 1940s, monopolies in the stick built industry claimed they were trailers or vehicles. The monopolies then used local zoning ordinances from the 1930s to argue that mod[1,2] should be banned from localities because they were trailers. During the 1940s and 1950s, producers of mod[1,2] continually attempted to have their homes classified as real estate, and not as trailers or vehicles, so they would not be banned from local areas.

There were two ways to accomplish this. First, there were attempts to change the local codes. Second, there were efforts to make mod[1,2] look less like the vehicles that were blocked in the codes.

As for the first avenue, there was a significant literature in Law Reviews discussing how local codes needed to be amended so that mod[1,2] were treated as real estate and not personal property. In the very year that the MHCSS act was passed, there was such a case made for ordinances in California in the Stanford Law Review (Vernon, 1974).

As for the second avenue, the removal of the chassis upon delivery made mod[1,2] distinguishable from vehicles. This was occurring as a matter of course, as mod[1,2] were not meant to be moved, and did not require a chassis after delivery. But the Nat-BC, by requiring a permanent chassis, allowed opponents of the homes to say that local zoning ordinances banned them from localities. The Nat-BC acted like a *national zoning ordinance* because opponents across the country could make these claims.

*Detour: Rulings of Local Judges on Mod[1,2]*

Up to this point, I have not given examples of the rulings of judges when local ordinances

blocking mod[1,2] were challenged. Typically, as suggested, the ordinances are upheld.

According to Bartke and Gage (1970), Massachusetts stands out in blocking mod[1,2] (mobile homes). “The most extreme position excluding mobile homes from single-family districts seems to have been taken by the Massachusetts courts. Their attitude can best be summarized as either ‘once a trailer, always a trailer’ or ‘a trailer is a trailer is a trailer.’ The fact that the mobile homes were purchased without wheels to be brought in on flatbeds, or that the wheels were to be removed and the structures were to be permanently attached to foundations, landscaped, and in every other respect made to comply with the applicable zoning ordinances did not make an impression on the Massachusetts judges.” (Bartke and Gage 1970, 501-502).

Here is an excerpt from the ruling of a judge in Massachusetts blocking mobile homes in a town: “In ordinary parlance the unit shown in the exhibits will be spoken of as a trailer or a mobile home, even if it has not been sold with wheels or its wheels have been taken away, and even if it has been affixed to the land. It looks like a trailer, has the qualities of a trailer superstructure, and has been built as a trailer.” (Town of Manchester v. Phillips 1962; cited in Bartke and Gage 1970, 501).

Though a court might uphold banning mod[1,2], there were sometimes dissenting judges who, in the midst of this deceit, spoke out against the monopolies. In a court case upholding the banning of mod[1,2] from municipalities in Idaho, Justice Bistline dissented, writing: “It is undoubtedly an easy matter for the nation’s elite to decide for the less affluent that they simply should not live in mobile homes. . . . The elite see no appreciable difference between the trailer house of yesteryear and the prefabricated homes of today which are, of course,

necessarily mobile until they arrive at their destination. Although times have changed, and “mobile homes” can no longer be equated with trailer houses, the elite do not change” (Berry 1985, 157).

Here is a case where a mod[1,2] was blocked from a neighborhood, with a dissenting judge’s opinion: “The structure in the present case is resting on a foundation and in order for it to be moved must be cut in half and have axles and wheels installed. I find it difficult, if not impossible, to hold that such a structure under the restriction in question is a mobile home.” (Albiet v. Orwige, Tennessee Court of Appeals; cited in Milligan 1987, 558)

## Weapons: Subsidies

Another weapon deployed by HUD in the late 1960s was to provide very generous *subsidies* to households that purchased stick-built homes. Households purchasing mod[1,2] were not eligible. Recall President Ford calling mod[1,2] producers “true entrepreneurs.” He was referring to the fact that they received no subsidies (and they still don’t).

One such subsidy program was “Section 235” of the Housing and Urban Development Act of 1968. A household could receive a subsidized mortgage as low as one percent to buy a stick-built home. The program was wildly successful. Homes purchased under this program increased from 637 units in 1968 (the first year of the program) to 133,222 units in 1971. Overall, the construction of stick-built homes that were government subsidized soared from 63,686 units in 1965 to 430,001 units in 1971 (see Miles and Robinson (1973), Table 5). These programs, obviously, shifted demand away from factory-built homes.

## Weapons: More Misinformation and Deceit

I already mentioned the extensive deceit and misinformation used by monopolies in the 1940s and 1950s. There is little doubt that the deceit reached new heights in the 1970s and 1980s. The monopolies had to explain, among other things, why the permanent chassis was needed. It's best to explain the incredible deceit by discussing it in context of the ongoing history in the industry, to which I turn.

In the next two sections, I show there were calls to eliminate these sabotaging-regulations very soon after they were introduced. In section 9.2.6, "*Report of the President's Commission on Housing (April 1982)*," I briefly discuss recommendations of Reagan's Housing Commission. In section 9.2.7, "*Producers of Mod[1,2] Fight Against NAHB/HUD*," I present the history of factory-home producers who, in the 1970s and 1980s, fought these sabotaging-regulations.

### **9.2.6 Report of the President's Commission on Housing (April 1982)**

President Reagan's Housing Commission called for removing many of the regulations that sabotaged factory-built housing that had been introduced in the 1970s. Here I list some the commission's recommendations. Note that the commission uses the term *manufactured home* for mod[1,2]. Some Recommendations and Observations From Reagan's Report include:

1. *Manufactured Homes Should be Considered Real Property* (p. 85) “

The Commission believes that manufactured homes permanently attached to the land qualify as real property and recommends that Federal and State government and quasi-government agencies provide the regulatory and legal framework necessary to permit permanent mortgage financing of such property on the same basis as other real property loans.”

*2. All Government regulations favor conventional housing over manufactured housing*

The commission pointed out that government programs that benefited housing all favored conventional housing relative to factory-built housing. “Manufactured housing has competed effectively in a national housing market characterized by a vast array of Federal credit programs, institutional financing facilities, and regulations that favor conventional housing competitors.” .... “limitations on the financing of manufactured housing continue to place serious inhibitions on what could be a valuable and affordable source of housing for millions of Americans.” (p. 85)

*3. The regulations that harm manufactured housing should be removed (pp. 85-86)*

The commission followed the above observation with a call to remove the policies harming factory-built housing. “The Commission believes that the disincentives that now characterize the manufactured housing sector should be removed in order to make full use of this resource.”

*4 . Reform Zoning Restrictions on Manufactured Housing (p. 203) “*

States and localities should remove from their zoning laws all forms of discrimination against manufactured housing ..... Despite the increasing attractiveness of manufactured housing, local zoning laws continue to discriminate against mobile homes. In many localities, mobile homes are segregated into special areas, often in disadvantageous locations set aside as ‘trailer parks.’ ”

*5. Use Private-Sector Standards for Construction Codes and the Like (p. 212)*

The commission argued that “Federal agencies, in their housing programs, should use appropriate voluntary private-sector construction standards and rely upon appropriate private-



sector processes for development and revision of standards.” The commission argued that the reasons for doing so were clear: “Government should rely only on sound, fair private standards. The standards-setting processes of the American Society of Testing Materials (ASTM) and similar consensus systems have demonstrated their reliability in most cases. A consensus approach, when properly followed, seeks to ensure fairness by inviting participation and challenge. Construction standards promulgated by such groups as ANSI or ASTM represent the work of more than 100,000 individuals in hundreds of technical committees that follow the consensus process.”<sup>144</sup>

*6. Manufactured-Housing Construction and Safety Standards Should Be Set By private Organizations* (p. 213) “

Consistent with its legal authority, HUD should revise its manufactured-housing construction and safety standards, using, to the extent feasible, nationally recognized voluntary standards.”

These recommendations, and others, would have undone much of the sabotaging-regulations introduced by HUD in the 1970s. But HUD, with support from allies in NAHB, ignored these recommendations. We’ll describe how HUD blocked attempts to have these recommendations followed. Many of the HUD officials involved in blocking attempts to follow the

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<sup>144</sup>The commission continued: “Most building standards are developed through the ASTM process, which ensures that technical data on the standard are considered and that the procedures followed take negative views into account. Committee memberships are drawn from material producers, designers, engineers, and others familiar with technical issues. Thus, when committee members develop or review a standard, they try to consider a variety of criteria including health, safety, durability, and ease of maintenance. The committees are intended to be balanced in that producers of material - who stand to gain most by the specific standard selected - cannot outnumber nonproducer members. Finally, any reasonable negative view, raised either within or outside the committee during review of the proposed standard, must be resolved before the adoption process can continue.”

recommendations would later be indicted on criminal charges.

### **9.2.7 Producers of Mod[1,2] Fight Against NAHB/HUD**

While today there is little awareness of the great sabotage inflicted on the factory housing industry, when the sabotage was initially introduced the factory housing industry fiercely fought against it. Producers of factory-built homes fought the permanent chassis rule, as well as other sabotaging-regulations meant to crush their industry. Here are some of their efforts.

1. Very early on, producers filed lawsuits against HUD. The lawsuits were dismissed.
2. Producers of factory-built homes found supporters in Congress, both the House and the Senate, who proposed legislation to roll back some of this sabotage. John Hiler, in the House of Representatives, and John Heinz, in the U.S. Senate, were in the forefront of trying to reform the regulations. But the legislation containing the reforms was defeated.

There were many congressional reformers who attempted to remove the permanent chassis requirement in the HUD code. Here is an excerpt from a letter from Senators Dan Coats and Richard Lugar to Senator John Heinz on September 25th, 1990: “The Manufactured Home Standards Modernization Amendments essentially change an outdated vehicular law into a modern, workable housing law. The amendments modernize the definition of a manufactured home to ensure the availability of safe, high quality and affordable housing. They allow permanently sited manufactured homes to be built without a permanent chassis, thus reducing the costs to consumers, while maintaining the structural integrity of the home.”

Regarding the attempts to eliminate the permanent chassis rule, consider some of the congressional testimony in hearings from 1990 on the Manufactured Housing Provisions of H.R. 5157. Maureen Wagner, the Chairman of the National Manufactured Housing Federation, stated: “An element of the Hiler amendment that we most support is the provision eliminating the mandate that every manufactured home be built on a permanent chassis. If there is one aspect of our homes that categorizes us as vehicles, it is this requirement.”

Wagner continues: “I can assure you that when a homebuyer buys a home from me and wants to finance it for 30 years and have it installed on a permanent foundation, the homebuyer prefers to have the chassis removed. In many cases homebuyers prefer to have their manufactured homes placed over basements. Because of the presence of a chassis, we must dig the basements deeper and erect more costly and unsightly piers. I could save my homebuyer significant costs, both in factory costs and installation costs, if I could order a home designed to have the chassis removed. When I advise a homebuyer that *the chassis cannot be removed because of Federal law, they find it illogical* (United States Senate 1990, 468-9).”

Gub Mix, the Executive Director of the Nevada Manufactured Housing Association, stated: “The Hiler amendments contain a provision to remove the antiquated requirement that all manufactured homes be built on permanent chassis. In our view, Mr. Chairman, this provision has perhaps the most important impact on the availability of affordable housing to Americans today. By requiring a permanent chassis for homes that are permanently sited adds unnecessarily to the construction and installation costs of a manufactured home. And the consumer pays” (285).

3. The *National Commission on Manufactured Housing (NCMH)* was created by Congress

in 1994 for the purpose of reforming the National Manufactured Housing Construction and Safety Standards ACT. Some of the reforms found in the NCMH report mirrored those found in the Reagan report. And just as HUD ignored the recommendations of the Reagan report, HUD ignored the recommendations of the NCMH.

One recommendation of NCMH is as follows: “The Commission recommends that the definition of a manufactured home under the ACT should be modified to eliminate the requirement that homes permanently sited on land owned by the homeowner be ‘built on a permanent chassis,’ subject to specific standards developed by the consensus committee.” (p. 15)

Note that this reform is less of a reform than in the Reagan report. In the Reagan report, there was no requirement that the manufactured house be on land *owned by the homeowner*.

### **9.2.8 HUD/NAHB Crush Attempts to roll back sabotage**

The efforts of producers of mod[1,2] to roll back the sabotage were crushed by monopolies in the stick-built industry, in particular, by HUD and NAHB. Again, misinformation by monopolies played a big role. Here is some of the deceit.

#### **NAHB: Unfair Competition from Factory-producers**

The NAHB admitted that stick-built homes were being outcompeted by factory-built homes. They argued, incredibly, that this was due to *unfair competition*. This was, of course, plain and simple deceit, if not lies. Here are two of the reasons they gave.

*1. NAHB Deceit: Purchasers cannot distinguish stick built homes from factory built.*

When factory-home producers argued for the removal of the permanent chassis requirement, NAHB countered that consumers wouldn't be able to distinguish the difference between stick-built homes and factory-built homes. NAHB said this was unfair because stick built homes were higher quality.

Here is Floyd Williams, vice president and legislative counsel for NAHB: "If you take a manufactured home [mod[1,2]], pull out the permanent chassis and put it up on a basement, it's going to look like the equivalent of a stick-built house. How is the consumer going to know the difference?" .... "a builder selling to the lower end of the market is not going to be able to compete, even though his product is better."<sup>145</sup>

These arguments are, of course, nonsense. HUD homes have a red steel plate attached to them. The arguments were attempts, and successful ones, to sow confusion.

## *2. NAHB Deceit: Government policy Unduly Favors factory-home producers.*

NAHB argued that government rules gave an unfair advantage to factory-home builders. An NAHB argument for why stick builders were being treated unfairly was that local codes were stricter than the HUD code.

Here is Kent W. Colton, executive vice president of the home builders' association: "State and local codes applied to site-built homes 'are designed to assure a greater level of structural soundness' than the federal regulations governing mobile homes, Colton said."<sup>146</sup> Ronald A. Rosenfeld, deputy assistant secretary for single-family housing at HUD, made the same

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<sup>145</sup>This is reported in: Catherine Collins, "Legislation for Factory Homes Debated," LA Times, September 2, 1990.

<sup>146</sup>Anne Mariano, HUD RULES CURBING MOBILE HOME INSTALLATIONS DRAW FIRE FROM INDUSTRY - The Washington Post, January 3, 1987.

points while testifying before the House Subcommittee on Housing and Community Development. In reporting by Catherine Collins (1990), she paraphrases (and quotes), Rosenfeld<sup>147</sup>: “The federal code for manufactured housing ‘is not as rigorous as the code for site-built or modular homes (mod[3,+]) and can best be understood as a code for light-weight building construction.’”<sup>148</sup>

NAHB had solutions for the unfair rules that favored factory-home producers. One was the permanent chassis. Because government policies supposedly favored factory-home producers over conventional producers, NAHB argued that the permanent chassis was required to *level the playing field*. When in the mid 1980s, some producers of mod[1,2] began ignoring the permanent chassis requirement of the HUD code (see discussion below), NAHB pushed HUD to intervene to stop the practice.

Here is reporting by Ann Mariano (1987), where she paraphrases (and quotes), Kent Colton: “The federal construction and safety standards clearly define manufactured homes as those ‘built on a permanent chassis,’ making the regulators’ move ‘a decision to enforce the law.’ ... ‘If you’ve been going through a red light for 10 years and suddenly somebody says they’re going to start giving tickets, this should not be a shock,’ Colton said. Conventional builders do not object to competition from the manufactured housing industry but want ‘to make sure the rules are comparable,’ he said.”<sup>149</sup>

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<sup>147</sup>This is reported in: Catherine Collins, “Legislation for Factory Homes Debated,” LA Times, September 2, 1990.

<sup>148</sup>Unfortunately, economists today, those that are experts in housing, push this line begun by NAHB. Herbert, Haurin, Rosenthal, and Duda (2005) state that “the HUD code is less onerous than local building codes.” (188)

<sup>149</sup>Anne Mariano, HUD RULES CURBING MOBILE HOME INSTALLATIONS DRAW FIRE FROM INDUSTRY - The Washington Post, January 3, 1987.

So, Colton was arguing for the chassis to insure on-site home builders were not being treated unfairly. It's quite amazing, but not surprising, that NAHB would argue that government rules and regulations (and subsidies, of course) favored factory built industry. Colton is simply pushing deceit, misinformation and lies. He's saying "You (HUD) must (literally) weigh the factory built housing industry down with regulations to reduce it's productivity."

HUD, of course, parroted this argument in defending the permanent chassis. In his letter to Representative Barney Frank of April 21, 1987, Assistant Secretary of HUD Thomas Demery states: "The proposed amendments include changes on the definition for 'permanent chassis.' This change will have the effect of separating the permanent chassis function into its two components (sustaining the house at rest and sustaining it during transportation) and permitting the transportation component to be removed from homes which are permanently sited." Demery goes on to state what the problem is: "While this legislation may be beneficial for the manufactured/mobile home industry, HUD is concerned about its effects on the modular (mod[3,+]) and site-built housing industries" (1). Demery's argument is "if we reform regulations in industry A, this will hurt industry B. So we won't."

### NAHB Deceit: Safety

Monopolies often claim a substitute should be blocked because it's unsafe. An NAHB-version of this was to claim that the permanent chassis was required on mod[1,2] to insure their safety, such as in high winds. NAHB gave testimony that the permanent chassis was based on sound engineering analysis: "The definition of a manufactured home built under the HUD code includes the requirement of a permanent chassis, we believe, because of the result

of a sound engineering analysis” (455). An engineering analysis of what? The testimony says nothing about an engineering analysis except this sentence. We have found no engineering analysis of the permanent chassis and suspect that none was ever done.

Again, what would it be showing? The chassis, in fact, made the home less safe! This safety issue was discussed nearly 30 years ago by George Porter in “We’ve Been Framed.”<sup>150</sup>

As a prelude to safety discussions, Porter starts: “Just when we thought we were getting somewhere with manufactured housing HUD tells us we have to make trailers. Recently, Manufactured Housing Institute asked Housing and Urban Development to modify their rule making to allow manufactured housing to be made without a permanent chassis. .... HUD’s reply basically boiled down to the fact that HUD code housing must have a permanent chassis so you can tell it apart from modular (mod[3,+]) housing.”<sup>151</sup>

Porter was skeptical about the reason for requiring a chassis. He stated that “there’s more than meets the eye here [the permanent chassis requirement] and I sincerely hope the industry does not let this slide.”

Porter then turns to discuss safety. Porter is primarily involved with installation of HUD homes. The permanent chassis leads to difficulties with installation. But his concern with the permanent chassis “has even more to do with the stability and possibly the safety of the home itself.” He argues that having a chassis makes the home less stable. Having one I-beam at the bottom of the house would, of course, make the house highly unstable. But the HUD

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<sup>150</sup><http://www.george-porter.com/articles.php>

<sup>151</sup>Recall above that HUD argued a permanent chassis was needed on mod[1,2] to distinguish HUD-homes from stick-built homes. This was nonsense but added to confusion over the monopoly sabotage. Here they argue that a permanent chassis was needed on mod[1,2] to distinguish HUD-homes from mod[3,+]. More nonsense, but more confusion. See below as well.



homes only have two, and leaving the house on these beams increases the home's instability.

Porter then argues stability brings safety: "It is reasonable to assume that the more inherently stable a structure is, the safer the occupants are during adverse conditions such as wind storms and earthquakes." He concludes: "I hope that HUD is not knowingly placing its need for a clean definition ahead of the safety and welfare of the American public."

## HUD: Sovereign Nation

In his letter to Barney Frank mentioned above, Demery uses the language of an "independent sovereign," just like the ADA in Massachusetts and Alaska, arguing that HUD is not going to stand by and see the low-income treated so poorly: "HUD has determined that we can no longer accept nor condone manufactured/mobile home construction standards which produce homes that may lose two-thirds of their original value in a four-year period" (4).<sup>152</sup>

## HUD's and NAHB's Deceit and the Reagan Housing Report

From the Reagan report on housing, and many other sources, of course, we know that HUDs and NAHBs arguments for why these sabotaging-regulations are needed have no basis in fact. Rather, the arguments by HUD and NAHB are misinformation, deceit and lies.

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<sup>152</sup>The idea that factory homes fall apart in a short while is a common form of misinformation and deceit used by monopolies in the stick built housing industry. No evidence is provided by the monopolies. Recent evidence from the Urban Institute suggests that the appreciation of mod[1,2] is similar to stick built homes (see Laurie Goodman, Edward Golding, Bing Bai and Sarah Stochak, September 13, 2018). One way mod[1,2] might lose value is similar to reasons why cars, at least in the past, lost value the minute they were driven off the lot. Car dealers would not post prices, and would often sell cars at wildly inflated prices to unsuspecting consumers. Drive such a car off the lot, its value significantly falls. Dealers of mod[1,2] sell these homes the way cars used to be sold. No posting of prices and so on. See Ron Wirtz, " Dealer Heal Thyself," for some of these tactics.

Let me briefly focus on one deceit: That government policy favors factory-built home producers over conventional producers. As we mentioned above, Kent Colton, executive vice president of NAHB, made such arguments.<sup>153</sup> Anne Mariano, on the basis of her interviews with Kent Colton, stated Colton's view that:

Conventional builders do not object to competition from the manufactured housing industry but want "to make sure the rules are comparable."<sup>154</sup>

Of course, the truth is the opposite. The Reagan commission reported that all the rules favored the conventional housing industry.

Kent Colton was, in fact, the staff director of Reagan's housing commission. He played a key role in the report's writing. Between 1982 and 1987, then, when Colton went from government service to NAHB, it seems he completely changed his views about the stance of government policy toward conventional homes and factory-built homes.<sup>155</sup> Or, perhaps he disagreed with Reagan's housing report on this issue?

When Colton left NAHB, he delivered the first annual John T. Dunlap Lecture (1999), at the Joint Center for Housing Studies at Harvard University.<sup>156</sup> The lecture was "Housing at the Millennium."<sup>157</sup> In the lecture he covered a very wide range of topics, including the record of housing production in the previous 50 years, and the need to meet the needs of housing have-

nots. He only mentioned manufactured housing in one place, on the top of page 5. He said:

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<sup>153</sup>Many other NAHB officials did as well, of course.

<sup>154</sup>Anne Mariano, HUD RULES CURBING MOBILE HOME INSTALLATIONS DRAW FIRE FROM INDUSTRY - The Washington Post, January 3, 1987.

<sup>155</sup>When Colton finished with his duties at the commission, he served at Freddie Mac from 1982 to 1984. He then moved to NAHB in 1984, remaining until 1999.

<sup>156</sup><https://www.jchs.harvard.edu/john-t-dunlop-lecture>

<sup>157</sup>[https://www.jchs.harvard.edu/sites/default/files/m99-1\\_colton.pdf](https://www.jchs.harvard.edu/sites/default/files/m99-1_colton.pdf)

“In the past five years we have produced almost 7.4 million homes, and another 1.7 million manufactured housing units (mobile homes) have been shipped for a total of over 9 million new housing units produced.” Nowhere is the great success of factory-housing production in the 1960s discussed, or its demise, or the idea that factory-housing is an important way, if not the only way, to meet the needs of the housing have-nots.

### **9.2.9 Why did producers of mod[1,2] choose to meet HUD code?**

In our long process of unraveling the misinformation and deceit of NAHB and HUD, one stumbling block proved extremely difficult to overcome. We could not answer the question: Why did producers of mod[1,2] choose to certify their homes as manufactured homes, thus requiring them to have a permanent chassis? Why not sell mod[1,2] another way?

Before I start to answer this question, recall what Speck said about regulations sabotaging factory-built homes: “At the outset it should be made clear that the straightforward exclusion of prefabricated houses and new building materials has never been attempted in any code. Such a practice by any of the interest groups would be poor public relations and afford a clear ground for attacks by opponents. Such outright exclusion would also be clearly illegal under the doctrines discussed below. The exclusion is accomplished by devious means ...”

What Speck teaches us applies, in full force, not surprisingly, to why the producers of mod[1,2] chose to certify their homes as manufactured homes. To explain this, I discuss details of the National Manufactured Housing Construction and Safety Standards Act of 1974 (MHCSS Act), and the regulations that followed from it.

Many of the regulations were not a straightforward attack on factory-built homes. Consider the permanent chassis requirement. In particular, the MHCSS *does not say* that every mod[1,2] must have a permanent chassis. The MHCSS Act *says* that a mod[1,2] with a permanent chassis is a manufactured home. That is, in the MHCSS, HUD “created” a new type of home, called a manufactured home, which had a permanent chassis.

A *manufactured* home was defined as follows “A structure, transportable in one or more sections, which is eight body feet or more in width and is thirty-two body feet or more in length, and which is *built on a permanent chassis* and designed to be used as a dwelling with or without a permanent foundation when connected to the required utilities, and includes the plumbing, heating, air-conditioning, and electrical systems contained therein” (Public Law 93-983, Aug. 22, 1974: 700).

A manufactured home is also called a HUD-home, or a HUD-code home. But we’ll call it, following the discussion above about language and its power, a mod[1,2]. We can add more detail, if the situation warrants, by saying its a mod[1,2] which has been modified by attaching a permanent chassis so as to make it a manufactured home.

So, we return to the question: Why did producers of mod[1,2] choose to certify their homes as manufactured homes, thus requiring them to have a permanent chassis? Why not sell mod[1,2] another way? The answer is that institutions were not available for a producer to sell the home another way. HUD and NAHB knew the producer of mod[1,2] would have to choose to designate their homes as manufactured homes, so why make it a requirement in MHCSS. This was an ingenuous way to sow confusion. I was confused for three years.

To explain why a producer of mod[1,2] had no choice but to choose the manufactured home designation, we begin by discussing how mod[1,2] were sold and financed before MHCSS.

*Institutions for Selling/Financing mod[1,2] and mod[3,+] Before 1974.*

When initially introduced, before WWII, mod[3,+] were typically (1) fairly *expensive* homes and (2) located in fairly *wealthy* areas. As markets for mod[3,+] developed, they were folded into the institutions that sold and financed stick-built homes, that is, they were sold by real estate agents and financed with traditional mortgages. Let me use “RE-TM” to denote these homes were “sold by Real Estate agents and financed with Traditional Mortgages.”

Mod[1,2] were introduced after WWII. They were typically (1) fairly *inexpensive* homes and (2) located in rural areas and small towns, areas that were not wealthy. So, from the start, markets for mod[1,2] were “segmented” from markets for mod[3,+] in two important respects: the price of home and the location of homes.

When it came to *initially* selling and financing mod[1,2], which, again, were being sold in different areas of the country than mod[3,+], the channels used were different from the RE-TM channels. Before the selling and financing of mod[1,2] could be folded into the RE-TM channels, there were *existing* institutions that immediately could be employed.

In particular, the channels for selling and financing Recreational Vehicles (RVs) were available. Mod[1,2] were very different than RVs. In particular, the chassis and wheels of RVs were never removed from the structure – they were vehicles, and would be moved often, even daily. By contrast, the chassis and wheels of mod[1,2] were removed once the house reached its permanent siting location.

But they had some similarities: the prices of mod[1,2] *were not so different* than the prices of RVs and they were sold in the *same geographic areas*. It was these similarities that initially led mod[1,2] to be sold in dealerships, like cars and RVs, using personal loans to finance the purchases. Let me use “DE-PL” to denote these homes were “sold by Dealers and financed with Personal Loans.”

There were, of course, significant benefits to a purchaser of mod[1,2] if the person could access RE-TM channels rather than DE-PL channels. But, initially, in the late 1940s, the markets for selling and financing mod[1,2] had not been integrated into RE-TM channels.

But, even 20 years later, producers of mod[1,2] were still waiting for their homes to be folded into the institutions selling and financing stick-built homes. Here is a CEO of a producer of mod[1,2] in late 1960s. “Lenders are getting a better understanding of what mobile homes are about; it’s only a question of time until they can be financed on terms similar to conventional housing.” (Howard 1971) Well, its been nearly 50 years since this CEO spoke, and the time has still not arrived. Mod[1,2] are still predominately sold and financed through DE-PL channels.

How is this possible? Why haven’t mod[1,2] been folded into the RE-TM channels? The institutional development has been *blocked by monopolies*. There has been resistance to these changes. Those that benefit from the DE-PL institutions have blocked the RE-TM channels from developing. In other words, today there are, not surprisingly, monopolies in the factory-built industry itself, monopolies that are badly harming the industry by blocking *new financing institutions*.

I will discuss these latter monopolies a bit below. But let me mention that these two groups of monopolies, those blocking factory-homes, and those blocking new financing institutions, often work together to benefit themselves, and to further harm low- and middle-income Americans. Again, this should not surprise us, given Frank Knight's description of monopolies: "The imperfections of the market, including monopoly of all kinds and bases, create power relations of infinite complexity as to kind and degree."

*Institutions for Selling/Financing mod[1,2] and mod[3,+] After 1974.*

As the discussion above indicates, in 1974, the institutions for selling and financing mod[1,2] and mod[3,+] were separate, and they had changed little since the 1950s. Of course, in 2019, they have changed little since 1974.

This is a clear case of what economists call *segmented markets*. Here households purchasing mod[1,2] are forced to pay a significant premium over real estate mortgages. And the source of the segmentation is clear: it's the result of monopolies and regulation.

So, we can return to our original question: Why did producers of mod[1,2] choose to certify the homes as manufactured homes, thus requiring a permanent chassis? And the answer is that the institutions to do otherwise were not available.

Before the Act, mod[1,2] were sold through DE-PL channels; RE-TM channels were not available. After the Act, RE-TM channels were still not available. Purchasers of mod[1,2] had to continue using DE-PL channels.

There is the remaining question of whether a manufacturer could, while using the DE-PL channels, sell the mod[1,2] as something other than a HUD-home. Could the manufacturer

ignore the HUD code? There was no law, that I know of, that required dealers to only sell mod[1,2] that met the HUD-code. That would have been too obvious a restriction. But HUD and NAHB did not need a law. They acted as if there was a law that required mod[1,2] to meet the HUD-code. Through many means, including misinformation and deceit, and threats of criminal penalties, HUD and NAHB prevailed in stopping attempts to sell mod[1,2] without meeting the HUD-code.

First, consider the misinformation produced by HUD and NAHB. Recall above that they argued a permanent chassis was needed on mod[1,2] to distinguish HUD-homes from stick-built homes. This was nonsense but added to confusion over the monopoly sabotage.

HUD and NAHB used the same deceit when arguing that a permanent chassis was needed on mod[1,2] to distinguish HUD-homes from modular homes, that is, mod[3,+]. Here is NAHB in Congressional testimony, arguing for the permanent chassis so homes could be distinguished: “..... how does the general public, public officials, or the Congress separate that housing which meets the definition of manufactured home and that is eligible for manufacture under the HUD code from manufactured housing that does not meet the HUD code” (U.S. Senate, Statement of NAHB, Manufactured Housing Provisions of H.R. 5157, 455). Again, this is nonsense but simply adds to much confusion.<sup>158</sup>

Second, when some manufacturers and dealers began to ignore some of the HUD-code when

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<sup>158</sup>Many groups and individuals tried to clear up the confusion that HUD and NAHB created. Congressman John Hiler stated, “The confusion seems to hover around whether a factory-built home has or does not have a permanent chassis. While modular homes and manufactured homes are both constructed in a factory setting, modular homes are built to individual state housing codes and manufactured homes are built to HUD’s preemptive, federal code for manufactured homes. Whether a home has a permanent chassis is irrelevant: the distinction is whether the builder chooses to follow state code and enforcement requirements or whether he or she follow HUD’s code and enforcement scheme” (Statement by John Hiler, Manufactured Housing Provisions of H.R. 5157, 250).



selling mod[1,2], they were threatened with criminal penalties. The initial attempts to sidestep HUD regulations were only modest ones. One way the HUD-code was ignored was in using temporary rather than permanent chasses. For example, manufacturers and dealers would use DE-PL channels in selling houses, meeting the HUD-code in the factory. But when the house was delivered, *the chassis would be removed*.<sup>159</sup> Using a temporary chassis would save a few thousand dollars. It would also save on the costs of installing the home on a foundation. Moreover, it might make the home more palatable to the area, as it would not have a chassis, like a trailer does. Having a temporary chassis was not an insignificant savings on mod[1,2]. For households in Appalachia, this could be a significant savings relative to incomes.

But, as mentioned, this drew the attention and wrath of the NAHB. The NAHB pushed HUD to require a permanent chassis. In response, HUD regulators began threatening manufacturers with criminal penalties. “Dealers who sell a nonconforming home [manufactured home without a permanent chassis] subject themselves to civil and criminal penalties,” James C. Nistler, a HUD deputy assistant secretary, warned in a letter to an industry trade group.<sup>160</sup> NAHB officials praised HUD’s efforts. As mentioned, Kent W. Colton, executive vice president of the homebuilders’ association, said: “If you’ve been going through a red light for 10 years and suddenly somebody says they’re going to start giving tickets, this should not be a shock.” So, through deceit and threat of criminal penalties, HUD and NAHB stopped these initial attempts to sell mod[1,2] that did not meet the HUD-code.<sup>161</sup>

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<sup>159</sup>Ann Mariano, “HUD Rules Curbing Mobile Home Installations Draw Fire From Industry,” The Washington Post, January 3rd, 1987.

<sup>160</sup>Ann Mariano, “HUD Rules Curbing Mobile Home Installations Draw Fire From Industry,” The Washington Post, January 3rd, 1987.

<sup>161</sup>Anyone with a passing familiarity with HUD will know it has a history of officials that have been indicted

### 9.2.10 Today, very few know of sabotage

While monopolies are inflicting great harm on the factory-built industry, very few associated with the industry are aware of it.<sup>162</sup> None of the 100s of economists studying the housing industry, at least that I am aware of, recognize the harm caused by monopolies.

Still harder to understand is that the current producers of factory-built homes are unaware of the sabotage. They do not realize the great extent to which their industry is currently being damaged by monopolists. For example, in the recent request by HUD for comments on the regulatory review of manufactured housing rules (call number FR-6075-N-01), only two comments (out of 200+) mentioned the problem with the permanent chassis rule (one of which was my comment).

Danny Ghorbani is one industry expert aware of the sabotage. He has been fighting the sabotage for over 40 years.<sup>163</sup> He recently wrote about the permanent chassis rule in the February and March 2013 issues of *The Journal: The Magazine for Manufactured and Modular Housing Professional*. In the February issue, discussing the mod[1,2] industry, he states:

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and convicted of serious crimes of corruption, both while at HUD, and afterwards. This includes Demery and Nistler.

Thomas Emery

<https://www.washingtonpost.com/archive/politics/1992/06/10/3rd-ex-hud-official-indicted-in-influence-peddling-scandal/50c0dc8a-687c-4f3d-b2d8-70ed99b3c4c6/>

<https://www.latimes.com/archives/la-xpm-1993-06-18-mn-4414-story.html>

James C. Nistler

<https://ashlandtidings.com/archive/developer-and-wife-charged-with-ponzi-scheme>

[https://www.oregonlive.com/business/2010/11/medford\\_developer\\_james\\_nistle.html](https://www.oregonlive.com/business/2010/11/medford_developer_james_nistle.html)

<sup>162</sup>Here I am talking about the harm monopolies cause by blocking the factory-built *technology*. There is some awareness of monopolies blocking better financing options for mod[1,2].

<sup>163</sup>In 1980, he and his group, the Association for Regulatory Reform, brought a case demanding HUD drop the permanent chassis requirement. In 1987, he gave testimony before Congress on “A New National Housing Policy: Recommendations of Organizations and Individuals Concerned about Affordable Housing in America.” In the testimony he talked extensively about how the HUD-code was written as a code for vehicles, thereby sabotaging the mod[1,2] industry. George Porter, who I introduced above when discussing safety, has also been a long time critic of HUD. I thank him for correspondence as well that has helped me.

“The industry’s competitors know that the across-the-board chassis requirement is a major Achilles Heel for manufactured housing, which is why they’ve done everything in their power—for decades—to maintain it.”

### 9.2.11 Combating Prejudice Against Mod[1,2]

Monopolies in stick-built production have fanned prejudice against mod[1,2] since their introduction. They have been very successful.

Let me give a brief indication of why it’s very difficult to combat prejudice against mod[1,2]. The homes in Figures 5A and 5B are nice homes. If we could show people these homes, and describe their high quality, the prejudice against mod[1,2] would begin to recede.

1. But in many parts of the country mod[1,2] are not allowed. In these areas, people don’t have any opportunity to see these homes. Perceptions, then, are formed from the misinformation touted by traditional builders and from culture, movies, television and so on, where mod[1,2] are often equated with trailers.

2. There are other parts of the country where mod[1,2] are allowed but face severe zoning restrictions. In these areas, mod[1,2] are often restricted to mobile home parks. These parks, in turn, are often zoned into areas near landfills, dumps, and so on. One doesn’t expect new homes like those in Figures 5A and 5B near landfills. One also expects that homes near landfills will not be maintained like those in nice neighborhoods. In these parts of the country, perceptions of mod[1,2] are typically based on mod[1,2] near landfills<sup>164</sup>

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<sup>164</sup>Knight (1970), writing about the dismal housing prospects of returning Vietnam Veterans, and how

3. Lastly, consider locations where zoning is the least prohibitive, where homes like those in Figures 5A and 5B are permitted in the same areas as stick-built homes. But if someone drove by these houses, most individuals wouldn't know they were mod[1,2].

So, the bad image of mod[1,2] dies hard. Of course, monopolies in the stick-built industry realize this and successfully exploit it.

### **9.3 Costs of Blocking Substitutes Large, Benefits of weakening monopolies Great**

Let me review some of the benefits of factory production, including some important ones we have not discussed at all.

#### **Experience of Cost Reduction in United States**

Statistics above showed that, on average, the costs per square foot of building homes in factories was as much as one-third the cost of building them on-site. In 2007, the U.S. Census Bureau reports the average cost per square foot was \$33.91 for homes built in factories, that is, modular homes of one-piece, while the cost per square foot was \$92.51 for single family homes built on-site.

As mentioned above, these averages understate the advantages of factories in producing homes for areas that are most in need, and for households in greatest need, of low cost

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factory homes are blocked, states: "The notion that mobile homes make "ugly trailer camps" is the doing of local ordinances. The rules are all against them in the New York metropolitan area, so you see them in such places as industrial areas and swamp edges, and almost nowhere else in that area. Of course they are unsightly."

housing. In particular, the costs per square foot of constructing homes on-site was much larger than \$92.51 for homes (1) that were “small” in size and (2) in areas, like rural areas or small towns, where on-site construction means building homes *one-at a-time*.

There are two reasons for this. When constructing homes on-site, the average cost per square foot decreases with the size of the house. That is, there are *returns to scale in house size*. Also, when constructing homes on-site, the average cost per square foot decreases with the number of homes that are simultaneously built by the firm. That is, there are *returns to scale in the number of homes constructed*.

The average cost per square foot in 2007 for site-built homes of \$92.51 was based on homes that were an average of 2,479 average square feet and that were primarily built by “production” builders, or Levitt type builders, in outer ring suburbs of large U.S. cities. Production builders are those that construct large numbers of homes at a time (up to 100 or more), on-site. If we had the underlying Census data, and were able to calculate the costs of on-site production of homes that (1) were 1,100 square feet (the size of modular homes of one piece in 2007) and (2) were built one-at-a-time, the costs per square feet would be significantly greater than \$92.51.<sup>165</sup>

## Stick-built Technology Subject to Long-lasting Recessions

Not only are factory-built homes significantly less expensive to build than stick-built homes, another advantage, factory production of homes is less susceptible to long and extended crises than is production using the stick-built technology.

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<sup>165</sup>In fact, it might be possible to work up some estimates from published data, as the Census Bureau reports productivity statistics for single family builders by number of houses built each year.

To explain this, let's first consider the significant problems that stick-builders are having, in some areas of the country, as the industry attempts to expand construction of homes. As the industry attempts to expand in many areas, it finds there are not enough skilled workers to build the homes. During the Great Recession, skilled workers, like carpenters, left the industry or moved to other locations. This has led to problems building houses on-site.

Consider the experience of Boise, Idaho. The city is having great difficulty building houses. The reason, says Gary Hanes, a retired HUD administrator based in Boise, is that the recession wiped out the city's construction sector. "Between 2008 and 2012, Boise home prices fell by 40 percent. With homebuilding stalled, thousands of construction workers took other jobs or left for North Dakota or Alaska."<sup>166</sup>

The factory housing industry faces no such difficulties in expanding production. As workers are semi-skilled, they can be trained for the factory work very quickly.

## Factory-Homes: Ownership and Investment Opportunity for Low-Income

Factory built homes offer the possibility of much less expensive housing. For example, rental rates for single family homes can be much, much cheaper with factory built homes. But the homes offer more. They offer low-income families two other opportunities, an investment opportunity and a home ownership opportunity.

Let's first discuss the homeownership opportunity. There are many reasons given for why home ownership has positive impacts on families. I'll not discuss that literature here, but

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<sup>166</sup>Michael Hobbes, "America's Housing Crisis Is Spreading To Smaller Cities," Sat, 05 May 2018: [https://www.huffpost.com/entry/housing-crisis-small-cities-boise\\_n\\_5ae878f7e4b055fd7fcfee0](https://www.huffpost.com/entry/housing-crisis-small-cities-boise_n_5ae878f7e4b055fd7fcfee0); See also "Construction industry, mid boom, can't find enough skilled workers," Curbed, 1-23-2018.

simply note that saving for a down-payment on low-cost stick built homes, say in the range of \$200,000 (for the structure), is much more difficult than doing so for a factory-built home costing say \$50,000. With factory homes, home ownership would be in the range of many more low-income households.

Homeownership is also thought to be a good investment for households, not least of which is that they can enjoy the tax deductibility of mortgage payments. Tapping into such investment is also much easier if factory built homes were available.

## **9.4 Housing Crises and Factory Production**

I finish Section 9 with some topics on the relationship between blocking factory-built homes and housing crises, both in the United States and throughout the world.

### **1. Housing Innovators Long Knew Factory Production was the Only Way**

Many observers in the 1930s pointed out the anomalies, and the great inefficiency, of making houses outside, while other durable goods were made in factories. Clark (1938), writing about Canadian construction methods, cites the complaints of a construction industry observer: “The construction industry [remains] as it was before the steam engine, an industry turning out a hand-made product. It is a product assembled by a group, of specialists — electricians and plumbers, metal workers and wood workers, plasterers and paperhangers, all acting with jealous independence of one another. This crew is feebly coordinated by one of its number acting in the capacity of a ‘general contractor.’ And all of them must deal on a retail basis

with a horde of material and equipment dealers standing between them and the producer of the material and equipment which they must buy.”

A.C. Shire (1937), the chief engineer of the Federal Housing Administration, and engineer of the Housing Division of the Public Works Administration, stated that: “in an age of large-scale financing, power, and mass production, we have the anachronism that the oldest and one of the largest of our industries, concerned with the production of one of the three essentials of life, is highly resistant to progress, follows practices developed in the days of handwork, operates as a large number of picayune businesses, is overloaded with a whole series of overheads and profits, is bogged down by waste and inefficiency, is unable to benefit by advancing productive techniques in other fields” (37-8).

Shire continues: “Unlike other widely used commodities, *shelter is not made in a factory or plant organized for its production*, nor are its design, construction, and sale controlled by a directing head or management. It is fabricated on the site, and is the concern of a number of loosely cooperating individuals, businesses, and professions. Each building or group of buildings is an operation in itself, unrelated to any other operation. Each operation is the occasion for a different combination of the men and organizations which make up the industry and its allied agencies. This lack of a definite productive organization has retarded the development of the product and has prevented its attaining the quality and the low cost which our knowledge and technique would otherwise be capable of producing.”

At some point innovators in the housing industry realized that factory production of homes was the only way to produce affordable, decent housing for a large fraction of the U.S. population (or that of any country). In the 1950s, John Betjeman (1952), an architectural



critic at the time (among other things), and later *poet laureate* in the United Kingdom, wrote: “Architects have been too wrapped up in “style,” in bricks and foundations and what not, to devote their attention to the only solution of the housing problem—the production of decent and convenient mass-produced houses. These houses should be pre-fabricated, as was the Crystal palace, they should be and could be well planned, as sound and weather-proof as the best brick-built house.”

Consider the view of Levitt and Sons, from the 1960s. Levitt and Sons were pioneers in mass producing homes outside. In the late 1940s, the Levitts built hundreds of houses at the same time in Hempstead, New York. They created an “assembly-line-like” system on-site. They purchased materials in large quantities. Skilled workers would move along an assembly line, that is, from house to house. Electricians would wire one house, then move next door. These methods significantly brought down the cost of producing homes.

However, the Levitt’s, with time, began to realize their mass production method had major drawbacks. The method is still a stick-built technology. The method still required very large amounts of skilled labor to make a house. The Levitts began to understand that the cost reductions from their new methods were not large enough to produce affordable, decent housing for a large fraction of the U.S. population. They realized factory production was the only way.

Here are the Levitt’s in Congressional testimony: “The labor time in a factory-built dwelling unit is only a fraction of what is required to construct a similar unit on-site. That’s why we must look at factory-built housing. That’s why factory-built housing must succeed, or we will never be able to produce the homes and apartments needed to house our expanding

population and our underprivileged citizens in a comfortable, dignified, decent way” (United States Senate 1969, 16).<sup>167</sup>

## 2. U.S. Housing Crisis: Productivity Divergence Between Stick and Factory

The productivity of the residential construction industry and the consumer durable goods manufacturing industries, presented in Figure 4A and 4B, tell the story of the U.S. housing crisis. The divergence of productivity is dramatic. This productivity divergence is the fundamental source of the U.S. housing crisis. House prices, relative to other consumer durable goods, will continue to rise as long as the productivity of residential construction continues to fall further and further behind the productivity of other durable goods industries.

Recall Section 6 where we discussed that when monopolies reduce productivity in an industry, that it’s only a matter of time, at least for tradeable goods, until the signs of this lagging productivity emerge, and until competition emerges from elsewhere.

In the U.S. cement industry, for example, the signs of lagging productivity showed up in high U.S. cement prices relative to world cement prices. The competition emerged from countries around the world. This competition could have been stopped, of course, but would have required high tariffs, and ever increasing tariffs over time.

In the U.S. residential construction industry, the lagging productivity has shown up in very high home prices. It also shows up as homelessness and evictions, as the low-income cannot

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<sup>167</sup> Another commentator from the 1960s was L.A. Knight. In discussing the great difficulty returning Vietnam Veterans were having finding housing, he wrote: “It almost seems silly to explain that mass production to standard specifications in a factory is the key to producing any goods including houses at prices far below what hand labor at the customer’s site can meet. Housing is about the only common product that has escaped the industrial revolution and still hews to basic procedures that are 400 years old” (Knight 1970, 338-41).

pay for shelter. The monopolies in residential construction don't have tariffs to block the emergence of factory homes, so they use other means.

### 3. A New Type of Misinformation: “Exorbitant” Fees Paid by Stickbuilders

Above we introduced many weapons that were employed against factory home producers in the 1960s and 1970s. The monopolies have continued to introduce new weapons and refine old ones in the intervening years.

Today, for example, monopolies use new types of misinformation and deceit to block factory homes. They argue that the very high prices of homes built on-site is the result of regulations, like zoning restrictions, and development fees, that are placed on stick-builders. Claims are made that regulatory costs make up to a third of the final selling price of many stick-built homes. No evidence is presented to support these claims<sup>168</sup> Unfortunately, these claims are often picked up and reported by those advocating for affordable housing. The advocates, unknowingly, spread the misinformation created by the monopolies.

There are studies showing, in fact, that these development fees are fairly small in many cities. One is from the Turner Center for Housing Innovation at the University of California, Berkeley. Mawhorter, Garcia and Raetz (2018) estimate housing development fees in a sample of California cities. The estimates for the development costs, relative to median home prices in the city, are: Los Angeles, 6%; Sacramento, 9%; Roseville, 10%; Oakland,

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<sup>168</sup>A recent “report” by the Housing Affordability Institute, “Priced Out: The True Costs of Minnesota’s Broken Housing Market,” purports to provide such evidence. In the introduction, we read: “Up to 1/3 of a new home’s price in the Twin Cities came from regulations and policies from the local, regional and state level.” I find the report unintelligible. Nowhere, for example, does the report describe how this 1/3 figure was arrived at.

11%; Irvine, 18%; and Fremont, 18%.<sup>169</sup>

Four of the six cities have fees of 11% or less. Two have fees of 18%. While these latter two cities have very high fees, there is evidence that California cities have fees that significantly exceed those in the rest of the country. These 18% development fees are outliers. Mullen (2015) estimates city development fees for single family homes for 271 cities across the United States. The average development fees for these cities was 5.9% of the house value.<sup>170</sup>

#### 4. More Hurdles to Factory Housing: Recognizing Existence of Industry

One of the hurdles to factory production, as mentioned, is having the public recognize that the factory-built housing industry is subject to sabotage. But it's even worse than this: Much of the public, it seems, does not realize that the factory housing industry exists.

Many housing experts are seemingly unaware of the factory housing industry (or, at the least, don't recognize its importance). In his paper "Housing Supply," for the Annual Review of Economics, Gyourko (2009) has one mention of factory homes.<sup>171</sup>

Even discussions of affordable housing policy typically make no mention of factory housing.

In "Promoting Home Ownership Among Low-Income Households," Olsen (2007) makes no

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<sup>169</sup>Mawhorter, Garcia and Raetz emphasize the difficulty in estimating fees. But work like this is a great start. The methodology is laid out. The caveats are noted and discussed.

<sup>170</sup>In Mullen (2015), a spreadsheet for his single family home calculations is presented on pages 1-7 of the sheet. The first column of numbers ("Total") are the total development fees for the city. The development fees are calculated for \$200,000 of value. On page 7, the average development fees are given for the nation and by U.S. state. The national average development fee was \$11,868 for a home valued at \$200,000, or 5.9%. I'm assuming the fees scale with value, so that this 5.9% is a reasonable approximation for a home with, say, \$400,000 value.

<sup>171</sup>This mention comes in footnote one. Here is the footnote: "This figure is a market-value estimate for all types of owner-occupied housing, including farm houses, mobile homes, second homes that are not rented, vacant homes for sale, and vacant land. See table B.100 Balance Sheet of Households and NonProfit Organizations from the Flow of Funds Accounts of the United States at the following

URL: <http://www.federalreserve.gov/releases/z1/Current/z1r-5.pdf>

mention of factory-built housing. Nor does he in “Reducing Poverty by Reforming Housing Policy.” (Olsen, 2016)

Glaeser and Gyourko (2008) don’t discuss factory-housing in *Rethinking Federal Housing Policy: How to Make Housing Plentiful and Affordable*.

A report by the Federal Reserve Bank of Boston, “The Lack of Affordable Housing in New England: How Big a Problem? Why Is It Growing? What Are We Doing about It?,” by Sasser, Zhao and Sass (2007), makes no mention of factory-built housing as an option for low-cost housing. Nor does a more recent report by the Federal Reserve Bank of Boston, “The Growing Shortage of Affordable Housing for the Extremely Low Income in Massachusetts,” by Chinmenti (2019).

Before WWII, of course, many economists understood the importance of factory built housing for alleviating housing crises. I know of only one economist since then that has laid out a plan for using factory built homes, in particular, mod[1,2], as part of a plan to spur low cost housing. This is Dorothy Newmann, an economist at the Bureau of Labor Statistics. Newmann (1966) studied how the United States might meet its need for low-cost housing. In some of the plans she sketched to provide low-cost housing, mobile homes were to account for a third of homes produced in rural areas. Her plans were made when mobile home shipments had never exceeded 230,000 units. She was ahead of her time (and, unfortunately, still is).<sup>172</sup>

## 5. NIMBYISM

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<sup>172</sup>There was, in fact, a concerted push for factory built housing at the end of the 1960s. This HUD program, Operation Breakthrough, handed out subsidies to those who wanted to enter the factory housing industry. It was a disaster. There is no need to discuss it here.

The only possible means to produce decent, affordable housing for a large share of the U.S. population is through factory production. But some may argue that NIMBYISM (Not in My Backyard - ism) will block high quality, low-cost factory-built housing.

Today, NIMBYISM blocks stick-built housing of all qualities in some areas. It will do the same to factory-built housing in some areas as well. But there are other locations that will accrue great benefits from a reduction in the barriers and harm inflicted on factory production of homes.

### *Location of Mod[1,2]*

Let me begin with some information on the locations of mod[1,2] in the United States. In Figure 10, we plot information on the stock of mod[1,2] in *U.S. counties*. We first consider the ratio of Mod[1,2] (Mobile Homes) to Single-Family Homes (Stick-Built + Factory-Built) by county. We plot, in dark, those counties where the ratio is 0.20 or greater. One can see that the stocks are “large” in Appalachia and the South. They are large in some areas of the West as well. With a few exceptions, none of the counties in the Midwest and New England are dark.

We next look at investment in mod[1,2] by region, where the narrowest level of aggregation we have, at this point, is at the state level. In Tables 1 and 2, we examine different measures of investment in mod[1,2] relative to total housing investment and relative to population. The investment rates in mod[1,2] tell a similar, but more nuanced, story as the stocks presented in Figure 10.

In Table 1, we present investment in mod[1,2] as a share of total single family housing

investment for two years, 1997 and 2017. We present this for states with low and high rates. In the late 1990s, there was a surge in mod[1,2] investment as no-doc lending was common at the time. It led to a crisis in the market for mod[1,2] loans, a prelude for what would follow a decade later in the real estate mortgage market.

The national average investment rate in 1997 was roughly 30 percent. We can see that even with no-doc lending, the investment rate in New England was very low. The Midwestern investment rate is much greater than the New England rate, though substantially below the national average. In 2017, investment rates in New England and the Midwest are similar, and both are substantially below those of the Southern states.

This is the nuance I referred to: In 1997, with borrowing so easy for mod[1,2], there was significant take up in the Midwest but very little in the Northeast. There are obviously pockets of locations in the Midwest that, if mod[1,2] are cheap enough, resistance can be fought to some degree.<sup>173</sup>

### *Benefits of Reducing Sabotage of Factory-built Homes, By Area*

Let me distinguish three areas in the United States based on the extent to which mod[1,2] are accepted today and the extent to which they would be accepted if monopoly sabotage was

scaled back.

1. Areas where they are currently accepted.

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<sup>173</sup>I'm not sure why there is a low investment rate in the Carolinas in 2017.

2. Areas where they are currently blocked, but would be able to enter (to some extent) after the reforms.

3. Areas where they will always be blocked, no matter what the law says.

The third type of areas are, of course, the NIMBY areas. No matter what the law says, they will be blocked. So, let me talk about the first two type of areas.

—*Areas where mod[1,2] are currently “accepted”*

There would be great benefits of reducing monopoly sabotage in areas where they are already accepted. Just because mod[1,2] are accepted in an area doesn't mean, of course, that monopoly sabotage does not harm these homes. The sabotage significantly hurts the homes.

First, the homes are required to have a permanent chassis. Second, the homes must satisfy the HUD-code, a code likely more stringent than the local building code (if there is one).

And, third, the homes must be financed as cars rather than real estate. The gains in well being from removing these types of sabotage on mod[1,2] homes in areas like Appalachia would be immense.

Reductions in sabotage would lead to two types of increased investment:

i. (Direct) The fraction of mod[1,2] in total housing investment would increase, as the prices of these houses would decrease.

ii. (Indirect) Total housing investment in these areas might increase. As prices of mod[1,2] are driven down, households may well move to these locations. These areas would grow in population



—Areas where  $\text{mod}[1,2]$  not currently accepted but would be (to some extent)

Suppose  $\text{mod}[1,2]$  were no longer blocked in small towns and rural areas in the Midwest. There would, again, be two types of increased investment. In fact, I am very interested in considering the indirect effects, which I focus on.

- i. (Direct) There would now be investment in  $\text{mod}[1,2]$ .
- ii. (Indirect) Total housing investment in these areas might increase. As  $\text{mod}[1,2]$  become available, households may well move to these locations. These areas would grow in population

There is a literature that asks why the poor live in cities. One answer is that transportation options are much better in cities than rural areas and small towns (see, e.g., Glaeser, Kahn, and Rappaport, 2008). I suspect another very important reason is that many low-income households are “trapped” in cities by the high cost of housing in rural areas and small towns.

As far as the housing-technology employed by area (urban, suburb and rural/small towns), the most *backward* is in rural areas and small towns where  $\text{mod}[1,2]$  are not permitted or are severely limited. In these areas, not only is the stick-technology the only one employed, the most unproductive stick-technology is used: making stick-built houses *one-at-a-time*.

If these rural areas and small towns treated  $\text{mod}[1,2]$  as regular housing stock, this would dramatically reduce housing costs in these areas. Large numbers of low-income, city residents would move to these areas, especially those in cities close to rural areas and small towns. Would they “pour” out of the cities? Perhaps.

Research at the Minneapolis Fed has pointed out commuting patterns consistent with this logic. City residents in the Minneapolis Federal Reserve's district are commuting to work in rural areas and small towns. Sometimes employers in these small towns are facilitating this commuting. Amazon buses employees from Minneapolis to a fulfillment center south of the city, as housing costs are cheaper in the city (Amazon buses individuals from Minneapolis to Shakopee; See Phil Davies, "Houses Are Where the Jobs Sleep at Night," Jan. 9, 2018). Some city residents commute on their own from smaller cities in the region to small towns for work (e.g., Phil Davies discusses some of this in "Help Wanted for Workforce Housing," Oct. 29, 2015 and "The Vanishing Starter Home," Jan. 9, 2018).

## 6. Housing Crises Around the World

The U.S. traditional construction industry is far from alone in blocking the development of factory-built housing. It's sabotaged in most countries. However, it's difficult to construct histories of this sabotage. First, there is a lack of data on factory production throughout the world. As far as I know, Canada, Germany and the United States are the only countries that have a consistent time series on factory production for any length of time. For other countries, estimates of factory production for single years are sometimes available. Second, it's been difficult to gather evidence given the monopolies sabotaging the industry rely on deceit in all countries.

### *Sabotage of Factory Housing: Canada*

For Canada, we have good evidence there is sabotage. The history of sabotage is very similar to that in the United States. As mentioned, we have extensive statistics on factory

production of homes. Factory production as a share of total investment was very high before the sabotage began. We also have information on some of the weapons used to sabotage factory housing (Feir, Schmitz, Scoones).

### *Sabotage of Factory Housing: United Kingdom*

The history of sabotage of factory-built homes in the United Kingdom also appears similar to that in the United States, though we don't have the same extensive evidence as we do for Canada. In the 1960s, factory-built home production began to surge as a share of all housing production. This led, in the 1960s and 1970s, to sabotage efforts on the part of many monopolies in the traditional construction industry.

Knox and Hennessy (1966) discuss resistance by British construction unions to new techniques. They do not mention resistance to factory methods in particular but conclude: "The construction industry's productivity has remained relatively low not because of technical stagnation but partly because of union resistance to innovations."<sup>174</sup>

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<sup>174</sup>Knox and Hennessey also discussed the large losses from jurisdictions in the traditional construction industry. In England, job jurisdictions are called *job demarcations*. Let me quote some of their writing on job demarcations and disputes over them, since it's some of the best writing I've seen on the subject. "If many observers, including some employers, consider that the construction industry's procedure for settling disputes is the most efficient in the country, it nevertheless remains true that demarcation disputes, however quickly settled, reveal the existence of restrictive practices. All demarcation agreements are unnecessary since the need for an agreement is prima facie evidence that members of both unions could do the disputed jobs." .. "Demarcation may be more harmful to output than strike. It is especially important in building where many crafts engage in each operation and where it is still necessary for the employer to call in a specified craftsman for a defined job, possibly for a few minutes at a time while other workers stand idly by. Co-ordination in building is inevitably complicated, with as many as 80 subcontractors working on a construction site, but unnecessary craft demarcation adds gratuitous complications." .... "Finally, insistence that labourers should not do certain jobs of which they are capable adds unnecessarily to costs. In the course of the research for this Paper the effort to compile examples from the 'case law' of demarcation disputes settled at national level in the building industry resulted in a monumental document. Had the researcher been asked to compile, in addition, disputes settled at local or regional level, his task would have been Herculean without adding to enlightenment, because when one has read one demarcation case one has read most of them. What stands out is that however efficient the building industry's demarcation procedure, it results in a large national waste of scarce man-power and resources in wholly unnecessary work." pp23-24

Martin (1975) is more explicit about how trade unions blocked production of factory-built homes. He also discusses resistance of planning authorities.<sup>175</sup>

Today, there is widespread agreement that there is a housing crisis in the United Kingdom. In some ways, UK housing experts are far ahead of their U.S. counterparts in understanding the housing crisis. There are UK experts who, today, discuss how the current technology for building homes has not changed for a very long time. Here is Kenneth Shuttleworth, a leading architect, as quoted by Steer (2018, p. 6), “House builders remain a way behind the office market, for example, where modular has been happening for years. We’re still seeing people building houses like the Roman times.”

Many UK housing experts and politicians argue that factory-built housing must play a significant role in solving the housing crisis. Mark Farmer, an industry expert and author of the report *Modernise or Die*, recently stressed the importance of factory housing. Discussing the housing crisis, Farmer argued “we haven’t got a choice” but to develop offsite construction.<sup>176</sup> Let me emphasize that, in the United States, there are no industry experts that stress factory production must be at the center of plans to limit housing crises.

—*UK Experts Don’t recognize Sabotage*

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<sup>175</sup>Here is Martin: “During the sixties boom conditions led to government initiative to promote industrialised systems of construction that were then developed in large numbers. The systems developed for housing were technically hardly more advanced than those produced after the two world wars and, in any case, were in competition with a prosperous traditional industry. Within a few years the industrialised systems came to an end. Building trade unions exercise a determining force in all aspects of building whenever employment appears to be threatened by methods that call for other skills or for work to be carried out in other places. Financial requirements, marketing problems, excessive use of a single material, improper use of designers, lack of after-sales service, restrictive building regulations, planning control and union policies all stultified the acceptance of new methods.”

<sup>176</sup>Construction News 06 FEB 2018 BY LUCYALDERSON

But UK experts, it seems to me, don't recognize that the factory-built home industry is small because it's subject to harm and sabotage from the traditional builders. One sees discussions that traditional builders are *hesitant* to enter the industry. Reasons given for being hesitant are the riskiness of the investment or the size of the investment. One sometimes sees that groups are reluctant because of being made redundant. Alderson reports: "According to Mr Farmer, getting the industry to embrace offsite is like trying to turn around an old tanker. One reason why the industry is hesitant to develop offsite, he suggests, is the threat it poses to the traditional main contractor role."<sup>177</sup> Alderson herself argues: "There appears to be tension between increasing client demand for offsite construction and resistance from an industry threatened by the challenge this presents to traditional contracting roles."

But these discussions fall short of recognizing that traditional builders make active investments *to block and sabotage* the factory built industry.

—*Some Pieces of Evidence of Sabotage*

*i.) Those Writing on monopolies Blocking Factory-built Homes*

I take as evidence, of course, those writing about sabotage in the past, like Knox and Hennessey (1966) and Martin (1975). My assumption is that the incentives of groups in the traditional construction industry have not changed since these authors (and others) described the sabotage of factory production. The actors that play the biggest role in blocking can change over time.<sup>178</sup>

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<sup>177</sup>Construction News 06 FEB 2018 BY LUCYALDERSON

<sup>178</sup>In the United States, for example, factory production has been blocked for 100 years. A major force blocking factory production today is HUD, which was not created until 1965.

I have found one recent expert, Lewis Abbott, who argues that sabotage plays a big role in keeping factory production at low levels. Abbott (2013) begins his discussion of sabotage in construction in a general way. “Given that political restrictions on the supply of new houses are basically similar to protectionist foreign trade barriers, it follows that their negative industrial-commercial consequences will be similar also. Both types of protectionism essentially serve the interests of insiders at the expense of outsiders. Thus, just as (say) the old Corn Laws resulted in the artificial raising of a staple commodity price to the benefit of British farmers at the expense of the urban poor and foreign producers, so protectionist housebuilding barriers have resulted in the artificial raising of house prices to the benefit of various vested residential property interests at the expense of the economy and society at large.”p.10

He then becomes more specific, talking about factory housing. “Modern high-tech detached dwellings can be mass produced cheap enough to be affordable by all but the poorest of households – and in the latter case, dwellings could even be given away free at substantially lower cost to taxpayers than the current cost of conventional so-called low-cost housing and/or rent subsidies. However, the supply and demand for cheap innovative housing products has been persistently frustrated by the development-planning control system in Britain.”p.94<sup>179</sup>

*ii). Misinformation and deceit.*

One finds plenty of misinformation and deceit spread by the traditional industry against the

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<sup>179</sup>Abbott points out groups opposed. “To begin with, anything that which [sic] might revolutionize existing housing production methods and substantially reduce dwelling costs has been perceived as a threat by various vested interests. These include traditionalistic housebuilders whose products would be made uncompetitive in price/quality terms; existing house-owners, mortgage lenders, and estate agents; and local authorities and politicians dependent on high and rising house prices for property-based taxes and votes.”p 94

factory industry. Matt Weaver, in a Guardian article, *Packed with potential*, May 17, 2005, explored the possibilities for prefabricated homes in Britain. He noted they cost less to build, and took half the time to construct. But, in interviews, he found many who were skeptical. The list of skeptics contains the usual suspects that actively blocking factory homes in the United States and throughout the world.

Sam Webb, councillor of the Royal Institute of British Architects, said “We’ve been here before.” .... “They look all shiny and new when they are built, but what will they look like in 20 or 30 years? If they want buildings to be like cars, my worry is that they will be like second-hand bangers in a few years’ time.” ....

Webb continues: “And what happens if you want to extend a house, or something goes wrong? Buildings need to be flexible. Take a Georgian house: they have served as houses, flats, offices, even schools. It’s a flexible form of construction that I don’t think we have improved upon.”

More recently, in a Financial Times article, “Is the UK Construction Industry having its ‘Uber Moment’?,” October 20, 2018, Gill Plimmer discusses the possibility of factory production taking off in the United Kingdom. There is some discussion as to why the United Kingdom has been slow to adopt factory-built housing. Comparisons are made to Japan which has more extensive production of factory-built homes.

According to Plimmer, the economic director of the Construction Products Association argues that Japan has a greater share of factory production than the UK because of its inherent advantages relative to the UK.

One argument is that “Japan has a bigger population” than the UK. But Sweden, which has a much smaller population than the UK, has very high shares of factory production, much higher than Japan’s. Estonia, which is much smaller than Sweden, was the leading European exporter of prefabricated homes in many years during the 2010s.

Another argument is that Japan has “a more stable housing market” than the UK, presumably making factory housing a less risky investment. But Japan likely has a more stable housing market because it has a higher share of factory production. The causality runs in the opposite direction.

So this housing expert is either sowing confusion, or is terribly ignorant of the industry.

## 7. McKinsey Calls for Modular Housing, Though It’s Unaware of Sabotage

The consulting firm McKinsey has produced a series of studies arguing that to alleviate housing crises around the world, much more housing should be produced with manufacturing techniques (see McKinsey 2014, 2017). They are to be applauded for bringing factory production to the public’s attention.

However, McKinsey doesn’t realize that levels of factory production today are very small because the traditional construction sectors in many countries have sabotaged the development of factory built homes. That McKinsey is unaware of the crucial importance of sabotage is more testament to the ability of monopolies in traditional construction to sow deceit and misinformation.

McKinsey (2019) is a study of modular housing production in the United States and the United Kingdom. On pages 17-19, McKinsey presents a side-bar, with the title: “*Modular*



*has had its moments before, but there is reason to believe its momentum is sustainable this time.*” Within that side-bar, Exhibit 6 shows, for each country, (roughly) the year when the country began an episode of modular construction expansion, and also (roughly) the year when the expansion episode stopped.<sup>180</sup>

For the United Kingdom, McKinsey identifies three expansion episodes: (1) Immediately after WWII, (2) The 1960s and (3) A current expansion that is still ongoing. For the United States, two episodes are identified: (1) Immediately after WWII and (2) A current expansion that is still ongoing. But the United States, obviously, had a tremendous expansion in modular housing construction during the 1960s, as we have shown in Figure 7. Moreover, the experience of modular housing construction today does not stand out as particularly better than usual.

That McKinsey did not identify the 1960s as an expansionary episode of modular housing construction, and that they identify the present as one such episode, is because the McKinsey authors have limited knowledge of U.S. housing statistics. There are significant gaps in their knowledge, including, as I mentioned above, that only part of factory production is included in official statistics, like housing starts. The production of mod[1,2] is not included in housing starts.

But just as important, McKinsey makes no mention that sabotage had any role in the previous failures of modular production in the United States and the United Kingdom to keep its momentum. Of course, sabotage was the overwhelming reason for its lost momentum

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<sup>180</sup>The “blue” dots along the horizontal (time) axis represent the years expansions began; the “red” dots along the horizontal (time) axis represent years when they stopped. Also, in small boxes beneath the timeline, they give reasons for the start and demise of each expansion.

in the United States (and Canada), and I suspect the UK as well. McKinsey has no knowledge of this sabotage.

## 10 Hearing Aids

The hearing aid industry is overrun with monopolies, from top to bottom: manufacturers, audiologists, audiology associations, and various groups in the FDA, AARP and state legislatures, to name some of the monopolies. These monopolies work together, spinning power relationships of “infinite complexity,” to pursue their goals. They inflict great harm on low- and middle-income Americans.<sup>181</sup>

In a report to President Barack Obama, the President’s Council of Advisors on Science and Technology (PCAST) (2015) quotes a survey where the average price for a pair of hearing aids was \$4,726.<sup>182</sup> The cost of manufacturing them is perhaps \$300.<sup>183</sup> That monopolies are able to sell a pair for this average price is an amazing, but despicable, feat.<sup>184</sup>

It’s tempting to compare the monopolies in the hearing aid industry to those in the stick-built residential construction industry. In both cases there are many, many monopolies. In both cases misinformation, confusion and deceit are potent weapons of the monopolies. But the monopolies in hearing aids, in terms of producing misinformation and deceit, likely outdo those in construction. In fact, while we’ve peeled away some of the deceit and misinformation

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<sup>181</sup>I worked on this material with Dirk Van Duym.

<sup>182</sup>The report can be found at: [https://obamawhitehouse.archives.gov/sites/default/files/microsites/ostp/PCAST/pcast\\_he](https://obamawhitehouse.archives.gov/sites/default/files/microsites/ostp/PCAST/pcast_he)

<sup>183</sup>See below for a brief discussion of markups.

<sup>184</sup>Most insurance programs don’t cover hearing aids. For a discussion of this, see Mary Helen McNeal, “Say What? The Affordable Care Act, Medicare and Hearing Aids,” *Harvard Journal on Legislation*, 2016.

laid by monopolies in the hearing aid industry, we still have a ways to go. We don't have the same understanding of how monopolies operate in this industry as we do in construction.

Here we briefly discuss some of the weapons used by monopolies in this industry.

## 10.1 There is a crisis

As for the contours of the crisis, let me quote from the PCAST (2015) paper already mentioned. PCAST reports hearing loss impacts many Americans. “Age-related hearing loss affects many Americans, with older adults particularly at risk—a quarter of adults between 60 and 69 years, over half in the range 70-79 years, and almost 80 percent of those older than age 80 have difficulty hearing. The absolute number of those affected, already almost 30 million, is expected to grow as the population ages.”

While hearing loss has significant health costs and risks, a small minority of Americans with hearing problems seek help. “While untreated hearing loss likely impairs physical and cognitive health, only a minority of Americans with hearing loss (perhaps 15-30 percent) seek out and use assistive hearing technologies. Adoption rates are even smaller for people with low income and for racial and ethnic minorities.”

As for the barriers to seeking help: “PCAST believes that cost is the largest barrier to hearing-technology adoption. A 2014 survey found that the average price of one hearing aid was \$2,363, with premium models costing \$2,898. Many, if not most, individuals need two hearing aids, one in each ear, doubling the cost.”<sup>185</sup>

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<sup>185</sup>For a paper discussing the PCAST report, see “Opening the Market for Lower Cost Hearing Aids:

## 10.2 Monopolies Block Substitutes

We discuss two types of low cost substitutes that are blocked by monopolies in this industry. First, on the manufacturing side, monopolists block new, low-cost technology. Second, as for “fitting the hearing aids,” high-cost professionals, just as in oral health services and legal services, are blocking lower-cost professionals from providing services.

### Monopolies Block new, extremely low-cost technology

Monopolies block the introduction of low-cost technology. An alliance made up of audiologists, manufacturers, the Federal Drug Administration (FDA), and others has blocked the over-the-counter sale of hearing devices that cost as low as \$150 and which perform well (see Zimmerman 2004, for example).<sup>186</sup>

### Audiologists Block Low cost alternative providers

There are typically two types of professionals that serve as hearing aid fitters in U.S. states. One is audiologists, individuals who hold advanced degrees, both MAs and PhDs. Audiologists also provide a wide range of other services, many of a more technical nature.

The other professional group, one that goes by slightly different names across states, simply fits hearing aids. They typically require only a high school degree. They are often allowed to operate independently of audiologists. In Minnesota, they are called hearing instrument dispensers (HIDs).

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Regulatory Change Can Improve the Health of Older Americans,” Jan Blustein and Barbara E. Weinstein, 2016, available at: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4880273/>

<sup>186</sup>Recent legislation has hopefully opened up the over the counter market to some of these devices.

Many audiologist groups have been working to make their profession comparable to the legal profession. That is, just as no individual can give legal advice *of any kind* without being a member of the bar, these groups want no individuals to give *any kind of hearing care, including fitting of aids*, unless they are an audiologist – that is, have an MA or PhD from an audiology program. Professionals like HIDs would no longer fit hearing aids (or at least would no longer operate independently from an audiologist).<sup>187</sup>

Unlike lawyers and dentists, that have made low-cost substitutes illegal, audiologists have been forced to use other means. Let us present a couple of the methods that audiologists in Minnesota have used to block HIDs.

#### *HIDs Face Many More Tests and Higher Fees for Same Tests*

To be certified to fit hearing aids, both HIDs and audiologists must pass exams. Becoming a HID requires a battery of tests, some “academic types” tests and a practical test, the actual fitting of the hearing aids. For audiologists, those with an MA or PhD, the only test is the practical test, the academic type tests being waved. Why wave such academic tests for audiologists? Lawyers obviously don’t.

The fee for the practical exam, the exam both HIDs and audiologists take, differs for HIDs and audiologists. The fee for a HID applicant is \$1,200, while that for an audiologist is \$250.

Let us emphasize that this is the same exam.

We wrote to state officials in Minnesota and asked what accounted for this difference in fees

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<sup>187</sup>I should note that there are audiology associations that are opposed to many of the monopolistic practices in the industry. One is the American Academy of Audiology. Its president, Larry Eng, wrote a letter to President Obama and PCAST, dated Nov. 15, 2015, that offered sound recommendations for improving access to hearing aids.

for taking the practical exam. Here is the response we received: “Regarding the differentials, the examination fees along with licensing fees are defined in statute and support the hearing instrument dispenser certification program, under Chapter 153A and the audiology licensing program, under sections 148.511 to 148.5198. . . . There are approximately 230 certified hearing instrument dispensers and 465 licensed audiologists. Therefore, program fees for audiologists are spread across a larger applicant base.”

This reasoning is, of course, absurd for everyone except members of a monopoly. This system of fees, obviously, works to accomplish the goal of audiologists to eliminate HIDs. Since HIDs are a smaller share of the total, they pay more per person. Thus, fewer potential HIDs take the exam as otherwise would. Which leads to HIDs being an even smaller share of the total, and even higher relative fees on the next round of the tests. And so on.

### *HIDs Required to Complete Internship*

If a potential HID passes all the exams, another requirement to be certified is that the person complete an apprenticeship or internship with an already licensed hearing aid dealer (either a licensed HID or licensed audiologist). The potential HID must find a dealer who will act as a sponsor for the internship. Audiologists don’t have this requirement.

The incentives of a potential sponsor are clear: Why sponsor a HID who will be a competitor?

This is a much greater barrier to HIDs than the costs of all the exams together, but none of this shows up in measures typically collected on the costs of licensing.<sup>188</sup>

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<sup>188</sup>Note that when an individual is considering taking the HID path, the person is an opponent to these restrictions on becoming HIDs. But if the person passes all these hurdles, that person now becomes an ally of the audiologists in blocking HIDs.

One might wonder why there are any HIDs at all. The answer is that, historically, the vast majority of hearing aids were fitted by HID-type professionals. Many went door to door. The idea that the service should be provided by MAs and PhDs is something relatively new. So, this is a case of a group of high-cost professionals organizing themselves into monopolies to block lower-cost professionals that had been providing the service. Historically, the industry has had significant problems with corruption, deceit and misinformation, dating back to before WWII. Many decades ago, the FTC held hearings to discuss such problems. But the answer to such problems is not to require a PhD to fit hearing aids. The answer is meaningful government oversight of the industry.

### 10.3 Markups in Hearing Aid Industry

There are fantastic markups in hearing aids. If we denote the price of a single hearing aid to households by  $p$ , and the marginal cost of production by  $c_m$ , a rough estimate is that  $p = \$2,000$  and  $c_m = \$150$ , so that there is a fantastic markup over marginal production costs, that is,  $p - c_m$ .<sup>189</sup> If we let  $p_m$  denote the price of the hearing aid that the retailer pays the manufacturer, we can write the markup of price over marginal cost as the retailer's markup plus the manufacturer's markup, or

$$p - c_m = [p - p_m] + [p_m - c_m].$$

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<sup>189</sup>The information on prices and costs is taken from Canadian Broadcasting reporting: <https://www.cbc.ca/news/canada/manitoba/hearing-aid-prices-much-higher-than-their-actual-cost-1.1367189>

Roughly, the manufacturer's price is  $p_m = \$500$ . So, there are significant markups at each step.

What about profits? While these may be very high, the monopolies in this industry also lead to significant waste; they lead to low productivity. Suppose we consider profit per unit sold for the retailer, which we write as

$$p - p_m - \bar{c}_r - \dots,$$

where we have deducted  $\bar{c}_r$ , the average direct-retailing costs per unit, and where obviously other items are omitted (the "dots"), some of which are discussed shortly. We define the cost per unit for direct-retailing as: The rental cost of the retail-store plus employee wages plus taxes and so on, divided by the number of units sold.

Note that if an establishment significantly raises its price, lowering its quantity sold, it raises its direct-retailing costs per unit. The per unit direct-selling costs can, obviously, become very large. By selling a pair of hearing aids for \$4000, very few are sold during a week. Retail stores sit empty much of the time.

Groups like the AARP point to high direct-retailing costs as one reason why hearing aids sell for such high prices. Here they get the causality wrong.<sup>190</sup>

Another large expense decried by both retailers and manufacturers is advertising. Both groups claim they spend lots on advertising in order to educate the public about the various

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<sup>190</sup>A reader might wonder why AARP is trying to defend the high price of hearing aids? While part of AARP is a non-profit, it also includes for-profit parts. In any case, AARP sells hearing aids, and often attaches links to its establishments selling hearing aids on webpages where it argues the high prices are easy to explain.



types and qualities of hearing aids. Manufacturers often claim that resale price maintenance is required so they can recoup these large advertising expenditures. Again, the causality, it seems to me, is the opposite. By charging \$4,000 for a pair of hearing aids, those that are potential customers is a small share of the population. The fight between manufacturers, and between retailers, to find them is intense.

## 11 Eyecare and Eyeglasses

The U.S. eyecare and eyeglasses industry is a lot like the U.S. hearing aid industry. The first similarity is high prices. While eyeglasses don't cost thousands of dollars, they do cost hundreds of dollars. The high prices of hearing aids means low-income Americans cannot purchase them. Though eyeglasses are less expensive, it's still true that many low-income Americans cannot afford eyecare and eyeglasses.

The second similarity is that, like hearing aids, the eyecare and eyeglass industry is overrun with monopolies. The industry involves a multi-step process, from eyecare services (provided by professionals including opticians, optometrists and ophthalmologists), to manufacturers of medical equipment (both frames and lenses), to the retail stores, and to the "builders" of brand names. There are monopoly elements at each step. There are also monopolies that consist of alliances between the monopolies at various steps. The arrangements, like Frank Knight said, are of infinite complexity.

## 11.1 There is a Crisis

The most common eye disorders are refractive errors. These disorders are also the easiest to treat, with eyeglasses providing sufficient treatment. Those suffering from refractive error are those afflicted with the condition less those that have been treated. Stated differently, it's (1) those that have been diagnosed but remain untreated plus (2) those that have not been diagnosed.

One estimate places the number of Americans suffering from refractive error at 15.9 million (Wittenborn and Rein, 2018, p. 11, Figure EX1).<sup>191</sup> I have found only a few statistics on the suffering of refractive error within *subgroups of the U.S. population*. Among those ages 12-17, whites have an estimated rate of suffering from refractive error of 0.06 for males and 0.06 for females. Blacks have a rate of suffering from refractive error of 0.12 for males and 0.15 for females. This evidence is from the National Academies of Sciences, Engineering and Medicine (NASEM) (2016, Table 2-10, p. 110), which obtained it from another paper by Wittenborn and Rein.

Among these individuals aged 12-17, those from low-income households almost certainly suffer a greater rate of refractive error. But there was no information given on suffering by income in this source, and I have not found other sources with this information.

I have also not found statistics for younger ages, but the rate of refractive error may well be higher for them as well. More individuals receive treatment as a cohort ages. But the total number suffering from refractive error could change as well.

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<sup>191</sup>Wittenborn, John and Rein, David, "The Preventable Burden of Untreated Eye Disorders," NORC, University of Chicago, July 16, 2018.

—*Charities/Non-profits*

One indication of the extent of the problem of refractive errors among children is the large number of non-profit organizations that are helping fund eyecare and eyeglasses for them. Helen Keller International has a program for “free in-school vision screenings and new prescription eyeglasses to children in high poverty communities” in five states (including Minnesota). At this point, I hesitate to provide an extensive list of such non-profit organizations, as many are likely “fronts,” as I know some are, for monopolies that have sabotaged the industry. As mentioned, such fronts are often created by monopolies.

First, monopolies block low cost substitutes that the poor would have purchased. They then form non-profit groups or fronts, as I call them, to “explain” why the prices of the monopoly goods are so high. They argue the prices are reasonable given the large production costs of the monopoly good. Next they emerge as champions of the poor. They create compound fractures, so to speak, and then show up to distribute bandaids, many times convincing the government or charities to pay for the bandaids.

—*Public Insurance*

There is very limited public insurance coverage for eyecare and eyeglasses. For the very young, there is some coverage, though it’s limited in scope. Coverage is provided for children through Medicaid, but only for families whose income is below some multiple of the Federal Poverty Level (FPL). These multiples are set by U.S. states, and there is a wide dispersion in the multiples. Some states also offer coverage through state insurance programs. (see NASE, 2016, Medicaid Coverage by State, Appendix G).

For adults, there is almost no coverage. A few exceptions are for pregnant women. (Again see Appendix G in NASE, 2016). For the aged, Medicare Parts A and B do not cover "routine physical checkups, eyeglasses, or eye examinations to determine the refractive state of the eyes." (see NASE, 2016, Table 6.1, p. 291)

## 11.2 Description of “Production” Process

The “production” process can be visualized as a multi-step operation, involving many different sub-industries. I describe the steps here. Later I’ll provide an analogy from the transportation industry. I’ll highlight how the mega-firms Luxottica and Essilor, which recently merged to form EssilorLuxottica, have a significant presence at each step in the process.

Imagine we arrange each step in the process along a line, with a node for each step. Running from left to right, we begin with the *medical profession* — the eyecare industry. While the names of these professionals differ across countries, there are three main professional groups in the United States: opticians, optometrists and ophthalmologists. Ophthalmologists are medical doctors that treat all eye disorders, including checking for refractive errors. They also write prescriptions for lenses. A small percentage also engage in retailing. Optometrists are professionals that check for refractive errors, write prescriptions for lenses and typically engage in retailing. Opticians are strictly retail professionals, taking prescriptions from (mainly) ophthalmologists, and selling the lenses and frames to customers.

Then there are the *manufacturers of medical equipment*, the lenses and the frames. Essilor is a major manufacturer of lenses. Luxottica is a major manufacturer of frames. EssilorLuxottica

own a large number of other lens and frame manufacturers. The American Economic Civil Liberties Project (AECLP) has constructed a list of these manufacturers (see “Illusion of Choice,” American Economic Civil Liberties Project, n.d.).<sup>192</sup>

Then there are the *retail stores and chains* that sell the eyeglasses. Luxottica also has a large presence at this node. David Lazarus, in “Why are glasses so expensive? The eyewear industry prefers to keep that blurry,” writes: “... Luxottica .... runs EyeMed Vision Care, LensCrafters, Pearle Vision, Sears Optical, Sunglass Hut and Target Optical.”<sup>193</sup> The AECLP, again, in “Illusion of Choice,” has constructed a list of EssilorLuxottica’s presence in the retail node of the industry.

Finally, there are the *brand names*, the last node. Significant investments (e.g., marketing) are devoted to building and maintaining brand names. Lazarus also points to Luxottica’s large presence in brand names: “Its owned and licensed brands include Armani, Brooks Brothers, Burberry, Chanel, Coach, DKNY, Dolce & Gabbana, Michael Kors, Oakley, Oliver Peoples, Persol, Polo Ralph Lauren, Ray-Ban, Tiffany, Valentino, Vogue and Versace.” (Again, see “Illusion of Choice” for another list).

Essilor and Luxottica, now EssilorLuxottica (EL), have a significant presence at every node. I have not cited (EL) market shares at each node. As a reader of this Introductory Essay knows by now, and something I’ll stress even more below in this Introductory Essay, statistics like market share have very little value in helping us determine whether organizations are involved in monopoly sabotage of industries. Following Thurman Arnold, we are interested

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<sup>192</sup><https://static1.squarespace.com/static/5df44e0792ff6a63789b5c02/t/5e2f6eb5e2ef3c5ec7eebe3/1580166849188/Illusiono>

<sup>193</sup>Article is in Los Angeles Times, January 22, 2019. I thank Chris Phelan for sending the article to me: <https://www.latimes.com/business/lazarus/la-fi-lazarus-why-are-eyeglasses-so-expensive-20190122-story.html>

in the actions that organizations take.

### 11.3 An Industry Controlled By Monopolies: A Long History

There is a long history of monopoly sabotage in this industry. Like so many monopolies we discuss, monopolies in eyecare and eyeglasses have been around for 75 or more years. Thurman Arnold (1940) addressed eyeglass monopolies in *Bottlenecks of Business*. “There is no economic reason why the ten-cent stores should not sell spectacles. The argument is made that it is necessary to the health of the public that good optometrists be employed. However, Woolworth’s is in as good a financial position to hire a good optometrist as is anyone else.” .... “Spectacles are a necessity. ... The tax on low income groups by fixing the price of spectacles is enormous.” (p28)

Roughly 75 years ago, the major U.S. manufacturer of eyeglasses, Bausch & Lomb, was found to have violated the Sherman Act. The United States Supreme Court held that Bausch & Lomb had “contracted and conspired with retailers to fix prices and to restrict sales.”<sup>194</sup>

And roughly 50 years ago, Bausch & Lomb was again found to have violated the Sherman Act. The United States District Court for the Eastern District of Wisconsin held that Bausch & Lomb, along with American Optical Co., had been refusing to sell or threatening to refuse to sell ophthalmic goods to wholesale laboratories.<sup>195</sup> This time, the penalties were more severe. Bausch & Lomb was enjoined from acquiring any wholesale laboratory for a period of 20 years; they were enjoined from engaging in business as a dispenser for a period of five

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<sup>194</sup>United States v. Bausch & Lomb Optical Co., 321 U.S. 707, 64 S. Ct. 805 (1944)

<sup>195</sup>United States v. Am. Optical Co., Civil No. 62 C 206., 1966 U.S. Dist. LEXIS 10167 (E.D. Wis. June 28, 1966)

years; and they were enjoined from directly or indirectly acquiring any dispenser without the consent of the Department of Justice for a period of 15 years.<sup>196</sup>

There have been elements of monopoly in the eyecare sector of the industry for as long as in manufacturing (see, e.g., Maurizi, Moore and Shepard (1981)). If we focus on optometrists and opticians, the relationship between the two groups is similar to that as between audiologists and hearing aid dispensers (HIDs). Optometrists have long sought to sabotage the practices of opticians (again, see Maurizi, Moore and Shepard (1981)).

Optometrists also engage in limiting competition among themselves. Just like professionals such as audiologists, dentists, lawyers and others, optometrists are instrumental in having legislation passed, and regulations implemented, that limit competition among themselves. For example, restrictions are placed on where optometrists can locate, and on the number of branches they can open (see, e.g., Hass-Wilson (1986)).<sup>197</sup> The FTC conducted extensive research on these restrictions (“Ophthalmic Practice Rules: State Restrictions on Commercial Practice,” Oct, 1986 (Eyeglasses II))<sup>198</sup>

At the beginning of this century, nearly 20 years ago, Luisa Kroll argued that the entire industry was dominated by a particular firm, Luxottica, and its founder, Leonardo Del Vecchio. This was clearly conveyed in the title of her article: “Tough Guy: Leonardo Del Vecchio has Built and Bullied His Way to Total Domination in the Eyeglasses Business. Don’t Mess With Him,” *Forbes*, February 4, 2002. More recently, similar arguments are made by

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<sup>196</sup>United States v. Am. Optical Co.

<sup>197</sup>Deborah Haas-Wilson, The Effect of Commercial Practice Restrictions: The Case of Optometry, *Journal of Law and Economics*, April, 1986.

<sup>198</sup>[https://www.ftc.gov/system/files/documents/reports/ophthalmic-practice-rules-state-restrictions-commercial-practice-eyeglasses-ii-report-staff-federal/r011001\\_-\\_ophthalmic\\_practice\\_rules\\_state\\_restrictions\\_on\\_commercial\\_practice\\_eyeglasses\\_ii\\_final.pdf](https://www.ftc.gov/system/files/documents/reports/ophthalmic-practice-rules-state-restrictions-commercial-practice-eyeglasses-ii-report-staff-federal/r011001_-_ophthalmic_practice_rules_state_restrictions_on_commercial_practice_eyeglasses_ii_final.pdf)

Sam Knight, in “The Spectacular Power of Big Lens,” *The Guardian*, May 10, 2018. Knight argues that Del Vecchio has sought to control, and largely succeeded in controlling, the entire chain of production (see more below on Knight’s article).

## 11.4 Monopolies Are Responsible for Today’s Crisis

Monopolies are the source of today’s crisis. For those interested in documenting large price-cost margins, this industry is a poster child of outrageous pricing. Here I am discussing the markup of price over marginal cost of manufacture, a markup that is often discussed. These high markups mean many low-income households are priced out of the market.

Rough information on today’s costs is discussed in an article by David Lazarus (“How Badly Are We Being Ripped-Off on Eyewear? Former Industry Executives Tell All,” *Los Angeles Times*, March 5, 2019). In the article he interviews two former executives in the eyeglass industry about the state of the industry.

One of the executives, Dean Butler, who was the founder of LensCrafter, describes the cost structure of the industry this way: “You can get amazingly good frames, with a Warby Parker level of quality, for \$4 to \$8.” .... “For \$15, you can get designer-quality frames, like what you’d get from Prada.” .... “You can buy absolutely first-rate lenses for \$1.25 apiece.” This puts the marginal costs of production, for the best glasses, at less than \$20 (in fact,  $\$15.00 + \$1.25 = \$16.25$ ). And for those at Warby Parker, the marginal costs range between \$5.25 and \$9.25.

As Butler admits, while the marginal cost of producing high-end glasses is less than \$20,



they sell for as much as \$800. He says: “It’s ridiculous. It’s a complete rip-off.”<sup>199</sup>

How are such outrageous markups secured? The executives that were interviewed by Lazarus offered their answers. Here is Charles Dahan, the leading supplier of lenses to LensCrafters when it was owned by Butler: “There is no competition in the industry, not anymore.” ... “Luxotticca bought everyone.” .... He later says: “Federal officials fell asleep at the wheel.” .... “They should never have allowed all these companies to roll into one. It destroyed competition.”

Then we have Dean Butler. In discussing the recent merger of Luxottica and Essilor, a merger cleared by the FTC (see below), he says of the combined firm: “If that’s not a monopoly, I don’t know what is.”

There can be little doubt that such markups are achieved through concentration of power, through monopoly. But it’s also a puzzle, both how the markups are achieved, and how they are maintained. To solve this puzzle will require hard work.

I said the hearing aid industry presents puzzles. This industry presents even greater puzzles. In hearing aids, we wonder why amplifying devices that perform as well as hearing aids for the vast majority of individuals, and sell for \$150, cannot be purchased over the counter? The proximate answer is that the FDA, together with manufacturers of hearing aids, have managed to block these low cost technologies.

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<sup>199</sup>There has been other reporting on these astronomical markups, for example, by Brett Arends, “Are Designer Sunglasses Worth the Price?” *Wall Street Journal*, July, 22, 2010, and Ana Swanson, “Meet the Four-Eyed, Eight-Tentacled Monopoly That is Making Your Glasses So Expensive,” *Forbes Asia*, September 10, 2014.

But why can't eyeglasses (and lenses) that cost, say, \$5.25, to produce, be sold cheaply at a local retail store? How is Warby Parker able to sell them for \$125, and then be considered the good guys (compared to other retailers selling them for much more)? I don't know.

## 11.5 How To Model The Monopoly?

As I said, I don't why eyeglasses of Warby Parker quality cannot sell for, say, \$20, at local retail stores, even then a terrific markup over marginal cost of \$5.25. We want to think of economic models that might help "explain" why glasses cannot be purchased for such prices at local stores.<sup>200</sup>

I consider two types of ideas that might be key ingredients in any model that is able to "explain" these astronomical markups on eyeglasses:

1. Bottlenecks and Hold-up Points
2. Trade associations and power relations of infinite complexity

Bottlenecks, Choke-points, and Hold-up Points: Some Analogies from Transportation/Distribution Industries

Before presenting some analogies to the production process in eyecare and eyeglasses, let us briefly discuss the European Commission's analysis of the Essilor and Luxottica merger.

The European Commission seems to have had more significant concerns than the FTC and

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<sup>200</sup>Eyeglasses can be purchased on the internet for very low prices. But for many reasons, not least of which is lack of access to internet, low-income households cannot avail themselves of these low prices.

other bodies about the merger. They put forth the idea that having the rights to brand names conferred significant advantages, ones that could be leveraged along the entire chain of production. They used the term “must-have” product for brand-name products.

Here is a description from Lofaro, Lewis, Levy, and Cook (2019)) discussing the Commission’s thinking on the merger. “An interesting development in the Commission’s assessment of ability to leverage from spectacle frames and sunglasses in the Essilor/Luxottica case was the (potential) characterization of Ray-Ban as a “must-have” brand for opticians. This formed a central pillar of the Commission’s theory of harm .....” (Chapter 24)

This idea of a “must-have product” is inspired antitrust analysis. In fact, this is an old concept in economics, a powerful one, and one used to understand many prior positions of monopoly power. Rather than called “must-have products,” the names used for this concept include choke-points, hold-up points and bottlenecks.

Many analogies to must-have products come from the freight transportation industry and goods distribution industries. In transporting freight overseas, it’s often the case that a shipper must go through a given port. This port, then, is like a must-have product. The workers at this port, the longshoremen, as we suggested above, have historically, and throughout the world, been organized by very strong union-management monopolies at these ports. Other groups at the ports, like owners of the land and warehouses, have often done the same.<sup>201</sup>

In Holmes and Schmitz (2001b), we called such ports *hold-up* points. We observed that an

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<sup>201</sup>There could be a couple of possible ports for a shipper to use. On the U.S. West coast, there were historically two major ports, one in the Los Angeles area, the other in the San Francisco area. The union-management organization organized both ports, so that it had a monopoly on port usage on the entire west coast.

entire transportation system can be competitive but if monopolies control a port, a hold-up point, the groups can impose monopoly control over the *entire industry*.<sup>202</sup>

There is another analogy in transportation to must-have goods, this being the tolls placed by sovereigns as freight moved over roads through their territories. Without paying the toll, the traffic could not move.

The word “bottleneck” was used by Thurman Arnold in his influential book *Bottlenecks of Business* to convey ideas similar to must-have products. One bottleneck frequently railed against by Arnold was that between the farmer and food consumed by households. He pointed out the significant monopoly elements in transportation and distribution sectors, must-have products, as culprits in these man-made bottlenecks.

So, this idea of must-have products that can be leveraged by monopolies has lots of precedent in the economics literature.<sup>203</sup>

## Trade Associations and Power Relations of Infinite Complexity

The previous discussion argued that ownership of a bottleneck could allow a monopoly to

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<sup>202</sup>As a case in point, we discussed debates about the extent to which the water freight transportation industry was competitive in the late 19th century. Robert Fogel, in his famous calculations about the benefit of railroads, assumed that the water freight transportation industry was competitive. He responded to critics that said transportation on the Erie Canal was not competitive by pointing out entry was very easy, since investments in canal boats was small. While this was true, Fogel did not recognize that, as the boats had to go through the port of New York City, the traffic faced a hold-up point which raised the costs of transportation for the entire route.

<sup>203</sup>Lofaro, Lewis, Levy, and Cook (2019) were, in fact, critical of the European Commission’s thinking on must-have products. The above quote from the book continued: “This formed a central pillar of the Commission’s theory of harm, although a “must-have product” is not an economic concept with any theoretical underpinning. Nonetheless, the Commission employed the “must-have” concept as part of its assessment, in particular as part of the market investigation questionnaires, which led to important issues of interpretation for the results from the investigation.” It would be interesting to know if this criticism was more widespread, and if so, where it originated.

exert control over an entire chain of production, even if it had no presence anywhere else in the chain.

But EssilorLuxottica has a large presence in other parts of the chain as well (not only the brand-names). First, it has significant ownership positions at other nodes in the chain, such as ownership of manufacturing and retail establishments.

Second, and maybe most importantly, it is deeply involved in the industry trade associations that exist at each node of the chain. EssilorLuxottica influences trade associations through many channels. It provides a major source of funding to the associations. Also, the CEOs of the trade associations are sometimes alumni of Essilor and Luxottica. Current employees of Essilor and Luxottica sometimes sit on the boards of directors of the associations. Here are just a few examples of trade associations with which Essilor and Luxottica are involved:

### *Opticians*

National Federation of Opticianary Schools (NFOS) — <https://www.nfos.org/sponsors/>  
[This is a link to sponsorship page, Essilor a sponsor]

National Association of Opticianry (NAO) — <https://www.nao.org/cpp/luxottica-ocpp/>  
[This is a link to a program funded by Luxottica; there are multiple such programs]

### *Optometrists*

American Optometric Association (AOA)- <https://www.aoa.org/about-the-aoa/corporate-support> [Essilor major sponsor]

American Academy of Optometry (AAO) - <https://www.aaopt.org/home/aaof> [Essilor major sponsor]

Luxottica has a trade association of optometrists: Luxottica Eye Care. From its webpage: “Luxottica Eye Care is a community of committed eye doctors. We’re part of Luxottica, an industry leader in innovative design, leading-edge manufacturing and global distribution of fashion, luxury, sports, and performance eyewear.”<sup>204</sup>

### *General Vision Groups*

The Vision Council — <https://www.thevisioncouncil.org/governance> [Essilor represented on board of directors]

Essilor’s and Luxottica’s extensive links to trade associations allows them to develop relationships with key industry players through informal meetings, often at events like annual meetings partly funded by them. Recall from above how Theodore Kreps (1945) argued that significant monopoly positions were those developed through informal meetings and understandings, like those in these trade associations. Here is Kreps (1945): “... the type of collaborative action embodied in and limited to the terms of a written contract is in many respects the weakest. After competitors come to know and trust each other, the written agreement or formal association is felt to be crude, inflexible, and unnecessary.” He continues: “There then evolves what has been called the ‘basketball technique,’ proceeding according to unwritten almost automatic habit patterns of action.” (p. 299)

He added: “In the United States and in other countries which have antitrust laws on the

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<sup>204</sup><https://luxotticaeyecare.luxottica.com/dal/who-we-are>

books, such a pattern of conduct has the additional advantage of leaving no evidence lying around loose of conspiracy to restrain trade.” (p. 299)

## Must-Have Good: Avoiding the Wrath of Del Vecchio (and his Successors)

Here is a potential must have good: avoiding the wrath of Del Vecchio. I mentioned above how Leonardo Del Vecchio, the founder of Luxottica, had been described as a tough guy and bully. With such power as we have described, up and down the chain, he is also supposedly a feared bully.

Sam Knight, in the Guardian article mentioned above, describes how executives in rival firms see his control of the industry in mafia-like terms. Here is text from Sam Knight’s article:

“He’s the godfather,” said Dean Butler, who founded LensCrafters in 1983. (Del Vecchio bought it in 1995.) “The godfather, to me, is the guy. He runs it.” One former senior Luxottica executive told me: “Honestly, he kind of rules by fear.” Very few opticians would even mention Del Vecchio’s name – lending him a Voldemort-like aura – for fear of offending him, however unlikely that might be. One talked about “getting a horse’s head in the bed”. Another concluded our interview by saying: “You can quote me as long as it sounds like I am xxxx.”<sup>205</sup>

We shouldn’t make too much of Del Vecchio’s ability to generate fear. I mean this in the following sense. We should certainly take from this fear that he has significant monopoly

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<sup>205</sup>For the rest of this sentence, which I highly recommend reading, please see: <https://www.theguardian.com/news/2018/may/10/the-invisible-power-of-big-glasses-eyewear-industry-essilor-luxottica>

control over the industry. But we should not think that this state of affairs will transpire when Del Vecchio leaves the stage. It's the nature of the industry itself that permits such a state of affairs to develop. There were tough guys in the industry before Del Vecchio and will be when he leaves.

In any organization more can be earned by flouting all the rules, all the conventions, and all the social norms. More can be earned by having tough guys and bullies in charge. But the amount that can be earned, the extra (potential) profits, does vary by industry. And in industries where the potential returns are the highest, we expect to see those most willing to flout the rules to be in control. We are not surprised that tough guys are in charge of longshore organizations, or hearing aid organizations.

The dominant organization in eyeglasses before Luxottica, Bausch & Lomb, has long had a reputation for maintaining a ruthless corporate culture.<sup>206</sup> It's not surprising that an organization that so routinely broke the antitrust laws ran afoul of other laws. It ran afoul of securities law and health authorities. In 1997, the SEC uncovered that Bausch & Lomb had been overstating their earnings to shareholders since 1993. In an effort to meet corporate sales goals, managers had been falsifying sales records.<sup>207</sup> The organization ran into legal difficulties with health authorities, including the Centers for Disease Control.<sup>208</sup>

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<sup>206</sup>Wine, William and Brooke Hamilton. "Observations on the need to redesign organizations and to refocus corporation law to promote ethical behavior and discourage illegal conduct." Delaware Journal of Corporate Law 29.1 (2004): 43-82

<sup>207</sup>Maremont, Mark. "Bausch & Lomb, Executives Settle Charges With SEC." The Wall Street Journal (Nov. 18, 1997).

<sup>208</sup>In 2006, Bausch & Lomb was forced to recall their ReNu line of contact lens cleaning products. Between 2005 and 2006, Bausch began receiving complaints that their contact lens cleaning solution was causing fusarium bacterial infections in their customers in Singapore and Hong Kong. Accordingly, Bausch & Lomb recalled their products from those markets, but they continued to sell the same products in the United States. It wasn't until mid-2006, after the Centers for Disease Control and Prevention had documented at least 122 fusarium infections that were linked to Bausch & Lomb's products, that they recalled the products



## 11.6 Gains From Eliminating Monopolies

Wittenborn and Rein (2018) find that there are large gains from treating refractive errors. They argue that the net gains amount to \$87.7 billion dollars per year (over a 10 year horizon) (see p. 12). Presumably these gains are centered among low-income Americans.

Of course, these estimates of gains can also be used as starting points to estimate the losses from monopolies in the industry, as well as the losses from allowing the recent merger between the two mega-firms, Essilor and Luxottica.

### Essilor and Luxottica Merger

When Essilor and Luxottica announced their intention to merge, one would expect that U.S. antitrust authorities, given what we've already discussed, would be highly skeptical of such a proposed agreement. Reviewing a few of the reasons for great skepticism, we have:

1. There is a long history of monopoly control, and monopoly sabotage, in this industry.

What could have happened in this industry, over the last couple of decades, to change this state of affairs? The only major change I know of, before the merger, was the emergence of a climate of lax antitrust enforcement. This would lead, obviously, to more monopolistic practices, not less.

2. Again using history as our guide, there are a multitude of industries that have had strong monopoly elements for 75 years and more, as has the eyecare and eyeglasses industry.

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in the United States (see Feder, Barnaby. "From Asia to America, How Bausch's Crisis Grew." *The New York Times* (May 18, 2006); Schwartz, Nelson. "Who Might Escape Bausch Without a Scratch?" *The New York Times* (Jun. 24, 2007)).

And in none of these industries have monopoly elements been rolled back. In fact, just the opposite has happened. So, why should eyecare and eyeglasses be different than all these other industries?

3. There are fantastically large markups in the industry. The very best frames cost perhaps \$16.25 to produce, but sell for 100s of dollars.

4. No one understands how these markups are achieved or maintained. For example, economists have no quantitative models that *match these markups in the model*.

Despite all this history in eyecare and eyeglasses, despite these fantastical markups in the industry, U.S. antitrust authorities allowed the merger. How did the FTC justify this action? The primary reason given by antitrust authorities around the world was a market share analysis. The argument was that market shares of the merged entity were not large enough to block the merger. But there were others, a couple of which we now discuss.

#### *FTC Justifications for Allowing Merger*

The FTC released a statement on March 1, 2018, which began: “The Commission has unanimously voted to close its investigation into Essilor International (Compagnie Generale d’Optique) S.A.’s (“Essilor”) acquisition of Luxottica Group S.p.A. (“Luxottica”). It does so after an extensive investigation by Commission staff over the past year that involved reviewing more than one million documents produced by the merging parties, interviewing more than 100 market participants—including lens casters, wholesale laboratories, frame manufacturers, optical retailers, independent eye care professionals, (“iECPs”), iECP alliances,

and buying groups, .....<sup>209</sup>

Later in the document the FTC states: “In its investigation, FTC staff gathered and analyzed evidence from numerous sources that in the end were wholly consistent with staff’s own empirical economic analysis. FTC staff used a variety of quantitative models to analyze the potential vertical competitive effects, and tested the robustness of its findings using a range of reasonable assumptions. None of these economic models support a finding that the merging parties would be able to impose higher prices or reduce output on their downstream rivals or ultimately consumers.”

I briefly consider two of the points above, first the use of quantitative models, the second the use of interviews.

—The FTC Used Quantitative Models?

The FTC argued that its staff used a variety of quantitative models to analyze the merger and none of them predicted the merger would lead to higher prices. Presumably, these quantitative models were able to produce, at least in significant part, the astronomical markups of eyeglasses. That is, the models presumably delivered prices of \$100s for eyeglasses that cost \$5.25 to produce. Because if the models could not do this, they would be worthless as tools in such exercises.

If the FTC developed such calibrated models, they should be congratulated. Moreover, I encourage the staff that developed such models to circulate them, and to submit the models

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<sup>209</sup>Statement of the Federal Trade Commission Concerning the Proposed Acquisition of Luxottica Group S.p.A. by Essilor International (Compagnie Generale d’Optique) S.A. [https://www.ftc.gov/system/files/documents/closing\\_letters/nid/1710060commissionstatement.pdf](https://www.ftc.gov/system/files/documents/closing_letters/nid/1710060commissionstatement.pdf)

(and their calibration) to the top economic journals. These calibrated models would make a great contribution to the economics literature. They would presumably help us understand other monopolies, like those in hearing aids.

Of course, I am being a bit sardonic here. I think that the chance such calibrated models have been developed by the FTC, that the FTC employed models that had more than zero usefulness in analyzing the potential effects of the merger, is extremely small.

—The FTC Used Interviews?

Interviewing market participants, both those currently in the industry and those who have left the industry, is clearly a process where important lessons can be learned. In many of the industries I discuss throughout these essays, I have been fortunate to interview many market participants. But there are concerns about this process as a way to gather information.

First, from the interviewer's perspective, one must realize that a participant may have seen the industry from one angle, one perspective. Even if the individual has no incentive to slant the "story," it may be distorted. And then the participant may have an incentive to shade the truth. One can still learn valuable information, but by using a bit of a filter based on the circumstances.

Second, for those who are reading about the information learned from the interviewing process, whether from a researcher, or from the FTC, one should be skeptical of the process. Even if the person conducting the interview hopes to uncover the true facts of the situation, does that person have enough knowledge and skill to maneuver around the issues just mentioned? And perhaps the person conducting the interviews wants to slant the story. That is

very easy to do. Who does the person choose to interview? Are interviews that don't deliver what is wanted simply discarded?

Here are some specific questions about this merger and interviews:

1. Who at the FTC chose the group to be interviewed? What are their incentives? Obviously, the list of interviewees can be manipulated to produce a desired "story."

For this merger, did the FTC interview retired executives from some of the major players in the U.S. market, for example, those associated with LensCrafters? Recall Charles Dahan told the Los Angeles Times: "There is no competition in the industry, not anymore." ... "Luxottica bought everyone." .... He also said: "Federal officials fell asleep at the wheel." .... "They should never have allowed all these companies to roll into one. It destroyed competition." Recall Dean Butler, the founder of LensCrafters, who, in discussing the merger of Luxottica and Essilor, told the Los Angeles Times of the combined firm: "If that's not a monopoly, I don't know what is."

Did the FTC interview current executives in the industry, like those interviewed by the Guardian, who said: "You can quote me as long as it sounds like I am xxxx."<sup>210</sup>

2. What are the incentives of those who are asked to be interviewed, and say yes?

An interesting question is: Who is going to be interviewed and say this merger is a good idea, or is no big deal? Presumably some of those interviewed took this position. Wouldn't that worry an interviewer, that a competitor is approving of a merger of rivals.

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<sup>210</sup>Did they interview: Chris Bryant and Elaine He, in "Luxottica's 53 billion deal looks a little cracked," Bloomberg.com, 10/13/17, conclude with "It's hard to see why Luxottica should be allowed to merge with lens giant Essilor." David Balto, in "Get ready to pay when one company dominates the eyeglass market," The Hill, 11/28/17, argues strongly against the merger.

Did the FTC interview officials from trade associations, who associations may have received funding from Essilor and Luxottica, and who themselves may have been alumni of the firms?

Did the FTC ever think that those being interviewed, even if granted promise of anonymity, might not divulge their real thoughts?

3. What do we conclude from those that are asked to be interviewed but decline?

So, we must be skeptical of any information gleaned from interviews such as these. The FTC, in fact, as far as I can tell, has released no information about the interviews.

## 12 Cournot Ill-equipped to Study Monopoly Harm

Our review of the essays thus far have made clear that the Cournot model is ill-equipped to study the harm caused by monopoly. In this essay, we provide a bit more detail for a few important industries. We describe prior studies of monopolies in oral health services, legal services and residential construction that employed the Cournot-oligopoly model. We show researchers using the toothless-monopoly model found very small costs of monopoly (and some no costs!). The costs coming from, for example, the killing of substitutes, were completely missed — they flew under the radar of the Cournot-oligopoly model.

Consider the U.S. oral health services industry. The recent literature looking at monopoly in this industry has used the Cournot-oligopoly model. A classic paper is by Bresnahan and Reiss (1991). They examine price-cost margins of dentists in relation to the number of dentists at a location (a town). Let  $p$  and  $c$  denote the price and cost of providing dental

services in an area. They find that price-cost margins,  $(p - c)$ , quickly fall with the number of dentists in a location, which they take as evidence that monopoly problems are not severe in the industry, at least in larger towns.

But, of course, price-cost margins of dentists tell us very little about the costs of monopoly in the oral health services industry. As discussed above, the dental monopoly influences productivity and productivity growth in the industry, so  $(p - c)$  might be low because costs, that is,  $c$ , are “high.”

Recall the important case of Sarrell Dentistry, which had developed a productive and efficient technology to deliver oral health care to low-income children, but which was blocked from expanding by the ADA. Those relying on the Cournot-model of monopoly to study the dental monopoly completely miss these costs associated with *lower productivity and lower innovation* among dentists.

Bresnahan and Reiss (1991) also don't consider that the dental monopoly blocks substitutes. Therapists are completely blocked from nearly all locations. Hygienists are permitted to clean teeth only at dentist offices. The Cournot-model of monopoly completely misses the costs associated with *blocking low-cost substitutes*.

The Cournot model, then, is obviously not equipped to study the harm caused by monopoly in this industry.

Consider the legal services industry. Posner (1993) discusses how the lawyer monopoly faced a surge in competition beginning in the 1960s.<sup>211</sup> From his perspective, in 1993, he said:

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<sup>211</sup>He used the word “cartel.”

“Today all is changed, changed utterly . . . Although the profession has not been thrown open to free entry, an accelerating accumulation of legal and especially economic changes over the past three decades has transformed the profession decisively in the direction of competitive enterprise” (Posner 1993, 26).

Competition among members of the monopoly certainly led to changes in the activities of the members. There were changes in how lawyers worked: “Lawyers become proficient in narrow fields of law or in particular techniques, learn to work in large teams, and engage in activities characteristic of competition—such as marketing—or of large enterprises—such as supervision.” And work, it seems, became less enjoyable: “Competition makes them work harder, too, and reduces their security of tenure—so there are more and more cases of firms dissolving, restructuring, regrouping; of firms firing associates and even partners; and of wide fluctuations in earnings within firms (Posner 1993, 28).”

But did the industry change “utterly?” No, it did not. Increases in competition may have led lawyer-work to be less enjoyable, but the competition *did not lead* to large reductions in the great harm caused by the lawyer monopoly. Very little changed as far as the *poor’s access to legal advice*. In the most important way, then, the industry didn’t change.

Using the Cournot model, as Posner does (see, e.g., Posner and Landes (1980)), he cannot see that little has changed. Posner did not see that the great harm caused by lawyer-monopolies in killing low-cost substitutes had not changed.

Again, the Cournot model is obviously not equipped to study the harm caused by monopoly in this industry.



Consider the U.S. residential construction industry. The recent literature looking at this industry doesn't even consider that there are monopoly elements in the industry. For the literature, the very large number of small firms, low concentration ratios, free entry, low profits and other statistics are more than enough proof that the industry is competitive. The conclusion that the industry is competitive follows from Cournot-oligopoly-type logic.

In his review of "Housing Supply" for the *Annual Review of Economics*, Gyourko states: "Housing is supplied by single-family and multifamily builders. The large number of such builders strongly suggests that homebuilding is a very competitive industry"(Gyourko 2009, 298). In their study of the industry, Glaeser, Gyourko, and Saks (2005, 331) state: "Home building is a highly competitive industry with almost no natural barriers to entry."

Because researchers conclude the industry is competitive, there is no loss from monopoly. But just as with oral health and legal services, the researchers completely miss the costs from monopolies lowering productivity in the traditional industry itself. They also miss the costs from monopolies sabotaging substitutes, like the factory-built housing industry.

Once again, the Cournot model is obviously not equipped to study the harm caused by monopoly in this industry.

There is nothing special, of course, about these three industries. So, if we "see" the Cournot-oligopoly model being employed to study monopoly harm in an industry, we can be fairly sure that the research is missing the most significant harm inflicted by monopolies in these industries.

Likely much more important, when we "see" industries that have long been thought to be

competitive, like residential construction, we must realize such designations were made based on Cournot-type logic. Many of these designations are likely incorrect.

What roughly happened in the residential construction industry, and many other industries, is that new technologies appeared that would render the existing capital stock, both physical and human, of little value. Producers in the *threatened* industry were willing to contribute to build monopolies to block the new technology. Even though there would be competition in the industry among those using the “old” technology after the new technology was blocked, the monopoly was worth building (see more below when I review Essay 15).

## **13 Many More Monopolies Inflict Great Harm**

Essay 13 presents more evidence that monopolies inflict great harm on low-income Americans. We introduce more monopolies that (1) sabotage low cost substitutes in their industries, that (2) infiltrate non-market institutions to enrich their members and that (3) destroy productivity within the monopoly industry itself. In this Section we preview only a subset of the monopolies we discuss in Essay 13.

We begin by discussing five industries where monopolies block low cost substitutes, those industries being Pharmaceuticals, Housing: Selling and Financing of Mod[1,2], Housing: Manufacturing of Mod[1,2], Repair Services, and Credit Cards. We then preview monopoly infiltration of non-market institutions in the Criminal Justice System, Voting Systems and Antitrust Institutions. Finally, we discuss how monopolies in Public Education have lowered productivity in that industry.

# Monopolies Sabotaging Substitute Products

## 1. Pharmaceuticals

Low- and middle-income Americans face great difficulties affording critical drugs. A case in point are the great hurdles faced by diabetics in purchasing life-saving insulin.

Monopolies in pharmaceuticals have played a large role in creating these crises. Monopolies have blocked the introduction of lower priced medicines, obviously disproportionately hurting those without insurance, primarily low- and middle-income income Americans.

As argued by Erin Fox in “How Pharmaceutical Companies Game the System to Keep Drugs Expensive,” *Harvard Business Review*, April 6, 2017, “Drug companies are thwarting competition through a number of tactics, and the result is high prices, little to no competition, and drug quality problems.”<sup>212</sup>

One way monopolies thwart competition is by emasculating the generic drug market. Fox briefly discusses three methods by which generics are frustrated or stopped: *pay for delay*, *citizens petitions*, and *authorized generics*.

Fox concludes: “Pharmaceutical firms are currently using a set of tactics to make their temporary monopolies semi-permanent. Eliminating these tactics will not be easy. Still, doing so will fulfill the deal that policy makers offered to drug makers and consumers: a temporary monopoly on sales to help pay for drug development.”

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<sup>212</sup>Erin Fox is the director of Drug Information at University of Utah Health. A teaching pharmacist, she tracks drug shortages for the American Society of Health-System Pharmacists.

We next discuss two industries that are part of the housing sector. Thus far we've discussed how monopolies in the stick-built sector have sabotaged the production of factory housing. There are, in fact, monopolies *within the factory-built housing sector itself* that inflict harm on that sector. The first industry we discuss is the selling and financing of mod[1,2]. The second is the industry that manufactures mod[1,2].

## 2. Housing: Selling and Financing of Mod[1,2]

The vast majority of mod[1,2] are sold and financed as cars. Households wishing to purchase a mod[1,2] visit *dealerships*. These dealerships arrange for personal loans for these households through *finance-companies*.

Though the vast majority of mod[1,2] are purchased by individuals placing them on land owned by the individual, and will never be moved, they still are financed as cars, with personal loans, and not real estate mortgages. This state of affairs obviously creates significant financial burdens on low-income households that purchase and finance mod[1,2]. Having to finance their homes as cars, with personal loans, and not real estate mortgages, greatly adds to the cost of home ownership.

There have been great efforts to reform the system of selling and financing mod[1,2], to have these homes financed with real estate mortgages. But these efforts are invariably blocked by those selling and financing these homes as cars. That is, the dealerships and finance-companies form concentrations of power, monopolies, and sabotage these efforts. I discuss more on these sabotaging efforts in the next section.

## 3. Housing: Manufacturing of Mod[1,2]

The industry that manufactures mod[1,2] is highly concentrated. The top three producers account for roughly 75% of units produced. Clayton Homes, the biggest producer, accounts for about 50% of production. It has recently gained market share, mostly through acquisitions. The manufacturers are not only highly concentrated but also own very large shares of both the dealerships and the finance-companies that sell and finance mod[1,2].

We want to define monopoly, of course, as Thurman Arnold did, by what organizations do, the harm they create, and not statistics on concentration and ownership. Such statistics can provide signals, perhaps, but often times they are incorrect.

These manufacturers, like Clayton, by their actions, by what they do, deserve to be called sabotaging monopolies. They have inflicted great harm on low- and middle-income Americans. These manufacturers have formed monopolies, for example, through their trade association, the *Manufactured Housing Institute* (MHI). The MHI has used various weapons to block and sabotage low cost substitutes for their members products and services.

Before discussing MHI, let me present a brief history of trade associations of manufacturers of mod[1,2]. In the 1970s and 1980s, manufacturers formed trade associations to battle the sabotage from stick-builders, that is, from NAHB and HUD. These were very small associations (with big names), like the *Association for Regulatory Reform* (ARR), whose headquarters, it seems, was a one or two person operation.

The goal of ARR was to change the HUD regulations introduced during the 1970s that treated mod[1,2] as cars and not homes. In particular, it fought for the removal of the permanent chassis requirement. It fought to have mod[1,2] financed as real estate and not

by personal loans.

Today, the major trade association, MHI, is a large organization. Moreover, its goals are *dramatically different* than those of the associations of the 1970s and 1980s. The goal of removing the permanent chassis is not discussed. The goal of financing mod[1,2] with real estate mortgages rather than personal loans, or chattel loans, has been dropped. A major focus now is to argue for the development of *secondary markets* for these chattel loans.

That these goals, removal of the permanent chassis requirement and the financing of mod[1,2] as real estate, would be downplayed and even dropped, seems shocking. But, in fact, MHI's incentives for doing so are clear. Members of MHI not only include manufacturers of mod[1,2] but also those selling and financing the homes, the dealerships and the finance-companies. This is because of their direct membership but also since manufacturers own large shares of these firms. Members of MHI therefore benefit greatly from the selling and financing of mod[1,2] as cars.

In "Time to End the Monopoly Over Manufactured Housing," *American Banker*, February 23 2016, Doug Ryan expresses alarm at these new goals of MHI, and discusses the sabotage of the mod [1,2] industry by *monopolies within the industry*. His claim of monopoly and monopoly sabotage was soon challenged by MHI, in particular, by Lesli McCollum Gooch in "Manufactured Housing Industry A Monopoly? Anything But," *American Banker*, March 04 2016.

Gooch's response was filled, not surprisingly, with a hefty dose of deceit and misinformation. Confusion and deceit are, of course, always weapons used by monopolies to hide their blocking

of substitutes. As for Ryan's call to finance mod[1,2] as real estate, she states: "Where we disagree with Ryan on a path forward is his support for state titling reforms to recognize manufactured homes as real estate, which he argues would more readily qualify them for GSE support. But there are compelling reasons why borrowers should not have to convert their homes to be titled as real property. This can carry significant costs, whereas a secondary market for chattel lending would respect the rights of consumers who often choose not to retitle their property."

This response promotes misinformation and confusion. Reforming the financing institutions so that mod[1,2] can be financed as real estate does not mean, of course, that purchasers of mod[1,2] cannot finance their homes with personal loans or chattel loans. That is always an option. Purchasers of site-built homes can finance their homes with chattel loans if they wish. They can also forgo financing altogether, using cash.

The response also highlights that an important part of MHI's policy goals is to develop a secondary market for chattel loans. But this policy is like putting a band-aid on a compound fracture. A secondary market in chattel loans would lead to very minor falls in interest rates on loans as compared to replacing chattel lending with real estate mortgages.

#### 4. Repair services

Repair services are provided by two broad groups. The first are *original equipment manufacturers* (OEMs), such as those in farm equipment (e.g., John Deere), autos (e.g., General Motors, Ford, ..) and computers, through their franchised dealers.

The second group consists of those in *independent repair firms*. These repair firms not

only “fix” used equipment, they also “recycle and refurbish” equipment that they later sell. Customers for the repair services of this industry, and for the refurbished equipment that is resold, are typically low-income Americans.

The independent repair services industry is under attack from OEMs. The OEMs in these industries have formed monopolies, such as trade associations and lobbying groups, to sabotage independent repair firms.

Consider the case of independent repair firms that refurbish old computer equipment.<sup>213</sup> The firms buy old equipment in bulk from recyclers. They then “save” some of the computers to refurbish, by hand, using the other computers for spare parts. Such refurbishers are able to sell old Apple computers for roughly \$150. This market provides great benefits for low-income Americans who could not afford computers otherwise.

Apple has mounted aggressive campaigns to crush this industry, to sabotage these low cost alternatives. For example, in one recent effort to sabotage the market, Apple formed an alliance with Amazon to block refurbishers from selling over the Amazon network. In order to sell over Amazon in the future, a refurbisher needs to prove they’ve sold \$2.5 million in Apple goods to major retailers or wireless carriers over 90 days. John Bumstead, a Minneapolis refurbisher, is quoted as saying: “The people who have been selling MacBooks or other Apple products are pretty much cut off from the Amazon marketplace.”

## 5. Financial markets: credit cards

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<sup>213</sup>My discussion of refurbishers is based on reporting by Michael Hiltzik, “How Apple and other manufacturers Attack Your Right to Repair Their Products,” Los Angeles Times, November 16, 2018.



For families with little or no savings, typically low-income households, having access to short-term credit can significantly improve economic well-being. Such short-term credit can allow a family to cover a temporary excess of expenses over wages. Credit cards are a form of short-term credit that play this role for many low-income families with little or no savings. For families with significant savings, access to such short-term credit is less important.

As a thought experiment, imagine credit cards were eliminated. Consider the impact on two families that had been using credit cards, one that had significant savings, the other with little savings. The latter family, we expect, would be harmed more than the former. As another thought experiment, imagine moving from a competitive credit card market to a monopolistic one. Again, we suspect that the household with little savings will again be harmed the most.

There is, in fact, considerable monopolistic elements in the credit card industry. Herkenhoff and Raveendranathan (2019) (HR) present a long list of antitrust cases brought against the credit card industry, many involving blocking low cost alternatives. The credit card industry invariably lost these cases (see their Table 5). Studying the impact of monopoly in the credit card industry, HR have found monopolies inflict significant harm.

We next turn to monopolies that have infiltrated non-market institutions so as to enrich members of the monopoly. As we mentioned, these actions may lead to greater harm of low-income Americans than the actions of monopolies sabotaging markets.

## Monopoly Infiltration of Non-Market Institutions

## 1. Criminal Justice System: Bail

Monopolies have infiltrated many parts of the U.S. criminal justice system. Here we briefly discuss one part of that system: the bail system.

There is a bail crisis in the United States. It has many dimensions but one part is that a large fraction of individuals who are confined in local jails (county and city jails) are not convicted of crimes.

The primary reason individuals are incarcerated while not convicted is the person's inability to pay bail. Many in this situation are charged with misdemeanors and non violent felonies. The bail amounts are sometimes just a few hundred dollars. For not being able to raise a few hundred dollars, the individual may spend a week, a few weeks, or longer, in jail. This results in lost jobs, challenges to parental rights, evictions and other household crises.

Consider these statistics about local jails. In midyear 2014, for example, 744,600 individuals were held in local jails (see Table 1, Zeng (2018)).<sup>214</sup> Of this total, 62.8% were unconvicted, with only 37.2% convicted (see Table 3).

Statistics on bail amounts are not available in this data set. One statistic that is available, and is related to bail amounts, though perhaps in some complicated way, is "expected length of stay in jail." For the year 2016, the expected length of stay in jail was 25 days. One interpretation of this rather low expected stay is that bail amounts are small and that those that are incarcerated and unconvicted need a few weeks to raise the bail.

As we mentioned, there have been recent attempts to reform the U.S. bail system so that

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<sup>214</sup>Zhen Zeng, "Jail Inmates in 2016" U.S. Department of Justice, Bureau of Justice Statistics, 2018.

individuals do not remain incarcerated for failure to pay small amounts of bail. Some of the efforts are succeeding — New York State instituted major reforms at the start of this year.

But there are groups that are opposed to these reforms, groups that form monopolies to block these reforms. We mentioned trade associations of bail bondsman above. The ACLU has documented how insurance companies and their trade associations are engaged in similar activity (Selling Off Our Freedom: How Insurance Corporations Have Taken Over Our Bail System, ACLU, May 2017).

## 2. Voting Institutions

Groups build monopolies along many dimensions, including color lines. White Americans have long developed monopolies in order to improve their economic position relative to black Americans. One type of such monopoly were those formed to sabotage black voting. I'll call them "*anti-voting*" *monopolies*. The monopoly-groups, in effect, infiltrated existing institutions, here those of voting in elections, and hijacked them for their own enrichment.

By sabotaging voting rights, these "anti-voting" monopolies enabled countless other monopolies to develop which harmed the economic prospects of black Americans. Because black men and women had less political power without the vote, this made it easier to pass legislation creating monopolies that promoted white American interests.

Many individuals and groups belonged to these anti-voting monopolies. Voting registrars would adopt rules making it difficult or impossible for blacks to register.<sup>215</sup> Blacks that did

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<sup>215</sup>Martin Luther King, Jr. wrote that one of the groups "abridging Negro voting rights is the registrar himself, administering complex registration procedures designed specifically to slow up and frustrate Negro applicants." From: M.L. King, Jr., "Civil Right No. 1—The Right to Vote," New York Times, March 14, 1965, p. SM26-7, 94.

register would find great resistance from those “manning” the voting booths on election day. There were tens of thousands of monopoly members, most nameless today.

Some members of these anti-voting monopolies have names that we can point to — like U.S. Senators. Consider these words of John T. Morgan, a six-term U.S. Senator from Alabama, spoken in 1900. He spoke about the problems that black voting had caused for whites, and how whites had the right to organize concentrations of power to block such voting.

As for the problems for whites of black voting, Morgan stated: “... No great body of white people in the world could be expected to quietly accept a situation so distressing and demoralizing as is created by negro suffrage in the south. It is a thorn in the flesh, and will irritate and rankle in the body politic until it is removed as a factor in government. It has been one unbroken line of political, social, and industrial obstruction to progress and a constant disturbance of the peace in a vast region of the United States.”<sup>216</sup>

For Morgan, black voting was a major obstacle to white American progress.

As for the right of whites to organize concentrations of power to block back voting, Morgan stated: “The people of the south are justified, and it would be inexcusable if they failed, by every constitutional measure in their power to preserve in their own hands the power of government in their own states, they being responsible for their welfare, their education, their business interests, and the interests of civilization.”

Morgan spoke these words on the floor of the U.S. Senate. They are cited in Juilen Monnet (1912, p. 63). Monnet was the Dean of the University of Oklahoma Law School, and was

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<sup>216</sup>Morgan spoke these words, and those below, on the floor of the U.S. Senate. They are cited in Juilen Monnet (1912, p. 63). As for the history behind Monnet’s article, please see Tepker (2010), “The Dean Takes His Stand .... Against Oklahoma’s Discriminatory Grandfather Clause.”

challenging some of the methods used in his state to sabotage black voting. As for the history behind Monnet's article, please see Tepker (2010), "The Dean Takes His Stand .... Against Oklahoma's Discriminatory Grandfather Clause."

Many researchers have noted how whites sabotaged voting by black Americans. Here is Mancur Olson (1983, p. 109): "If my highly preliminary investigation of southern history is at all correct, the first important special-interest coalitions that emerged in the South during and after Reconstruction were small, local, and white-only coalitions, sometimes *without formal organization*. All these small groups were by no means always against the advancement of the black population, but many were, and there was an undoubted susceptibility of the majority of the white southern white population at that time to racist demagogues. The much weaker black population was in essence *denied political organization and often the opportunity to vote* through extra-legal coercion, which included at times widespread lynchings." (italics supplied).

For a more recent discussion of these issues see, for example, Roithmayr (2010).

### 3. Monopolies Block Black Americans From Institutions Generally

Monopoly infiltration of voting institutions to sabotage black voting is just one case, an important one, of this phenomenon. Many other researchers have described other types of infiltrations to promote the interests of white Americans at the expense of black Americans. Herbert Northrup (1946, 1968) discussed how whites excluded blacks from unions. Philip Marcus (1946) discussed how professional associations excluded blacks from their memberships. Bernhard Stern (1941) discussed, in a very general and powerful way, how blacks were

excluded by monopolies from participation in many U.S. institutions.

#### 4. Antitrust Institutions

Antitrust institutions are another important set of institutions where there has been concerns about monopoly infiltration. An early concern was that industries could influence decision-making at the FTC through Congress (see, e.g., Posner (1969)). A typical narrative was: (1) Industries have influence over Congress<sup>217</sup>; (2) Congress can influence FTC (through its Congressional appropriations, etc.) and (3) it's not a leap, then, to imagine that industry, through its influence on Congress, can influence the FTC.

#### —Congressional Influence of FTC Decision Making

Imagine, then, two mega-firms wanting to merge. The firms could approach members of Congress, asking them to pressure the FTC to permit the merger. In diagram form, we have

$$\text{Merging firms} \rightarrow \text{Congress} \rightarrow \text{FTC(CE is civil servant)} \quad (5)$$

where "FTC(CE is civil servant)" means the chief economist (CE) at the FTC is a civil servant. When Posner (1969), Tollison (see below) and others were writing about these issues, the CE would have been a civil servant.

In this situation, we can think of there being two concentrations of power that act to enrich themselves, and can be considered monopolies: the two merging firms and the groups in Congress that push the FTC to clear the merger.

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<sup>217</sup>An industry may have a very large presence in the district of a Congressman or Congresswoman.

There was a significant amount of research in the late 1970s and the 1980s showing that monopolies, in fact, had influenced FTC decision making through this channel. Some of this research was actually conducted at the FTC. Robert Tollison, who was the CE at the FTC in the early 1980s, produced, along with colleagues, some of this research (see, e.g., Faith, Leavans and Tollison (1982)).<sup>218</sup> Also, see research by Weingast and Moran (1983)).

### —The Revolving Door

More concerns about monopoly infiltration of antitrust institutions have arisen since Posner, Tollison and Weingast were writing. In the last several decades a new consulting industry has emerged that offers services to corporations that are facing antitrust challenges from the FTC and/or DOJ-AD. The industry consists of economists at private consulting firms. I'll call it the "Antitrust Consulting (from) Economists" industry, and denote it by "ACE."<sup>219</sup> It's the development of ACE that has led to many of these concerns.

One concern is named "the revolving door." This concern, in diagram form, can be written

$$\text{Merging firms} \longrightarrow \text{ACE-firm} \longrightarrow \text{FTC(CE is civil servant)} \quad (6)$$

where the merging firms now approach an ACE-firm to help them through the merger process.

We have replaced "Congress" with an ACE-firm in the diagram, though, of course, Congress may still be involved as before.

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<sup>218</sup>I saw some of these issues firsthand when I worked at the Federal Trade Commission as a graduate student intern in the summer of 1982. As I remember it, this was not a regular visiting program at the FTC. I asked Robert Porter if he would contact the FTC about me possibly visiting. Rob set it all up, and I thank him for that.

<sup>219</sup>The industry also provide services to government antitrust agencies.

The new concern is that the CE-civil servant has opportunities for employment at ACE-firms after a period of service at the FTC. This may influence the person's actions while they are CE-civil servant. By giving "special treatment" to an ACE-firm, say when that ACE-firm is hired to represent merging parties, the CE may increase their chances of receiving lucrative employment when they leave government service. The ACE industry, of course, has an incentive to signal such benefits. By doing so, it can attempt to influence behavior.<sup>220</sup>

These first two concerns, about Congressional influence on CE-civil servant and the ACE-industry's influence on CE-civil servant, that is, the revolving door, are about groups *outside the institution* attempting to influence civil servants inside the FTC. We now turn to another concern, a different type, and one that seems of another order.

### —Troubling Incentives of Another Order: ACE Consultants Enter FTC

Over the last several decades, it has become common practice for economists belonging to ACE to leave their consulting positions to take leadership positions at the DOJ-AD and/or FTC. This model, in diagrammatic form, is

$$\text{Merging firms} \longrightarrow \text{ACE-firm} \longrightarrow \text{FTC(CE is ACE-consultant)} \quad (7)$$

where the CE is a consultant from ACE. Sometimes the CE has a single affiliation before becoming CE, that being a consultant at an ACE firm. Others have two affiliations before becoming CE: a university affiliation and an ACE-firm affiliation. Most of these latter

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<sup>220</sup>There are, of course, many individuals at the FTC that have an influence on enforcement and policy in addition to the chief economist. I focus here on that position.



consultants, though, earn the vast majority of their incomes from work in the ACE-industry. Again, this situation is very different from the first two. In the first two cases, groups *outside the FTC* try to influence the decisions of civil servants in the FTC. In this third case, these outside groups place themselves *inside the FTC itself*. They no longer have to attempt to influence decision making of CE-civil servants: They are now in a position to make decisions themselves.

Let's be clear about this situation: An executive from industry X is given a very important position in an agency that, in principle, has adversarial relationships with industry X. The possibilities for conflicts of interest are immense. Unfortunately, this situation is not unique. The situation at the Securities and Exchange Commission (SEC) is of a similar nature.

I now argue that the potential conflicts of interest are greater in the situation represented in Diagram-(7) than in Diagram-(6).

Let's first consider a single potential merger that is to be examined (or not) by the FTC, and the conflicts of interest that arise in different cases. As for the situation represented in Diagram-(6), CE-civil servants may increase their chances, by giving special treatment to an ACE-firm handling a merger, of receiving lucrative employment when they leave government service. But this "payoff" might come five or ten years down the line. And there are no guarantees.

As for the situation represented in Diagram-(7), where the CE is a consultant from ACE, the potential for payoffs are more immediate, and possibly much larger. To show this, I'll discuss three scenarios that can emerge under the situation represented in Diagram-(7). These three

scenarios are illustrated in Diagrams (8), (9) and (10).

Some of these scenarios might require recusal by the chief economist. I'm not sure. In any case, how effective are such recusals? If staff economists know the CE economist must recuse herself or himself from a merger case, might that not influence their behavior?

I start with the following assumptions. There are three ACE-firms, ACE-firm-X, ACE-firm-Y and ACE-firm-Z. There are two ACE-consultants, ACE-consultant-X who works for ACE-firm-X, and ACE-consultant-Y who works for ACE-firm-Y.

Here is one possible scenario: The merging parties are represented by ACE-firm-X, and the CE is ACE-consultant-X:

$$\text{Merging firms} \rightarrow \text{ACE-firm-X} \rightarrow \text{FTC(CE is ACE-consultant-X)} \quad (8)$$

It seems reasonable to assume that the potential conflicts of interest, and the potential payoffs, for the CE are larger in scenario (8) than in scenario (6). The CE that is an ACE-consultant-X just came from ACE-firm-X to FTC, so the CE likely has good relationships with those at ACE-firm-X. That is, the guarantee of some rewards is likely much higher. The potential payouts may be higher too.

Another scenario is that the merging parties are represented by ACE-firm-Y:

$$\text{Merging firms} \rightarrow \text{ACE-firm-Y} \rightarrow \text{FTC(CE is ACE-consultant-X)} \quad (9)$$

It seems that the potential conflicts of interest, and payoffs, to ACE-consultant-X are less in scenario (9) as compared to scenario (8). But perhaps the consultant is interested in moving to ACE-firm-Y after the consultant's tenure at FTC. Management of ACE-firm-Y can certainly signal such opportunities during the merger process. Or the management of ACE-firm-Y can bring up the possibility of moving to ACE-firm-Y themselves.

Another possible scenario is that the merging firms are actually firms in the ACE-industry, like ACE-firm-X and ACE-firm-Y:

$$\text{Merging firms, ACE-X, ACE-Y} \rightarrow \text{ACE-Z} \rightarrow \text{FTC (CE is ACE-consultant-X)} \quad (10)$$

where ACE-X is now shorthand for ACE-firm-X and so on. Here the potential conflicts of interest and payoffs are seemingly very large. The CE who is ACE-consultant-X has an opportunity to shepherd through a merger between ACE-firms, potentially very lucrative deals. Again, recusals may be in order. But what is the effect of staff that are sitting a few doors away?

The scenario in (10) has, in fact, happened. I'm not sure how many times. It's difficult to track down details on some of the cases. But it has certainly happened.

We've laid out some potential conflicts of interest when ACE-consultants take important positions inside antitrust institutions. The conflicts of interest, and the ability to influence the institutions, seem to be of another order than the conflicts that are discussed in the

typical case, the revolving door (again, scenario (6)).

We can now add another assumption, which will magnify the conflicts of interest and concerns very much more. Suppose ACE-consultant-X has ownership shares in ACE-firm-X. Now go through three scenarios illustrated in Diagrams (8), (9) and (10). Still another assumption is that ACE-consultant-X has ownership shares in ACE-firm-Y and/or ACE-firm-Z.

## ACE is a Monopoly

How is the ACE-industry a monopoly? As we've mentioned many times, a monopoly does not need a formal organization. Moreover, informally organized monopolies can be as devastating to the low-income as formally organized ones. The ACE monopoly is informally organized. There is no trade association (that I know of). It's held together through some powerful forces.

One is that members of ACE have incentives to act cooperatively with each other. Adversarial relationships would greatly harm the industry. Consider the scenario in (9) above. The government, in bringing its case against the merger, could challenge the credibility of defense witnesses, like consultants from ACE-firm-Y. The consultants from ACE-firm-Y could be challenged on prior (and current) conflicts of interest.

But the CE, who is an ACE-consultant from firm X, would argue against such tactics. The CE would likely have their credibility challenged as well. Their conflicts of interest would be brought to light.

Such challenges to credibility are a losing proposition for both sides. The incentives of ACE consultants are aligned. They act in a cooperative fashion, not an adversarial one. They

are essentially one organized group, one concentration of power, a monopoly. No formal organization was needed to work out these agreements.

Another powerful force holding the monopoly together is peer pressure. There are 100s of consultants/economists in ACE. If an economist is a member of ACE, it's very likely that a large fraction of that person's professional colleagues are ACE-members as well. And some of them may be members that earn fabulous amounts of money from ACE. For such a person to be critical of the ACE-industry, suggesting it may be a monopoly, potentially brings high costs. For myself, I can count the number of ACE members I know on my thumbs.

### How ACE at FTC is Different from Boeing at DOD.

A related case to having ACE members in positions of power at the FTC is the recent appointment of a top executive from Boeing to run the Department of Defense (DOD). With this person's appointment, we have the following model

BOEING —>Lobbying group —>DOD(BOEING-exec)

where "DOD(BOEING-exec)" means the Secretary of Defense, who runs the Department of Defense (DOD), is a Boeing executive. Before this appointment, the diagram would have had "DOD(civil servant)," with the meaning obvious.

This scenario shares some features with the ACE case, but is also different. It highlights the strength of the ACE monopoly.

There are similarities. The Boeing executive has an incentive to steer the defense budget

toward major weapons programs (fighter jets, for example) and away from manpower. This incentive is also shared by other major weapons producers, like Lockheed Martin. The major defense firms act as one in this regard, as a concentration of power.

The ACE scenario, with ACE members serving as chief economists, is similar in that the CEs have an incentive to steer the FTC agenda toward programs that are lucrative for the ACE-industry. All ACE-firms can agree on this strategy. One such strategy is encouraging the pursuit of analyzing mergers of mega-firms (see discussion below).

There are differences. Boeing and other major producers of military equipment agree that major weapons spending should increase as a share of the DOD-budget. But they disagree over which defense weapons producers, say Boeing or Lockheed, should benefit the most. There is an adversarial aspect to the relationship. In fact, the executive from Boeing, Acting Secretary of Defense Patrick Shanahan, faced an ethics complaint over promotion of Boeing weapons systems.<sup>221</sup>

In contrast, an increase in analyses of mega-mergers should benefit most ACE firms. This strategy cannot be directed toward one firm, as the Boeing executive buying Boeing weapons systems benefits one firm. And ACE consultants regularly switch firms. The ACE-industry, therefore, has a more tightly knit concentration of power than the defense contractors.

## How ACE Monopoly Harms the Poor: Or The Agenda That is the Most

### Lucrative for ACE

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<sup>221</sup>See reporting in <https://www.militarytimes.com/news/your-military/2019/03/13/shanahan-faces-ig-complaint-over-boeing-ties/> The article includes: "Previous news reports indicated that Shanahan has disparaged Lockheed Martin's fighter, the F-35, and other Lockheed weapons systems in private Pentagon meetings. In January Politico reported that Shanahan called the F-35 "f—ed up" and reportedly said Lockheed "doesn't know how to run a program."

Given the incentives of ACE-consultants in important positions at the FTC and DOJ, we expect that agendas at antitrust institutions will be directed toward those making money for ACE. As mentioned, a very lucrative agenda for the ACE industry involves representing very large firms in merger challenges from the FTC/DOJ-AD. Members of ACE earn tremendous amounts of money representing firms in mega-mergers.

An agenda at the DOJ-AD and FTC that included a significant commitment to protecting low-income households from the monopolies discussed above would seem to be a much less lucrative agenda for ACE. So, it's not actions that ACE takes that harms low-income Americans, but the responsibilities it's shirking that does.

### How ACE Monopoly Harms Antitrust Institutions

Of all the harms inflicted by the ACE industry, we cannot forget the harm to the institutions themselves. As just one example, imagine an economist taking a job at the FTC with the ambition to carve out an exemplary career, to leave a mark on the working of antitrust institutions. Part of that plan would likely entail rising to the highest rank of economists at the agency, in particular, the chief economist position. But that path is not open. The chief economist position at the FTC and DOJ-AD is more or less locked-up by consultants from ACE. Obviously this has a stunting impact on those with such ambitions. Why even start a career at the FTC or DOJ-AD if that is your ambition.

### Today's Antitrust Enforcement (Or Lack Thereof)

There have been calls for greater antitrust enforcement for the last couple of decades. But it's only relatively recently that the lack of enforcement has been tied to the incentives

of ACE-members holding key positions inside U.S. antitrust agencies. Jonathan Tepper presents arguments for this possibility in his “Why Regulators Went Soft On Monopolies,” *The American Conservative*, January 9, 2019.<sup>222</sup> Tepper’s discussion is a nice introduction to the troubling incentives in these institutions. Some other recent articles on the topic include those by Eisinger and Elliot (2016), and Elliot (2016).<sup>223</sup> Charles Ferguson’s books, *High Stakes*, *No Prisoners* and *Predator Nation*, offer brief discussions of these issues in antitrust institutions.

I briefly consider some reasons why antitrust enforcement is so weak today. I start with enforcement of merger laws.

—*Lax Antitrust Enforcement of Laws Dealing with Mergers.*

A very lucrative business for ACE is analysis of, and defending, mergers.<sup>224</sup> Of course, such mega-mergers will only be proposed if the merging parties have some confidence that the antitrust authorities (which, again, include members of ACE as they sit in leadership roles at FTC and DOJ) will approve them.

The ACE-industry, through its influence on FTC/DOJ-AD actions and decisions, cannot challenge mega-mergers, have members of ACE earn extraordinary amounts of money representing the challenged parties, reject the mergers, and then expect more mega-mergers to be proposed. This, of course, leads to additional troubling incentives within U.S. antitrust institutions. This is a strong force for lax enforcement of laws dealing with mergers.

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<sup>222</sup><https://www.theamericanconservative.com/articles/why-the-regulators-went-soft-on-monopolies/>

<sup>223</sup>Eisinger, Jesse, and Justin Elliott. “These Professors Make More Than a Thousand Bucks an Hour Peddling Mega-Mergers.” *ProPublica* (Nov. 16, 2016). Elliott, Justin. “The American Way.” *ProPublica* (Oct. 11, 2016).

<sup>224</sup>Challenging mergers (as a government consultant) is also a lucrative business for some ACE members, though not as lucrative.



Let me next consider reasons for lax enforcement more generally.

—*Lax Antitrust in General.*

1. *Today's Antitrust Authorities Know Less Than Those of 1940s*

Those in charge of U.S. antitrust institutions in the 1940s, like Thurman Arnold and Wendell Berge, and their colleagues, as well as antitrust consultants, like Henry Simons and Theodore Kreps, knew much more about monopolies than those running these institutions today.

Berge well understood that monopolies employed weapons of all manner, that the weapons were devious and hard to detect. He knew monopolies would sabotage industries without the authorities or general public realizing it was happening.

Recall Kreps knew that "... the type of collaborative action embodied in and limited to the terms of a written contract is in many respects the weakest. After competitors come to know and trust each other, the written agreement or formal association is felt to be crude, inflexible, and unnecessary."

I know next to nothing about the *history of science* literature. It would be interesting to know how unusual it is for a discipline to forget or discard such important information as the economics profession has done about monopoly

So, one answer for today's lack of enforcement is that the current staff of antitrust institutions are unaware of many of the monopolies, and the harm they create. This may well explain some of the lax enforcement.

Let me be more specific about important facts and theory that were known to antitrust authorities in the 1940s but have now been forgotten. Knowledge that has been lost includes:

a. Knowledge About Monopolies in Industries

Many of the monopolies I write about in these essays were in operation in the 1940s. Many were, in fact, attacked by antitrust authorities. Perhaps the most significant are the monopolies in the traditional construction industry that sabotaged factory-built homes. Today's authorities are completely unaware of these construction monopolies, and many of the others as well.

b. Knowledge about Theory of Monopoly

Henry Simons, Fritz Machlup, Robert Brady, and many others that worked directly in U.S. antitrust institutions, or were involved in research about antitrust, had a much broader knowledge of theories of monopoly than those in today's antitrust institutions. They knew well the standard models employed today: the Cournot-monopoly model (and its cousin, the Cournot-oligopoly model) and the model of monopolistic competition.

As we discuss throughout these essays, they also knew the severe shortcomings of those models to study economic policy, in particular, questions about the costs of monopoly. Economists in antitrust institutions today are not aware of them.

And, most importantly, they were steeped in the Arnold-Simons model of monopoly, the standard model of monopoly in the first half of the 20th century. They understood that monopolies were sabotaging monopolies.

c. Knowledge that statistics used to measure competition are of very limited use

As already mentioned, when statistics like the price-cost margin were introduced as measures of competition, a who's who of economists criticized the idea that such an enterprise would be fruitful. They argued these statistics were poor measures of competition. They did not employ them as they sought out monopolies that harmed the public. I'll turn to discuss these criticisms in the next section. Today's antitrust authorities have forgotten this knowledge as well. Today we have merger guidelines where measures of firm market share play a significant role.

## *2. Today's Antitrust Authorities Know Less Than Those of 1970s*

While economists quickly abandoned the Arnold-Simons model in the mid 1950s, they did become aware of the problem of regulatory capture of antitrust institutions. Economists in the 1970s and 1980s, if not earlier, began to study this phenomenon. There was significant research on, and evidence of, regulatory capture of the FTC during this period by Posner, Tollison, Weingsast and many others. There is a large literature devoted to the topic.

But some of today's most well known antitrust experts are unaware of this history of research on regulatory capture of the FTC. What was learned about capture seems to have been forgotten by today's authorities. Dennis Carlton and Randal Picker, both renowned antitrust experts, say they know of no episodes of capture:

“We are unaware of claims that the FTC has been captured by any industry or special interest group” (Carlton and Picker 2013, 28).

Carlton and Picker have a theory for why there has been no capture of the FTC. Their theory has roots in ideas of Cooper, Pautler, and Zywicki (2005), if not earlier ideas, who argue: “The FTC deals with a *wide range of industries*, making it less likely than agencies that serve only one or a few industries to be subject to capture by a single interest group.” (emphasis added).

Here is Carlton and Picker’s theory: “The FTC, unlike industry-specific regulatory bodies, deals with industry in general” (27-8).

The assumptions of this theory are, obviously, wrong. First, particular industries, say the petroleum industry, regularly interacts with members of Congress who can be counted on to represent their interests. And these groups in Congress, either directly or indirectly, regularly interact with the FTC. It’s not a leap, then, to see that particular industries interact with the FTC on more or less regular basis.

Second, and most importantly, the FTC obviously “deals with the ACE-industry” on a continuous basis. Members of this industry serve in key positions inside the FTC.

### 3. *Antitrust Authorities Lack Jurisdiction*

Another explanation for lax enforcement is that the antitrust authorities lack the jurisdiction to challenge and attack some monopolies. Federal authorities sometimes argue that the state-action doctrine preclude them from antitrust challenges. A question naturally arises: Why not attempt to change antitrust laws?

There are no reasons antitrust laws cannot be changed. With monopolies so widespread, and so harmful to the low- and middle-income Americans, we need to change the laws if they

are what's stopping the antitrust authorities from protecting Americans.

One potential vehicle for changing the law are the periodic task forces, commissions, and national committees that are organized to reform U.S. antitrust institutions. Historically, these commissions have been comprised of broad and diverse groups of professionals, representing many different interests in the antitrust enterprise. Such diverse groups provide a chance, and the legitimacy, to make changes. But the only commission formed in the ACE-industry-era, the *Antitrust Modernization Commission*, was a highly skewed group of professionals, who overwhelmingly represented the interest of large corporations.

Before giving a brief history of the Antitrust Modernization Commission, and the prior commissions, let me first explain that economists are not the only profession that has developed a consulting industry that has infiltrated the top positions in the DOJ-AD and FTC. The legal profession has done the same. Today there is an industry, I'll call it the Antitrust Consulting by Lawyers industry (the "ACL," for short) that behaves in very similar ways to ACE.

ACE and ACL have shared interests. Both benefit when large firms propose mergers, go through extensive merger review processes, and have their mergers cleared. Again, ACE and ACL can't expect mergers to be proposed when the parties know the chance of success is small. In this section, when I say consultant, I mean both types, from ACE and ACL.

Turning to the history of these commissions, since the end of WWII these task forces have included:

- i). The Report of the Attorney General’s National Committee to Study the Antitrust Laws (1955 Report)
- ii). The 1969 Report of the White House Task Force on Antitrust Policy (Neal Report)
- iii). The Report of the Task Force on Productivity and Competition (Stigler Report, 1969)
- iv). The Report to the President and the Attorney General of the National Commission for the Review of Antitrust Laws and Procedures (Shenefiel Report, President Carter)
- v). Antitrust Modernization Commission (2002)<sup>225</sup>

Again, the last task force, the Antitrust Modernization Commission (AMC), is the only one in the ACE-industry-era.

The task forces prior to the AMC were comprised of diverse groups of members. There were deans of law schools, defense attorneys, academic economists, and academic law professors. For the task forces prior to the AMC, the term “academic economist” meant something specific. One can be pretty sure that the economist’s primary income was from an academic job, from teaching and research. That, obviously, is not true today. The term “academic law professor” also meant something specific. An antitrust law professor earned the vast majority of their income at the university, through teaching and research. Today, with ACL, an antitrust law professor may earn the vast majority of their income from consulting.

The 1955 National Committee was comprised of 64 antitrust experts. It was a diverse group. The economists included Walter Adams, Morris A. Adelman, Alfred E. Kahn, Sumner

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<sup>225</sup>This list is adapted from Stephen Calkins, Antitrust Modernization: Looking Backwards, 31 J. Corp. L. 421 (2006), p. 425

Slichter, and George J. Stigler (see Calkins, 2016, p. 426). Though it was a diverse group, some “critics grumbled that the committee was ‘stacked’ with defense lawyers.” (Calkins, 2006, p. 426)

As for the Neal Report, Hovenkamp tells us “The authors of the report included six law professors and scholars of antitrust, three economists and three practicing antitrust attorneys.”<sup>226</sup> So, defense lawyers amounted to 3 of 12 members, or 25% of the group.

The makeup of the AMC was dramatically different than the other task forces in terms of professional makeup. Of the 12 commissioners, all, except one, were defense lawyers.<sup>227</sup> The one exception was Dennis Carlton — a consultant/economist. This commission was not stacked with defense attorneys, it was a commission of defense attorneys. I suggest it be referred to as *The National Commission of Defense Attorneys*.

The makeup of the The National Commission of Defense Attorneys (NCDA) is extraordinary. It was highly skewed relative to all other task forces. And it was highly skewed relative to what we as a society would want. The interests of large corporations, obviously, were represented to the exclusion of all other groups.

So, as the antitrust consulting industry has grown, it has not only infiltrated positions in DOJ-AD and FTC, it has taken over other important institutions devoted to reforming and updating these institutions.

#### 4. *Domination of Chicago School of Antitrust*

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<sup>226</sup>Herbert J. Hovenkamp, “The Neal Report and the Crisis in Antitrust,” (2009). [https://scholarship.law.upenn.edu/cgi/viewcontent.cgi?article=2796&context=faculty\\_scholarship](https://scholarship.law.upenn.edu/cgi/viewcontent.cgi?article=2796&context=faculty_scholarship)

<sup>227</sup><https://govinfo.library.unt.edu/amc/bios.htm>

One frequently cited reason for lax antitrust enforcement is that the Chicago School of antitrust triumphed over the Harvard School. The story is that the Chicago School has pushed a hands off approach to enforcement (relative to the Harvard School).<sup>228</sup> I don't find this explanation convincing. I suspect that the increase in the amount of money that can be made as antitrust consultants (for both economists and lawyers) has had a much greater influence on the current state of antitrust enforcement (or lack thereof) than the fight between these two "schools."

## Monopolies Reduce Productivity

### 1. Public education

Student performance in many public schools is poor. In some areas, invariably areas with a high percentage of low-income students, the level of performance is referred to as a crisis. There are, of course, many reasons for the low performance. In fact, many of the monopolies we have discussed above have significant negative impacts on student performance when they kill the low cost substitutes the poor would purchase.

Because students from low-income households often have poor eyesight, due to uncorrected vision problems, their school performance suffers. Monopolies in the eyecare and eyeglasses industry are responsible for a large share of these problems.

Because students from low-income households often have poor oral health, due to untreated cavities and the like, their school performance suffers. Monopolies in the oral health industry,

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<sup>228</sup>There is actually a literature dedicated to this debate about the Chicago and Harvard Schools of antitrust. I don't recommend it.



like the ADA, play a significant role in creating these problems.

Because students from low-income households often face housing situations that are poor and unstable, with some experiencing homelessness and eviction, and many more facing threats of such outcomes, their school performance suffers. Monopolies in the traditional construction industry are largely responsible for such poor housing conditions as they have blocked factory-built housing, the only possible means “to produce the homes and apartments needed to house our expanding population and our underprivileged citizens in a comfortable, dignified, decent way.” (from the Levitt and Sons testimony above)

There is, in fact, a significant homeless problem among U.S. school children. In order to help address this issue, a federal law, the McKinney-Vento Act, was passed to provide resources to states to help homeless students remain in school. Homeless students in the Act are defined as individuals who lack *a fixed, regular, and adequate nighttime residence*.<sup>229</sup>

As part of the McKinney-Vento Act, U.S. states are mandated to count and track the homeless student population in their state. Monetary incentives are provided to the states

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<sup>229</sup>Much of the discussion on McKinney-Vento comes from work I did with Laura Cattaneo and Sarah Larson when they were colleagues of mine at the Minneapolis Fed. They produced a document, “Homeless Report,” (no date), that I use in the discussion. That report includes text from the Act on the definition of homelessness:

The term "homeless children and youths"—

(A) means individuals who lack a fixed, regular, and adequate nighttime residence (within the meaning of section 11302(a)(1) of this title); and

(B) includes—

(i) children and youths who are sharing the housing of other persons due to loss of housing, economic hardship, or a similar reason; are living in motels, hotels, trailer parks, or camping grounds due to the lack of alternative adequate accommodations; are living in emergency or transitional shelters; or are abandoned in hospitals;

(ii) children and youths who have a primary nighttime residence that is a public or private place not designed for or ordinarily used as a regular sleeping accommodation for human beings (within the meaning of section 11302(a)(2)(C) 1 of this title);

(iii) children and youths who are living in cars, parks, public spaces, abandoned buildings, substandard housing, bus or train stations, or similar settings; and

(iv) migratory children (as such term is defined in section 6399 of title 20) who qualify as homeless for the purposes of this part because the children are living in circumstances described in clauses (i) through (iii).

for making such counts.

The counts of homeless students are conducted at the school district level. The counts represent the number of students that have experienced homelessness over the course of a school year. It's thought that in some states not all districts are meeting full compliance, so that national totals may be biased downward.

In the school year 2015-2016, the national homeless student count was 1,301,238, with a homeless rate of 2.6% (that is, homeless students divided by total student enrollment).

We are interested, of course, in the rate of homelessness in low income areas, areas where schools perform the worse. Some states publish statistics at the school district level, allowing for comparisons across income areas. In New York City (NYC), for the school year 2016-2017, the homeless student rate was 9.9%. NYC has 32 school districts. Across school districts, the rate of homelessness varied from a low of 2.9% to a high of 21.6%. There were 12 districts out of 32 with rates at or above 14.7%.<sup>230</sup> There is a significant correlation between the homeless rate and the income in the area of the district.

For the Minneapolis school district, for the school year 2015-2016, the rate was 8.3%.<sup>231</sup>

While these monopolies, in eyecare, oral health, and residential construction, among others, have profound negative impacts on school achievement of low-income students, there are a number of monopolies *within the public school system itself* that lower productivity and performance.

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<sup>230</sup>See Table on pg 26, NYC Institute for Children, Poverty & Homelessness, [https://www.icphusa.org/wp-content/uploads/2018/08/Atlas\\_2018\\_section-1.pdf](https://www.icphusa.org/wp-content/uploads/2018/08/Atlas_2018_section-1.pdf)

<sup>231</sup>[https://fundedprograms.mpls.k12.mn.us/uploads/mps\\_hhm\\_sy15-16\\_summaryreport.pdf](https://fundedprograms.mpls.k12.mn.us/uploads/mps_hhm_sy15-16_summaryreport.pdf)

There are a number of sources of monopoly in public education. One is the lack of competition between union-management organizations that manage teacher-union locals. A large fraction of public school teachers belong to unions. The vast majority of union locals, or local associations, are managed by one of two groups: the American Federation of Teachers (AFT) or the National Education Association (NEA).

We have already discussed how union-management monopolies can be expected to behave as any other monopoly. Thurman Arnold made this argument over 70 years ago. In particular, there is no reason to expect that the impact of union-management monopolies in public education should be much different from the impact of union-management monopolies in manufacturing, construction, transportation and other industries. Nor should the impact be different from that in the professions we discussed, like law and dentistry.

From the experiences in *all these other industries*, we expect union contracts in public education will emerge to protect jurisdictions, again with the use of restrictive work practices, and to reduce productivity. And this is precisely the history of the public education industry since the 1960s.

In a remarkable speech at the National Press Club, on February 5, 1997, NEA President Robert Chase described the development of the NEA since the 1960s.<sup>232</sup> He describes how the NEA followed the industrial relations model of industrial unions, including the development of restrictive practices in teacher contracts.

Here is Robert Chase: “When we reinvented our association [NEA] in the 1960s, we modeled

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<sup>232</sup>Robert Chase, President of the NEA, to the National Press Club, feb 5, 1997, “The New NEA: Reinventing the teachers Unions for a New Era.”

it after traditional, industrial unions. Likewise, we accepted the industrial premise: Namely, that labor and management have distinct, conflicting roles and interests, that we are destined to clash, that the union-management relationship is inherently adversarial.”

“Our challenge is clear: Instead of relegating teachers to the role of production workers, with no say in organizing their schools for excellence, we need to enlist teachers as full partners, indeed, as co-managers of their schools. Instead of contracts that reduce flexibility and restrict change, we, and our schools, need contracts that empower and enable.”<sup>233</sup>

Given the controversy that often surrounds discussions of public policy as it relates to public education, let emphasize I have discussed some of the problems that emerge with a monopoly, in particular, a union-management monopoly. Concerns about such monopolies need not be related to one’s views about unions. One can be a strong proponent of unions and collective bargaining, as was Thurman Arnold, and yet think that a union-management monopoly is not in labor’s interest (as Thurman Arnold did). The argument is that teachers themselves would benefit if there was a choice among union-management teams to represent teachers in an area.<sup>234</sup>

Similarly, concern about union-management monopolies in education need not be related to one’s view of vouchers and charter schools. One may oppose both vouchers and charter schools but still have concerns about union-management monopolies in public education.

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<sup>233</sup>Robert Chase continued: “In 1983, after the Nation at Risk report came out, NEA President Mary Hatwood Futrell tried to mobilize our union to lead the reform movement in American public education. At the time, as a member of NEA’s executive committee, I took a leading role in opposing her. I argued that we should stick to our knitting, stick to bargaining for better pay and working conditions.”“

That, ladies and gentlemen, was the biggest mistake of my career. I was wrong. And today, with all due respect, I say to the traditionalists in NEA’s ranks, to those who argue that we should stick to our knitting, leaving education reform to others: You are mistaken.”

<sup>234</sup>See, e.g, Kye Pawlenko, “Reevaluating Inter-Union Competition: A Proposal to Resurrect Rival Unionism,” (2006) for a discussion of the benefits of competition among union-managements.

## 14 More Lessons About Monopolies

Thus far, we have focused on three big lessons concerning monopolies: they sabotage markets, typically killing low cost substitutes; they sabotage non-market institutions; and they reduce productivity within the monopoly industry itself. We have learned many other lessons about monopolies along the way, which we gather and discuss in Essay 14.

Here we give brief previews of some of these lessons, including: many monopolies are controlled by a small cadre at the top; for some monopolies, the more entry, the better; and many monopolies are long-lived. We then present a bit more detail on these lessons: (1) When Monopolies Sabotage Low Cost Substitutes, They Inflict Great and *Expanding* Harm; (2) The economics profession's limited understanding of monopoly has led to serious errors in measuring economic inequality; (3) The importance of developing good definitions of monopoly; and (4) Shrouded attributes and economic theory.

—The weapons of monopolies: some generalizations

While Berge told us that the weapons used by monopolists to destroy rivals were artful, numerous and varied, we can make some generalizations about them. Some weapons are employed by all monopolies.

I had originally placed this discussion in the first 10 pages of this Introductory Essay. It may have been a mistake to move it here, one I can correct later. Another mistake was not putting more emphasis, at an earlier stage of the essay, on the use of peer pressure in monopolies. The use of peer pressure in monopolies, both to limit competition among members, and to

galvanize members to contribute effort to block outside competition, through lobbying, for example, is often crucial. I make a few general comments about peer pressure in the next two subsections.

### *Peer Pressure in Monopolies*

Peer pressure and other types of customs have been shown to be effective in eliciting desired behavior in many situations. Elinor Ostrom (2010) studied situations where a group owns a resource in common, like grazing lands. While there is an incentive for individuals in the group to “overgraze” the land, Ostrom shows that groups can develop customs (like peer pressure) to alleviate these “common-resource” problems (see Bergstrom 2010 for a nice discussion of Ostrom’s work).

Monopoly is a common resource for those groups in the monopoly.<sup>235</sup> Peer pressure, then, can be employed to coerce members of the monopoly to support the monopoly. Booth (1985) studied peer pressure in the context of holding together a union-management monopoly. These issues, and related ones, have recently been studied in a series of papers by Levine and Modica (2106) and Levine, Mattozzi and Modica (2018). This work is an important contribution to the study of monopoly. It represents a new set of models that are proving useful in understanding the harm created by monopolies.

The next section deals with professional codes and trust as a way to build monopolies, and shares features with the discussion on peer pressure.

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<sup>235</sup>We might call grazing lands a *positive* common resource, in that attenuation of the common resource problem leads to societal gains, while calling monopoly a *negative* common resource.

*Ethics Codes, Trust and Monopoly*

Some have argued that the ethical codes of professions have played large roles in organizing the professions into strong monopolies. Let me focus on the work of Berlant (1975, 1978).

Berlant (1978, p. 50) begins his discussion in a general way: “First, it is my contention that medical ethics, though ostensibly pertaining to the doctor-patient relationship, have, in fact, addressed the structuring of relationships among doctors. Second, many prescriptions for professional behavior can be discerned in medical ethics which, if adhered to, would result in a highly monopolistic form of social organization of professionals. Third, historically, official medical ethics have increasingly served the collective interests of physicians through the gradual innovation of monopolistic uses of medical ethics. Paradoxically, documents which manifestly call for the protection of patient interests have actually been more concerned with the furthering the interests of physicians and may have helped forged the Anglo-American medical profession into a collectively organized group.”

Berlant then discusses the medical ethics code of Thomas Percival (1803). He discusses how Percival’s code used the building of patient trust as a means to create a monopoly. “The most important impact [of inducing trust] has been the creation of a paternalistic relationship toward patients which has helped to undermine the creation of consumer organization for self-protection among patients and has thereby maintained consumer atomization. Essentially, trust inducement persuades the patient that he need not protect his own interests either by himself or by organized action. Through atomization of the public into vulnerable patients, paternalism results in the profession’s dealing with fragmented individuals instead of with organized groups.” (p. 51)

He later argues: “Yet the use of paternalism to dominate patients is not sufficient to create a monopolistic form of professional organization. The bulk of Percival’s code is directed toward reducing the internal conflict among physicians ..... It is preoccupied to an extraordinary degree with the suppression of intraprofessional comparisons.” (p. 52)

As we mentioned above, the monopolies of dentists and lawyers have largely avoided detection. These ideas of Berlant just sketched, on trust and paternalism, are very likely an important reason why these monopolies have avoided detection among the general public.<sup>236</sup>

Let me close with a few remarks.

1. Percival seems to have well understood the power of peer pressure.
2. While Berlant discusses professional codes, there are likely other groups of workers with codes, some even implicit, that help build monopolies.
3. Above I wrote that Thurman Arnold brought an antitrust case against the AMA in the late 1930s. At that point, roughly 85 percent of doctors belonged to the AMA. That fraction has plummeted over the years, and now stands at roughly 15 percent. Coinciding with this decline, the medical profession has become a leader in integrating mid-level professionals into its care for patients.

### *Legislation and Regulation*

We have discussed how private monopolies work to pass legislation, and to have regulations promulgated, that sabotage products and services that are substitutes for their monopoly

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<sup>236</sup>Even in the academic literature, there is extremely little written about the dental monopoly. There is more writing about the lawyer monopoly in the academic literature, but not nearly enough.



product. This type of monopoly activity is sometimes called *capture*, as in the private groups capture politicians in legislatures. Here I simply emphasize that the groups in legislatures, and those in regulatory agencies, that partner with the private monopolies should also be considered monopolies. The benefits go both ways, and its more accurate, I think, to call them *alliances* among monopolies. I have, of course, been using this convention throughout.

### *Subsidies to “Help” the Poor*

Another weapon we have discussed is *subsidies* paid to low-income individuals to purchase the *monopoly’s good*. As mentioned, when a monopoly sabotages a low cost alternative, many low-income households are not able to afford the monopoly good. At this point, monopolies typically step up as champions of the poor, lobbying governmental and private groups to provide subsidies to the poor to purchase the monopoly good.

We only mentioned these subsidies in the context of the residential construction industry. But it’s a very common tactic for monopolies. The ADA is instrumental in sabotaging the independent practice of professionals such as hygienists and therapists. When some areas, as a result of this monopoly sabotage, have no oral health care available, that is no dentists, the ADA argues that dentists should receive subsidies to move to these areas. They successfully lobby for waivers of dentist tuition if dentists temporarily serve in such areas.

### *Misinformation, deceit and confusion*

A tactic for all monopolies is misinformation, deceit and confusion. This is an extremely effective tactic. Moreover, it does not necessarily require alliances with other groups, like those in legislators.

## *Killer Acquisitions*

Recently, Cunningham, Ederer and Ma (2019) have argued that firms purchase rivals in order to sabotage their rival's innovative projects, thus reducing the threat of future competition.

—Many monopolies are controlled by a small cadre at the “top.”

Monopolies are often controlled by a small group at the top. In many cases, its only the small group that earns significant profits. The small cadre often exploits other “members” of the monopoly.

The ACE industry is a monopoly that is run by a small cadre. It is those members earning \$1,000 to \$1,500 per hour representing large corporations in merger cases that become CE's in the FTC and DOJ. It's they that direct the FTC to pursue agendas lucrative to ACE. This, of course, harms many members of ACE, as well as members of U.S. antitrust institutions.

There are likely many consultants/economists that work for ACE-firms that are disgusted with the state of affairs in U.S. antitrust institutions. Likewise for many staff economists in U.S. antitrust institutions. But what options do they have to challenge the status quo? Being openly critical risks significant losses in professional contacts, prestige and so on. Using whistle-blower mechanisms is fraught with difficulties. In the words of Thurman Arnold, "monopolies exploit their own members."

Another industry with this feature is the real estate brokerage industry. Monopolies in this industry don't necessarily harm the lowest income Americans, as homeownership is often beyond their means. But the industry is a good example of how a small cadre benefits at the

expense of others in the industry. The superstars in this industry, those selling the very high priced homes in an area, have been able to enforce a fixed percentage fee system for selling houses. This greatly benefits the small cadre. For a nice description of how the real estate cadre has maintained the fixed percentage fee system, and blocked the introduction of new low cost technologies, see Nadler (2007).

There are many important implications, for the study of monopoly, of monopolies being run by small cadres. One implication of having a small cadre that runs a monopoly is that the group often benefits from entry into the industry. We discuss this next, and other implications later.

—For some monopolies, the more entry, the better.

It's often argued that a key to strong monopolies is the ability to block entry. In fact, for some monopolies, the more entry, the better.

In the real estate brokerage monopoly, the small cadre selling the highest priced homes benefits from more “members.” When new individuals enter the industry, they pose little threat to the superstars in this industry, those selling the high-end houses. But the cadre argues that there is free entry into the industry and that the industry is competitive. There are, of course, other benefits of entry to this cadre. These new members represent a ready-made lobbying group for the trade associations and the like formed by the cadre members.

In the legal profession, those earning the greatest returns from the monopoly are also open to entry. According to Levin (2016, p. 2634) “The elite bar has been open to efforts to

provide more legal services to individuals, in part because nonlawyers will not compete with them for high-end corporate work. Much of the rest of the organized bar has attempted to block efforts to expand entry of nonlawyer providers into the legal services market.”

The ACE industry is another case where the small cadre atop the monopoly benefits from more members, from more economists becoming consultants. New members pose no threat to those earning \$1,000 to \$1,500 per hour representing large corporations in merger cases. But new members in the monopoly benefit the small cadre.

One benefit to the cadre new entry into ACE, that is, the decision of an economist to become a consultant in ACE, is that it decreases the probability that economists will argue that ACE acts like a monopoly.

There are two reasons for this. First, the more economists that are consultants in ACE, the greater the chance that peer pressure will be effective in keeping a given consultant/economist “in line,” of keeping an individual consultant quiet about the way ACE works. Second, the more economists that become consultants, the fewer economists that are not consultants. In the limit, of course, we are all consultants. If each economist that is not a consultant has a certain probability that they discover, and report, ACE’s monopoly position, then having fewer economists that are not consultants lowers the expected number of times ACE’s monopoly position is reported on.

This implication that, with a small cadre atop a monopoly, the cadre often benefits from entry, is important to understand. Otherwise, we can become confused about the *competitiveness of an industry*. This confusion is clear in the analysis of the real estate brokerage

industry. There are many articles, in top economics journals, that point to the free and large entry into the industry to argue there is *too much competition* in the industry.

In the three industries above, real estate brokerage, legal services, and the ACE-industry, the entry of new monopoly members benefited the small cadre at the top. This is not the only type of monopoly, that is, one with a small cadre at the top, where more entry is better for the monopoly.

The monopolies formed to sabotage black voting, the *anti-voting* monopolies, welcomed members. The more local registrars on board the better. The more of those working voting stations that opposed black-voting the better.

### —Many Monopolies, and Monopolized Industries, are Long-Lived

There is a view that monopolies cannot persist, that they are short-lived. This is a widespread view but certainly economists like George Stigler played an outsized role in promoting it.

There is an economic logic supporting this assumption. If a monopoly creates great profits, this will lead to increased incentives for entry, or for developing substitute products. Stigler states it this way: “it is virtually impossible to eliminate competition from economic life. If a firm buys up all of its rivals, new rivals will appear... If the state gives away monopoly privileges... there will emerge a strong competition in the political area for these plums.” (1988, p.164).

Stigler’s view, just as his view that monopolies produced efficiently, was based on his introspection. And, again, his intuition failed him.

Contrast Stigler's view to Arnold's: "[Monopolies] enter into politics using money and economic coercion to maintain themselves in power, making alliances with other powerful groups against the interests of consumers and independent producers. In short, they will become a sort of independent state within a state, making treaties and alliances, expanding their power by waging industrial war, dealing on equal terms with the executive and legislative branches of the government and defying governmental authority if necessary with the self-righteousness of an independent sovereign."

Arnold's view was based on experience. He spent five hard years fighting monopolies in the trenches. Arnold knew the resilience of monopolies. He won victories over several monopolies that were later overturned, some by friends of the monopoly in the legislative branch.

Many of the monopolies discussed above, of course, have been around for 75 or more years. This view that monopolies are short-lived, while widespread, has no basis in fact.

Let me mention one possible source of confusion about how long monopolies persist. Presumably many groups have attempted to form monopolies but were unsuccessful. Either the monopoly was never formed, or was unable to stop competition *inside the monopoly* from destroying it, or met significant *outside competition*. But documenting such cases, if one was so inclined, in no way lessens the fact that many monopolies are long-lived and inflict significant harm. We can add these costs incurred in *failed attempts* to form monopolies to the overall costs of monopolies, but they may amount to small costs.

Another important point is that, in some industries, long-lived monopolies are eclipsed by other monopolies. The *identity of the monopoly organizations in control* changes over time.

This is a competition of sorts. But for low-income households it makes no difference who the monopoly is, what's important is that the *industry itself remains monopolized*.

Monopolies in residential construction have blocked factory-built housing for 100 years. Some of the organizations that play the biggest role today in sabotaging the industry are different than those of 100 years ago. HUD, for example, plays a big role today, yet was not created until the mid 1960s. But it makes no difference to the households that suffer the harm from monopolies what organizations are responsible.

The eyeglass industry has been monopolized for the last 100 years. As we discussed above, Bausch and Lomb had a strong monopoly in the U.S. eyeglass industry before WWII and for several decades afterward. More recently, Luxottica has constructed a dominant monopoly, replacing Bausch and Lomb. It matters, of course, to the owners of Bausch and Lomb, and the owners of Luxottica, who has the monopoly in the U.S. eyeglass market. But not to low-income Americans.<sup>237</sup>

### —Stigler and Coase: Two Nobel Laureates That “Left the Playing Field”

George Stigler and Ronald Coase both won Nobel prizes in economics, for work related to the field of industrial organization, the field that has historically studied monopoly. Both had strong views on monopoly, and both thought the costs of monopoly were small. Given their status in the economics' profession, it's important to discuss how they arrived at these views. Perhaps they have arguments that I need to address in making my argument that monopolies inflict great harm.

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<sup>237</sup>Of course, some monopolies can be more ruthless than others. But it seems Bausch and Lomb, and Luxottica, both score very high points on ruthlessness.

Stigler at one point thought that monopolies were worrisome. W. Allen Wallis (1993) wrote about how he and Stigler had written a letter to the editor of the New York Times (December 4, 1934) critical of some proposals for addressing the economic crises of the time, and referencing "concrete and practical proposals for social policies, such, for example, as that contained in Professor Henry Simons's brilliant and suggestive 'A Positive Program for Laissez Faire.'" Stigler (1956) discussed Harberger's (1954) initial paper, and argued that perhaps Harberger's estimates of losses from monopoly were too low.

But Stigler's views changed over time. He seemed to rely on the power of his introspection. I've already discussed how Stigler arrived, through introspection, at his views that monopolies produce efficiently and that they are short lived. Stigler left the playing field, that is, the field where evidence is presented and debated, such as the quantitative literature on the costs of monopoly, a literature he once contributed to.<sup>238</sup>

And Ronald Coase? I don't know of any discussion by Coase of Harberger's work, in particular, or that of estimating the costs of monopoly, more generally.

When Ronald Coase discussed, in general terms, industrial organization and monopoly, he had three themes: (1) economists were very ignorant about industrial organization, that is, the workings of firms and industries; (2) economists spent too much time studying monopoly

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<sup>238</sup>Douglas Irwin has a blogpost where he puts forth reasons for Stigler's changing views (<https://promarket.org/stigler-monopolies-competition-tough-weed-not-delicate-flower/>). Here is Irwin: "In his memoirs, Stigler attributes his downgrading of the importance of monopoly to three factors: (i) the fact that business concentration did not necessarily imply a lack of competition or the prevalence of anticompetitive practices, as previously thought; (ii) the persuasion of Aaron Director, his friend and colleague, who skillfully interpreted many business practices as profit-maximizing rather than monopolistic exploitation; and (iii) his own work that showed the difficulty of sustaining oligopolistic collusion. He came to believe that 'competition is a tough weed, not a delicate flower.' For this reason, he no longer viewed big business as a major problem in itself, and dissolution 'should be used only in the most extreme occasions.'" I don't recall Stigler making this case explicitly when I read his autobiography. In any case, none of these are reasons, it seems to me, to change one's mind about the nature of monopoly (whatever the view).



and (3) the U.S. economy was broadly competitive.

Of course, if we are ignorant about industrial organization, on what basis can we conclude too much time is spent studying monopoly? If we are ignorant about industrial organization, on what basis can we conclude that the economy is broadly competitive?

Here is Coase on our ignorance: "I happen to think that we are appalling ignorant about many aspects of the working of the economic system, at least so far as that part of economics is concerned in which I am particularly interested —the economics of the firm and industry." (2012, p. 48, [1975])<sup>239</sup>

Here is Coase on spending too much time studying monopoly: "One important result of this preoccupation with the monopoly problem is that if an economist finds something — a business practice of one sort or another — that he does not understand, he looks for a monopoly explanation. And as in this field [industrial organization] we are very ignorant, the number of understandable practices tends to be very large, and the reliance on the monopoly explanation, frequent." (1972, p. 67)

And Coase on the state of competitiveness: "By concentrating on the problem of monopoly in dealing with an economic system which is, broadly speaking, competitive, economists have had their attention misdirected and as a consequence they have left unexplained many of the salient features of our economic system or have been content with very defective explanations." (1982, p. 22).

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<sup>239</sup>Reference is to Ronald Coase "Economists and Public Policy," in Essays on Economics and Economists The University of Chicago Press 2012. The article was originally published as: Ronald H. Coase, "Economists and Public Policy," in Large Corporations in a Changing Society, J. Fred Weston eds. (New York University Press, 1975).

Ronald Coase, in effect, never entered the playing field. He was willing to argue, without evidence, that the U.S. economic system was broadly competitive and that we spent too much time studying monopoly.<sup>240</sup>

We now turn to discuss some lessons about monopoly in more detail.

## A. When Monopolies Sabotage Low Cost Substitutes, They Inflict Great and Expanding Harm

Thus far when we've discussed how monopolies block low cost substitutes, we've argued that low-income households must replace these goods with alternatives. But there are other harms related to this initial harm, or follow-on consequences. We use the term "expanding harm" to emphasize this. We start with a summary, then present some details.

### Summary of the Great and Expanding Harm.

1. Monopolies raise the price for goods and services purchased by the high-income. But they sabotage and destroy the low cost alternatives to their monopoly product, those purchased by the low income.
2. Monopolies typically sabotage low cost alternatives that have *no close substitutes*, meaning the harm in point (1) could not be larger.
3. Many of the low cost alternative goods sabotaged by monopolies have an *investment component* to them. This means low-income Americans are blocked by monopolies from

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<sup>240</sup>There was, of course, extensive evidence to the contrary, that monopolies were causing significant harm to the U.S. economy.

making investments, or limited in their ability to make investments, that are crucial for the future development of households.

4. When monopolies block low cost alternatives, they often *block the career paths* of the low-income.

## Details of the Great and Expanding Harm.

In explaining this widespread harm, I use the term substitute (and substitution) in a couple of ways. To hopefully avoid confusion, let me start with an example describing this. Let  $X$  denote the “food away from home” industry. For now, think of this as the restaurants in a city. Let  $x_h$  and  $x_l$  denote the consumption of food at high-end and low-end restaurants, respectively.<sup>241</sup>

We can talk about substitution possibilities between  $x_h$  and  $x_l$ . Suppose a city introduces a hefty tax on  $x_h$ . Then some households may substitute  $x_l$  for  $x_h$ .<sup>242</sup> This, then, is the first use of the word substitution, that *between goods in the “same” industry*.

Suppose a city introduces a tax on the entire restaurant industry, on  $X$ , that is, a tax on both  $x_h$  and  $x_l$ . Households may substitute goods from other industries for those in  $X$  (as the prices of goods in industry  $X$  increase with the taxes). Let  $Y$  denote the industry “food at home,” that is, meals made at home. This “industry” is, of course, a good substitute for both  $x_h$  and  $x_l$ . Here I’m using the term substitution in the second sense, of substitution *between goods in “different” industries*, between goods in  $X$  and  $Y$ .

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<sup>241</sup>Let’s be health conscious, and assume both types of restaurants use high-quality ingredients, with the high priced ones simply devoting much more time preparing interesting and innovative meals.

<sup>242</sup>We use only two restaurant types for simplicity. With more types, the substitution possibilities would be greater.

With this as background, let me discuss details of the great and widespread harm inflicted by monopolies when they *block low cost substitutes*.

*Point (1)*. Monopolies raise the price of  $x_h$  and make it illegal to produce  $x_l$ . The low income are hurt more, as they must *search* to replace goods that are sabotaged, that are made illegal to produce.

*Point (2)*. The low-income often find there are no close substitutes for the sabotaged goods. Monopolies, then, often destroy goods  $x_l$  with no substitutes. There are no good alternative industries  $Y$ .

Let's describe this for a few of the industries already discussed.

—Consider legal services. In terms of the notation above,  $X$ =legal services;  $x_h$ =lawyer services,  $x_l$ =paralegal services;  $Y=?$ , where the “question mark” denotes there are few, if any, substitutes.

If paralegals were allowed to practice independently of lawyers, then, for some services, like official name changes, there would be some substitutability between them. But they are not permitted to practice independently of lawyers<sup>243</sup> The good  $x_l$  is destroyed.

An alternative industry in this case, that is,  $Y$ , is Legal Zoom. This is an internet based company where some simple services, like name changes, can be completed without a lawyer.

But for many households the service is difficult to access. One needs a computer. One needs internet services. One needs to be aware of the service.

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<sup>243</sup>There is, of course, some substitution possibilities among lawyers. There are very high priced lawyers and lower priced lawyers. The key is that there is a floor on the fees lawyers charge given the costs of obtaining a law degree is significant.

—Consider oral health services. In terms of notation above,  $X$ =oral health services;  $x_h$ =dentist services,  $x_l$ =therapist services ;  $Y=?$ . If therapists were allowed to practice, then, for some services, like filling cavities, there would be substitutability between them and dentists. But they are not permitted to practice. The good  $x_l$  is destroyed.

An alternative good in this case is emergency room services. Many individuals visit emergency rooms to obtain care for serious infections and health concerns emerging from lack of dental care. A not insignificant fraction of public spending on dental care is emergency room visits. Of course, this is not much of a substitute at all. Infections are treated. But teeth are not.

—Consider purchases of consumer durables, in particular, personal computers. In terms of notation above,  $X$ =personal computer services;  $x_h$ =New Apple computer,  $x_l$ =\$150 Refurbished Apple;  $Y=?$ . If refurbishers were allowed to sell computers, then there would be substitutability between them and new computer sales. But their sales are being blocked. The good  $x_l$  is destroyed. An alternative “industry” in this case might be library computers.

Many readers are likely asking: Is there really much substitution between new Apple computers and refurbished Apple computers costing \$150? How many sales of new computers does Apple lose with the existence of this refurbished market? In the same way, and going back to the dental monopoly: Is there really any substitution between a dentist in a big town in Alaska and dental therapists serving their communities in distant Native American villages? There is, of course, very little substitution possibilities in these cases. This does

not concern these monopolies. Their concern is squashing any possible threat, *no matter how small*, to their monopolies.

—Consider public education. For public education, the model above needs to be altered a bit. In the industry  $X$ , public school education, there is only one good — the local public school. In  $Y$ , there are a few alternative goods — there are public schools in other towns and private schools. In notation, we have:  $X$ =public school in neighborhood;  $Y$ =public schools in other districts and private schools.

Now consider the impact of elements of monopoly in public education. As discussed above, monopoly elements have led to decreased productivity in some public schools. Consider a high-income household some of whose members are currently attending public schools in an area where a monopoly starts to reduce productivity. The household can send their children to private schools in the area. The household can also consider moving to areas where these monopoly elements are not so large. In contrast, low-income families have fewer options. Private schools may cost too much. Moving may also be less of an option. So, the industry  $Y$  may not be much of an option for low-income households.

—Consider housing services. Here,  $X$ =housing services;  $x_h$ =stick-built housing,  $x_l$ =factory-built housing;  $Y=?$ . There is significant substitution between stick-built homes and factory-built homes. But monopolies in the stick-built industry have blocked factory-built housing. In many areas,  $x_l$  is destroyed. In this case, the alternative industry might be  $Y$ =sleeping in cars, or sleeping in the street.

Because the fraction of the population that cannot afford stick-built housing is so large,

governments intervene so that homelessness does not become such a problem as to threaten the stability of society. They do this by providing direct subsidies to stick-builders to construct homes on-site, or providing subsidies to low-income households to purchase housing (produced on-site). So, in this case,  $Y$  = stick-built homes plus subsidy, or sleeping in cars, or sleeping on the street.

*Point (3).* Monopolies sabotage many goods that have investment components to them. So, monopolies limit the investment options available to low income households. Here are some of the goods that are sabotaged that have an investment component to them:

3-a). Goods and services in the health industry, including oral health, eye health and hearing health.

When monopolies kill low cost substitutes in oral health, like prohibiting hygienists from cleaning teeth except in a dental office, or by outlawing dental therapists altogether, monopolies limit the ability of households to invest in the oral health of their children. For children with untreated caries, pain is a constant companion, making it difficult to learn in school. Tooth pain can also impact job performance of adults.

As is becoming recognized more and more, having poor oral health hurts overall health, thus further lowering income-earning possibilities.

Here is a list of other goods that monopolies block that limits the ability of households to invest in themselves and their children. For these goods I'll provide little description, or none at all, of how sabotaging them limits household's ability to make investments (as I've discussed some of these ideas already).

3-b). Education of children.

3-c) Durables, like computers.

3-d) Housing.

Living in poor housing conditions, those with lead paint, mold and similar hazards, obviously negatively impacts health. We've also mentioned how sabotaging factory-built homes limits an investment option for low-income households.

3-e) Legal services.

The inability to defend oneself against exploitation by various groups, to protect one's accumulated investments, obviously limits the incentives to save.

*Point (4).* When monopolies destroy low-cost substitutes that the poor would otherwise purchase, they also *limit the career options* of the lower-income individuals.

Consider an individual in a low or middle income family. Suppose the individual considers pursuing a profession in oral health services. Given the educational investment to be a dentist greatly exceeds that of becoming a therapist, the individual might choose to be a therapist. But when therapists are banned, this career option is no longer available.

## B. Monopolies and Economic-Inequality

I have sparingly used the term *economic-inequality*, preferring to emphasize that monopolies inflict great harm, in fact, the greatest harm, on low-income Americans. This results



in increasing economic-inequality, but that is a secondary consequence, and of secondary importance. But for those studying economic-inequality, it's important to recognize that the economics profession's limited understanding of monopoly has led to serious errors in estimates of economic-inequality.<sup>244</sup>

Definitions of economic-inequality begin with concepts such as economic well-being, or well-being for short. As described by Amartya Sen (Sen, 1997, 385-386), an individual's well-being depends on the extent to which the person can "do things that she values doing and ... achieve states of being that she has reasons to desire." The well-being of an individual depends on many factors, including the extent of a person's health, the types of goods consumed and the amounts of the goods, the extent of criminal activity and pollution in the area where the person resides, and many other factors influence well-being. With a definition of well-being, based on such factors, economic-inequality is then defined as dispersions in well-being in the population.

An individual's well-being is sometimes proxied by that individual's income and/or wealth.<sup>245</sup> Then, economic-inequality is proxied by income-inequality. I've already discussed in the introduction how income-inequality is a poor proxy for economic-inequality when monopolies play a significant role in economies, as they do in the United States. In such cases, income-inequality understates economic-inequality.

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<sup>244</sup>I thank David Scoones who encouraged me to explore these issues related to economic-inequality.

<sup>245</sup>Here is Sen on the use of income as a proxy for well-being: "The important point to note is that the valuation of income is entirely as a means to other ends and also that it is one means among others. A more inclusive list of means has been used by John Rawls in his theory of justice" ..... "Income is, of course, a crucially important means, but its importance lies in the fact that it helps the person to do things that she values doing and to achieve states of being that she has reasons to desire. The worth of incomes cannot stand separated from these deeper concerns, and a society that respects individual well-being and freedom must take note of these concerns in making interpersonal comparisons as well as social evaluations."

## Studies of Consumption Inequality

There is a fairly old literature, now undergoing a revival, of measuring consumption inequality (see, for example, Jorgenson and Slesnick (1984), Krueger and Perri (2006) and Meyer and Sullivan (2017)).

Those studying consumption inequality don't recognize that monopolies are inflicting great harm on low- and middle-income Americans. They don't recognize that monopolies, by making some goods illegal to produce, severely limit the goods available to low and middle-income Americans. Monopolies destroy part of the "commodity space," in particular, commodities that the low- and middle-income would purchase.

Because researchers are unaware that monopolies destroy significant elements of the commodity space, the methods they employ to estimate consumption-inequality underestimate actual consumption inequality. My guess, based on the research in these essays, and described in this Introductory Essay, is that it significantly understates consumption inequality.

## C. Experimentation and Monopoly Adoption of Innovation

Thus far we've discussed how monopolies are sabotaging monopolies, and that this sabotage lowers productivity growth in the economy for many reasons. In our research, we've identified another force, separate from the fact monopolies are sabotaging organizations, that leads monopolies to reduce economy-wide productivity growth. The force: As shown in Holmes, Levine and Schmitz (2008) (HLS), monopolies are reluctant to engage in experimentation.

Let us briefly review the two forces we've already introduced for why sabotaging monopolies

reduce productivity. We then explain the new force.

Sabotaging monopolies reduce productivity growth for two reasons:

(i) Monopolies sabotage substitute industries, and the innovation that would have occurred in them. In models of sabotaging monopolies, like Holmes and Schmitz, Parente and Prescott, and Herendorf and Teixeira, monopolies spend resources block substitutes, and the new technologies of these rivals.

(ii) Conflict among groups in monopolies leads to reduced productivity in the monopolized industry.

Here is the new force. When a new organization adopts a major innovation, it's often the case that major problems occur in integrating the innovation into existing operations. In HLS, we call these problems switchover disruptions. During such a period, the production levels of the organization might fall, or the growth rate of production might be diminished. This scaled back production leads to lost sales. These lost sales are an opportunity cost of adoption. Note that the opportunity cost is tied to the firm's current price. A very high price represents a very high opportunity cost. Hence, the opportunity cost is tied to monopoly. Monopolies are reluctant to experiment.

This idea is a very general one. For example, the same ideas apply to a monopoly firm considering replacing its CEO. The CEO's performance might be below par. But a new CEO takes time to learn the system. And that CEO might not work out. Just as with adopting a major innovation, changing CEOs can lead to switchover disruptions.

The new force is easy to describe in the context of a standard model of monopoly. We assume

there is only one firm with the right to produce a good X in the country. The firm is owned and managed by one entrepreneur. Hence, as in the standard model, there are no conflicts of interest, and no productivity losses from this.

Let demand be equal to  $Q = \hat{Q}$ , if  $p \leq \hat{p}$ , and  $Q = 0$  otherwise. The firm faces foreign competition, at price  $p = p_W(1 + \tau)$ , where  $p_W(1 + \tau) < \hat{p}$ . The domestic monopoly initially produces at marginal cost  $c_H$ ,  $c_H < p_W(1 + \tau)$ . The monopoly price is the limit price,  $p_M = p_W(1 + \tau)$ .

Now imagine a new technology becomes available to the monopoly. The monopolist pays a fixed cost of  $F$ , and obtains a lower marginal cost  $c_L$ . We add a twist to this familiar framework. We add time to the model, and also add that if you adopt, there may be a period where production is less than  $\hat{Q}$ . The decision to adopt now depends on  $(1 + \tau)$ . Reductions in tariffs, that is, an increase in foreign competition, may lead the monopolist to adopt the innovation (or change the CEO), when the monopolist would not have done so before.

## D. Defining Competitive and Monopolistic Industries

Developing a “good” *definition* of monopoly is an extremely important issue. It’s hard imagine making significant progress on the study of monopoly without one.

### Defining monopoly as Arnold did, By What Organizations Do

Thurman Arnold defined a monopoly based on what an organization did. In Arnold (1943), for example, he presented a list of six behaviors, given above, that he thought defined a

monopoly. We can say an organization is a monopoly, then, if it engages in the activities on this list. Of course, we could require that an organization commit only a subset of the behaviors on his list, or we could have other lists.

We can define an industry as a “monopolistic industry” if the industry has an organization that is a monopoly, that is, an organization that engages in the behaviors on Arnold’s list. If an industry does not have an organization like that, we can call it a “competitive industry.” We can distinguish between monopoly industries by comparing the number of monopolies in the industry, the amount of harm inflicted by monopolies in those industries, and so on.

In Holmes and Schmitz (2010), our Annual Review of Economics article on “Competition and Productivity,” we discussed various ways to measure competition and monopoly. We discussed using historical episodes where industries that had been monopolized underwent dramatic surges in competition. We then argued that we could determine how monopolies behaved, and understand the harm they inflicted, by looking at the change in the actions of the monopolies during these periods.

We were “getting close” to Thurman Arnold’s idea of simply looking at what organizations did to define monopoly. That is, we didn’t need to look at these dramatic historical episodes. We were approaching Thurman Arnold’s ideas, his “list.”

## Defining monopoly based on statistics, like price-cost margins

Many of today’s papers examining monopoly do not provide a definition of monopoly. Rather they begin with a collection of industry and firm characteristics, that is, statistics. This might

include, for an industry, the concentration level and the average price-cost margin. For the industry's firms, this might include their size, profits and price-cost margins. Next the studies implicitly assume that if an industry and its firms have certain characteristics, it's a monopolistic industry (and if not, a competitive one). If the industry has a low concentration ratio and great ease of entry, if the firms in the industry are small and earn small profits, then the industry might be considered competitive.

A few studies are explicit about defining monopoly. These studies typically categorize competitive and monopolistic industries on the basis of price-cost margins. A higher price-cost margin indicates an organization (or industry) with greater monopoly power.

In the Annual Review article mentioned above, "Competition and Productivity," we were critical of using statistics like concentration, price-cost margins and the like, to measure competition. We mentioned how Harold Demsetz had pointed out that in a competitive economy if a firm developed a major innovation, that firm would grow and the industry might become highly concentrated. High market shares would be an indication of a competitive economy, not a monopolized one.<sup>246</sup>

Demsetz's arguments had significant impact. Here is Schwartz (1983, p. 584), in his highly critical article on merger guidelines, quoting Phillip Areeda, on market shares: "As Professor Areeda has pointed out, however, "[i]t cannot be emphasized too strongly that market definition and the assessment of defendant's share of that market give, at best, only a suggestion of defendant's market power."

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<sup>246</sup>Leonard Weiss told Tom Holmes how he had been at the conference where Demsetz initially made his criticisms of using concentration ratios as indicators of monopoly. Weiss told Tom that Demsetz convinced him at the conference that concentration ratios were a poor measure of monopoly. My experiences with Leonard Weiss were similar: He was a great scholar and a great colleague.

We presented extended criticisms of price-cost margins as well (see, e.g., pp 621-627). We argued that using price cost margins, or changes in price-cost margins, to measure competition had “serious drawbacks.” (p. 626)

These criticisms of using statistics to measure competition go back long before Demsetz. When the idea of using a price-cost margin as a measure of monopoly was first introduced by, it seems, Lerner (1934), it was widely criticized. A list of critics looks like a who’s who of economists. Some of the economists included: Peter Bauer, Edward Chamberlin, Milton Friedman, Frank Knight, Fritz Machlup, Melvin Reder, Tibor Scitovsky, Henry Simons and George Stigler. The idea was criticized both on the grounds of evidence and theory. Let me describe some of these criticisms from the 1930s-1950s, then present some recent criticisms of price-cost margins as measures of monopoly.

## Historical criticism of price-cost margins

Let me start with the criticism of Edward Chamberlain, a developer of the monopolistic competition model. If one’s view of the world is that monopolies are well approximated by the Cournot monopoly model, or the Cournot-oligopoly model, or, like Chamberlain, the monopolistic competition model, then one might think price-cost margins would be a reasonable proxy for monopoly power and harm.

But even that is not the case. Edward Chamberlin, in “Measuring the Degree of Monopoly and Competition,” was critical of using price-cost margins as measures of monopoly power (see, Chamberlin (1954, 266-267)).

Chamberlain had some specific criticisms and then more general ones. We turn to the general ones later. Here are some specifics: “Neither elasticity or the Lerner index measures anything beyond the effectiveness of existing substitutes .... and it passes over completely the important problems of competition and monopoly in the non-price area .....

Let me next turn to criticisms of economists that knew monopolies were sabotaging monopolies. For those that employed the Arnold-Simons model of monopoly, it was clear there was no relationship between price-cost margins and monopoly harm.

1. As for evidence, Bauer (1941, p.198), always practical, showed that markups were not a useful measure of monopoly power in the industries he was studying. After arguing that fluctuations in price-cost margins likely had nothing to do with changes in monopoly power in other industries, he argued his analysis “should reveal the meaningless nature of  $(p - c)/c$  as a ‘degree of monopoly’”

2. As for theory, some argued that monopoly reduces productivity, hence increasing costs, so that price-cost margins of monopolies were not necessarily higher than average.

Reder (1947), of course, argued that monopolies don’t maximize profits, that they don’t produce efficiently. The lower productivity leads to higher costs, and possibly lower price-cost margins.

Scitovsky (1955) studied, through the lens of economic theory, the usefulness of measures of monopoly power, including the price-cost margin. Like Reder, he questioned the assumption of profit maximization in monopoly, and argued that monopoly leads to low productivity and increased costs. He, too, criticized the usefulness of the price cost margin (p. 110).



Others argued the same point but in the context of profits, or profit margins (and not price-cost margins).<sup>247</sup>

Knight (1939, 272) argued: “ .... most monopoly does not create monopoly profit to any great extent, but results simply in waste through the misuse of economic resources...”

Machlup (1952, 32) wrote: “One must be on guard against the widespread misunderstanding that the effects of monopoly power are always visible in the form of ‘exorbitant prices’ being charged to buyers .... Where the monopolistic restrictions lead to inefficient use of resources, it may be the economic costs that are excessive, not the profit margin.”

3. As for other theory, some argued that organizations might create monopolies, though it could be difficult for the organizations to stop expansion and investment by insiders, leading to lower profits. So, monopoly harm could be great, but profits small.

Henry Simons makes such an argument in his manuscript “The Monopoly Problem” (undated, but presumably late 1930s).<sup>248</sup> He has a brief section discussing “Tests of Monopoly.”

As for using profits, Simons writes:

“Profits [is] no test at all, except in extreme cases.”

He then gives some reasons why they are no test at all. In talking about industries with monopolies, he writes: After establishing a monopoly .... “If investment is free to enter an industry, earnings may well be abnormally low though prices are extortionate ....”

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<sup>247</sup>In fact, Joe Bain (1941a) argued that profit-margins may be a better way to define monopoly than price-cost margins.

<sup>248</sup>This manuscript is in Simons’ archive at the University of Chicago, Box 9, Folder 6.

4. As for other evidence, Simons, in his notes referenced above, mentioned particular industries where organizations created monopolies but had difficulties limiting investment from insiders. He mentioned both the construction industry and mining industries.

5. Other critics mentioned how *profit-sharing* in monopoly could reduce price-cost margins. Factors of production other than capital might capture some of the profits. Stigler (1956) discussed these matters in his criticisms of Harberger (1954).<sup>249</sup>

### “New” criticisms of price-cost margins

I now list some “new” criticisms of price-cost margins as measures of monopoly, of the harms they inflict. These are reasons colleagues and I have “come up with” over the years, and thought were new. But as I have been discovering, not surprisingly, some of these arguments were raised long ago. It’s likely only a matter of time until I find that all of them were discussed ages ago.<sup>250</sup>

#### 1. *Price-cost margins don’t tell us whether the monopoly sabotaged substitutes*

Price-cost margins in an industry tell us nothing about whether monopolies in that industry have sabotaged low cost substitutes. As this is one of the greatest costs inflicted by monopolies *in markets*, the price-cost margin is silent when it’s most needed.

#### 2. *Price-cost margins have nothing to say about monopoly harm of non-market institutions*

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<sup>249</sup>Milton Friedman was also critical of price-cost margins for this reason. He, in fact, was the one who educated Stigler about the problem (see footnote 6 in Stigler (1956)).

<sup>250</sup>One criticism I won’t discuss is that competitive models, of course, deliver price-cost margins.

Probably the greatest harm of all inflicted by monopolies is the sabotage of non-market institutions. Here I am thinking of cases like monopolies sabotaging black voting. In these situations, there are no prices, there are no price-cost margins. Again, the statistic is silent when it's most needed.

*3. If monopoly run by small cadre at the top, harm can be great while margins low*

Another implication of some monopolies being run by a small cadre is that, because they are a small group, industry profit, or industry price-cost margins, which are averages over all the firms in an industry, may not be large. The harm inflicted by the monopoly may be great, but profits may not be great.

*4. Monopolies Block New Technology, Even When Margins will be Low Afterwards*

In many industries, new technologies appear that would render the existing capital stock in the old technology, both physical and human capital, of little value. Producers in the *threatened* industry have a choice of attempting to block the new technology. For example, they may form trade associations, or strengthen existing ones, to pursue this goal.

If the new technology is blocked, there may well be significant competition in the industry among those using the old technology. But those with skills in the old technology, those with physical and human capital in the old technology, may still organize to block the new technology. If the technology is blocked, they earn returns on their skills and their capital. So even if price-cost margins will be low, they may well organize to block the new technology.

This theoretical argument was developed from my experience studying monopolies. I had

developed this argument to understand the U.S. construction industry, one example, an extremely important one, of this type of phenomenon.

##### *5. Monopolies Agree to Lower Margins in Exchange for More Secure Margins in Future*

Private monopolies can reach deals with government to reduce price-cost margins in exchange for the government helping the industry reduce outside competition in the future. In exchange for a lower price-cost margin today, the industry obtains more secure price-cost margins in the future.

During the Great Depression, the U.S. government permitted, indeed encouraged, industries to draft codes of conduct or codes of competition. With the codes, firms in the industry were able to limit competition in their respective industries by (1) reducing it among themselves, for example, with quotas on each other's production, and by (2) blocking entry. In exchange, the industries agreed to give significant bargaining power to labor groups. This increased bargaining power was meant to lead to higher wages, and possibly lower margins. One interpretation is that the firms agreed to lower margins in exchange for less competition, and hence more secure margins, in the future.<sup>251</sup>

Such deals, in less obvious form, may be common in the United States.

##### *6. Manufacturing in 1980s: Surges in Competition Lead to Increased Price-cost Margins*

For the first few decades after WWII, U.S. manufacturing industries faced little competition from manufacturers in other countries. During this period, significant monopolies developed in many U.S. manufacturing industries, including automobiles, steel, tires and cement.

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<sup>251</sup>Cole and Ohanian stressed such ideas.

While there was often more than one source of concentrated power in these industries, that is, more than one monopoly, typically a significant source of monopoly was the union-management teams that obtained monopoly control over unions. As studies done by colleagues and myself have shown, and what was predicted to great accuracy by both Thurman Arnold (1943) and Henry Simons (1944) before the monopolies actually developed, these monopolies led to significant declines in industry productivity.

That these monopolies would face a surge in competition, at some point, should not be surprising. We already discussed, in Section 6, that when a monopoly reduces productivity and its growth in an industry, the productivity of similar industries in other countries, where there are no monopolies, or they are less strong, will ultimately catch up to the domestic industry's productivity. Then, the domestic industry's productivity will fall further and further behind similar industries where there are no monopolies. The domestic industry, and monopolies, will ultimately be threatened by these less-monopolistic industries unless, of course, they find some ways to block these industries (with tariffs, for example).

In the early 1980s, U.S. manufacturing industries faced a surge in competition from manufacturing industries throughout the world. One factor setting off surges in manufacturing imports, other than the growing differences in productivity, was the great appreciation of the U.S. dollar. As competition intensified, many of the monopolies in U.S. manufacturing, including union-management monopolies, came under attack and lost significant power. Union-management monopolies reduced restrictive work practices. Productivity in the industries soared. Costs of production fell sharply. When exchange rates returned to previous levels, domestic prices returned to pre-crisis levels. Price-costs margins were significantly

higher than before the crisis. Competition had led to surges in price-cost margins.

*7. Switchover Disruption: Increases in Competition Can Lead to Increased P-C Margins*

In Holmes, Levine and Schmitz (2008), described above, a "small" increase in competition, modeled as a "small" reduction in tariffs, can lead to technology adoption by the monopolist, a significant reduction in marginal cost, and an increase in the price-cost margin.

*8. Not suggesting we throw out data.*

I'm not suggesting, of course, that we ignore price-cost margins and the other statistics that are discussed in the literature. We need to use all the evidence we have in understanding monopolies and the harm they inflict. But I can't see how price-cost margins, and other statistics like concentration ratios, can play more than a marginal role in these efforts to understand what organizations are monopolies, how monopolies operate and what types of harm they inflict.

There are, of course, situations where price-cost margins signal trouble in industries. The price-cost margins in eyeglasses and hearing aids obviously signal rampant monopolies in these industries. This helps. But it's the first step in a very long process, as mentioned above, to unwind what monopolies are involved, how they achieve these markups and so on.

As an economic science we want to understand how monopolies in eyecare and eyeglasses achieve such high margins. But the stakes are even higher today given the lax antitrust environment. The FTC just allowed the merger among the two largest players in this industry, Luxottica and Essilor. One wonders what it will take for antitrust authorities to do their

job. As an economic science, we can develop greater knowledge about the industry, using this knowledge to pressure antitrust authorities to do their job.

There is a statistic, an exception, that should attract special attention and study. These are statistics relating to organization size. We must be worried about the potential political costs of monopoly and these are related to size. Important questions are: What are good measures of size (for these purposes, for measuring potential for political control)? How to scale them so we can compare sizes over time?, and so on.

### A Few More Points, Perhaps Tinged With Frustration, on P-C Margins

*1. There is the absurdity of it – of using the price cost margin to measure monopoly harm.*

Then there is the absurdity of it. The idea that we can calculate statistics, say, price-cost margins, that will tell us what we need to know about the state of competition in an industry.

I mentioned that Edward Chamberlain gave some general criticisms of price-cost margins (and any other statistic that might be used to measure monopoly). He begins his conclusion to “Measuring the Degree of Monopoly and Competition” this way: “Our general position is that the measurement of monopoly and competition is many-sided. Certain aspects of these two categories and of their relations to each other cannot be measured at all ...” He continues: “The various indices which can be constructed are limited in their meaning and will always require further interpretations .....” Moreover, “it does not follow that because they are quantitative themselves they can be averaged or in some other way reduced to a single index .... of monopoly power”

Chamberlain then proposed an analogy to make his points clearer. “

Here (as elsewhere) a comparison of economic with medical science may be helpful. Some aspects of health can be measured and others cannot. Among the former we have body temperature, blood pressure, metabolism, weight, etc. But these do not lend themselves to the construction of a *single* quantitative index of health.” (emphasis in original)

Something Chamberlain didn’t mention, perhaps because it was so obvious, is that he talked about the difficulty of measuring the health of an individual. Coming up with measures of the health (that is, the competitive health) of an industry would seem another order of difficulty.

Chamberlain wrote this 65 years ago. Today he would find a small “industry” dedicated to calculating price-cost margins. The industry does so with great confidence that these calculated statistics, these numbers, tell us what is to be known about the competitiveness of an industry.

These economists are telling me (figuratively, of course) that to understand the extent of monopoly in an industry, say, construction, I can download one of their papers, say, Hall (2018), look up the price-cost margin in construction, and I’d be done. Of course, there are 100s of economists telling me this. I mention Hall since he seems to be the one who most recently resurrected this long-ago discredited approach. As I mentioned above, these papers typically find low price-cost margins in construction. This matches well with the other statistics from the construction industry thought to signal competition: free entry, small firms, low concentration and so on.

When I began these essays, five or more years ago, I considered whether to discuss mo-



nopolies in construction. I knew that historically there had been very strong monopolies in construction. The ones I knew about, and the only ones I assumed there to be, were union-management monopolies for many of the skilled construction trades.

As I kicked around the idea of including monopolies in construction, that is, union-management monopolies, I knew they reduced productivity in the construction industry by sabotaging substitute products. Holmes and Schmitz (1995) discussed Oster and Quigley's (1977) work on how union-management monopolies in construction had blocked the use of preassembled parts. I wondered if they had harmed factory-built homes, the logical extension of preassembled parts?

I soon learned that there was very little written about the factory-built housing industry in the economics literature. I learned that the majority of factory-built homes were not even included in U.S. housing statistics, like housing starts, permits and new home sales. When I learned enough, I was able to draw a figure of shipments of mod[1,2] (like Figure 6). My immediate conjecture was that the drop in shipments of mod[1,2] in the mid 1970s was the result of monopoly sabotage. I have drawn enough of these pictures in other industries to be confident that this was the case. But it took another four years to figure out how the sabotage was accomplished, what monopolies were involved, and so on.

Union-management monopolies played only a small role, if any, in the dramatic drop in shipments of mod[1,2] in the 1970s in Figure 6. It was HUD and NAHB that were the guilty parties.

This is an obvious point, but I'll say it anyway: Price-cost margins didn't help in figuring

out the monopoly sabotage in this industry.

*2. More on the absurdity of it – Giants don't use these statistics*

Chamberlain discussed using price-costs margins as a possible way to measure monopoly power and harm. He was skeptical and urged caution using them.

Other giants did not rely on price-cost margins. I already mentioned how Arnold defined monopolies on the basis of what organizations did. I recently searched Thurman Arnold's *Bottlenecks of Business* for the term "price-cost" and the word "margin."<sup>252</sup> There were no instances of "price-cost." I found four instances of "margin." All four were used in the discussion of monopolies in food distribution and food processing. The discussions concerned how monopolies in these sectors were inflicting great harm on the poor.

Two uses of the word "margin" were to argue that the poor's diet, because of monopolies and high prices, left little margin for safety. The poor's diet "provides little variety and little margin of safety in vitamins and minerals." (p. 225) And the poor "were finding it so hard to get enough to eat that they had little or no margin of safety in diet." (p. 226)

Two referred to price-cost margins: "the retailer must have his normal margin in selling farm and food products." (p. 218) and "Nevertheless, the processors' and distributors' margins ... are added to the farm price." (p. 229) In fact, only the use of the word margin on p. 218 was from Arnold; the other three were by Corwin Edwards, as Arnold had published a memo from Edwards in his book.

*3. The fight over the size of (or variance of) price-cost margins is fight over peanuts.*

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<sup>252</sup><https://archive.org/details/B-001-018-047/page/n251/mode/2up/search/margin>

While 100s of economists are calculating price-cost margins of various sorts, I wonder how many realize that, in the context of standard monopoly models, the findings mean very little. That is, in the context of the Cournot-oligopoly models, and models of monopolistic competition, the costs from price distortions are small if not trivial. The debates over how to measure margins, or the size of margins, or the dispersions in margins, are debates that, as far as the costs of monopoly are concerned, are over peanuts.

## E. Shrouded Attributes and the Exploitation of Economists

Gabaix and Laibson (2006) explore the extent to which firms can shroud attributes of products so as to exploit consumers. They examine products that are add-ons to existing products, like printer cartridges.

A certain logic tells us that such exploitation can't persist. Firms that shroud attributes will be exposed by competitors that can increase profits by capturing the customers that had been exploited. But if some consumers are unaware of the shrouding, Gabaix and Laibson show that exploitation can persist in competitive equilibrium.

The historical studies of monopolies reviewed in this Introductory Essay obviously raise some fundamental questions about the extent to which consumers, but also producers and economists, can be exploited.

In the residential construction industry, monopolies in stick-built construction are exploiting producers of factory-built homes by requiring that they "add-on" to their products, namely, the permanent chassis. Again, today's factory-home producers are unaware that this require-

ment is simply to reduce the value of factory-homes. Producers, not only consumers, are being exploited. But economists are being exploited as well. The deceit and misinformation used by monopolies in the stick-built industry have even confused economists.

What this means for economic theory, that economists can be studying markets and be exploited by market participants, is an interesting question.

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**Table 1**

**Investment in Mod [1, 2] (Mobile Homes), by State**

	1997		2017	
	Mobile Home Shipments	As Percent of Total Single-Family Home Production in State*	Mobile Home Shipments	As Percent of Total Single-Family Home Production in State*
<b>States with Little Investment</b>				
Connecticut	188	2.35%	113	4.36%
Massachusetts	185	1.21%	213	2.84%
Rhode Island	28	1.19%	38	3.73%
New Jersey	424	1.77%	471	4.44%
Wisconsin	3,625	14.95%	612	4.94%
Minnesota	3,217	13.82%	713	5.01%
Iowa	2,137	22.50%	470	5.51%
Nebraska	1,132	16.72%	186	3.31%
<b>States with Significant Investment</b>				
North Carolina	33,318	37.50%	3,835	7.21%
South Carolina	20,062	47.45%	3,797	11.63%
Alabama	17,323	55.96%	6,046	33.08%
Mississippi	10,809	58.08%	3,665	35.95%
Louisiana	9,864	42.79%	5,776	29.88%

\*Total Single-Family Home Production in State = Mobile home shipments plus building permits for on-site production of new privately-owned single-family units in 2017. Data on building permits can be found on the Building Permits Survey of the Census: <https://www.census.gov/construction/bps/stateannual.html>

**Table 2**

**Investment in Mod [1, 2] (Mobile Homes), by State, 2017**

Mobile Home Shipments in State				
	Total Number	As Percent of Total Single-Family Home Production in State*	As Percent of Total Units Produced in State**	Per 10,000 Population
<b>States with Little Investment</b>				
Connecticut	113	4.36%	2.42%	0.31
Massachusetts	213	2.84%	1.19%	0.31
Rhode Island	38	3.73%	3.19%	0.36
New Jersey	471	4.44%	1.63%	0.52
Wisconsin	612	4.94%	3.04%	1.06
Minnesota	713	5.01%	3.15%	1.28
Iowa	470	5.51%	3.26%	1.49
Nebraska	186	3.31%	2.06%	0.97
<b>States with Significant Investment</b>				
North Carolina	3,835	7.21%	5.41%	3.73
South Carolina	3,797	11.63%	9.66%	7.56
Alabama	6,046	33.08%	29.00%	12.40
Mississippi	3,665	35.95%	32.88%	12.28
Louisiana	5,776	29.88%	27.50%	12.33

\*Total Single-Family Home Production in State = Mobile home shipments plus building permits for on-site production of new privately-owned single-family units in 2017.

\*\*Total Units Produced in State = Mobile home shipments plus total building permits for on-site production of new privately-owned units in 2017 (single- and multi-family units).

Data on building permits can be found on the Building Permits Survey of the Census: <https://www.census.gov/construction/bps/stateannual.html>

Figure 1



Home Plan No. 704  
 A charming structure  
 Dutch Colonial home.  
 Large living room; din-  
 ing room; kitchen, with  
 built-in kitchen sink; 3  
 bedrooms; bath; closets;  
 porch. All materials com-  
 plete as specified.  
**\$2389.00**

# Judge Landis'

## Decision Gives You Wholesale Prices on Building Material!

In the agreement between the Unions and Building Contractors before Judge Landis last Saturday, Rule No. 3 says: "There shall be no restriction in the use of any raw material or manufactured material except prison made."

People of Chicago—Here is the opportunity for which you have long waited. Do you know that you can now build a new home or repair your old one at a positive saving of 25% to 50% on materials? Judge Landis has made this possible. By this agreement, for the first time in years, millwork manufactured outside of Chicago may now be shipped into and used in Chicago. This means that you get the benefit of outside low prices—that you can enjoy, as do 200,000 other of our customers, the benefits of the famous Gordon-Van Tine system of selling from mill direct to you.

Because of our tremendous resources and method of selling, we can offer you building materials—either complete homes or lumber, millwork and other requirements called for by your building contractor—at prices actually at or lower than wholesale. You can build or repair at pre-war costs and get finest quality if you buy of Gordon-Van Tine. Shipments delivered to your nearest freight depot.

### Complete Homes—Direct From Factory to You

Before going one step further in trying to solve your housing problem, get from our Chicago headquarters our book containing plans for 200 Modern homes—free.

Learn from this book what the Gordon-Van Tine system actually is—how it saves you \$200 to \$2,000 on a finished home; how it guarantees the finest materials at wholesale prices; offers you the service of the best architects; protects you from unexpected "extras" in the cost of building. Start to build now and move into your new home within 60 days.

Garages, easy to build, \$71.00 and up

### Let Us Figure Your Material Bill

If you have architects' plans, submit them to us and let us prove to you how much money we can save you by our direct-from-factory method of selling. Our line includes everything in lumber and building material, and we are prepared to ship immediately in any quantity. Quality and quantity are absolutely guaranteed. Shipments direct from our Davenport mill—quick service.

Get our general catalogue containing 5,000 Building Material Bargains and pick from this, at wholesale prices, everything you need for any repair jobs you are contemplating.

Phone, call or write our Chicago headquarters for full information.

# Gordon-Van Tine Co.

Room 717, Tribune Bldg.  
Chicago

Telephone State 6610

Home Office  
Davenport, Iowa

Special millwork orders for any home completed on short notice in one of the best equipped factories in America. Sold to you at Factory Prices. Let us quote you on any millwork, stock or special. Will show you some real savings—highest quality guaranteed or your money back.

Book  
of  
200 Home  
Plans  
FREE!



Gordon-Van Tine service and prices furnished just as always for people living outside of Chicago. Write our home office at Davenport for books and information.

Figure 2



This Pacific war veteran and his family are homeless because we have let rackets, chiseling and labor feather-bedding block the production of low-cost houses.

\**Look* (April 1, 1947): p. 21.

# Figure 3

## [ CLIENT STORY ]

1



**Ronald | Louisiana | Consumer and Finance** | Ronald needed legal help when FEMA filed a claim against him for repayment of disaster funds issued after Hurricane Katrina. He had never even applied for, much less received, any FEMA funds. FEMA seized his income tax refund and told him he had to pay an additional \$8,000. With the help of legal aid, Ronald was able to demonstrate that the funds in question had been issued to someone else. FEMA dismissed the claim and returned the money wrongfully seized from Ronald's accounts.

## [ CLIENT STORY ]

2



**Mary | Ohio | Health** | Mary lives in an assisted-living community. When a health condition required rehabilitation, she entered a skilled nursing facility for what she expected would be a short-term stay. Once therapy was completed, however, the nursing home refused to begin discharge, insisting she required 24-hour care and demanding payment for her continued stay. Mary could not afford to pay for both the nursing home and her assisted living residence. Legal aid attorneys got involved, advocating for her right to make an informed decision about her living situation. They also helped Mary work with her primary care physician to arrange for the necessary home health services she needed to return to her home.

Source: LSC Client Success Stories.

## [ CLIENT STORY ]

3



**Misty | Nebraska | Income Maintenance** | While giving birth to her third child, Misty, 32, went into cardiac arrest and was left with a serious heart condition that made her eligible for Social Security Disability benefits. She filed for benefits to help make ends meet and take care of her family, but was denied two times. With the help of legal aid attorneys, Misty's third application for disability benefits was expedited and shortly thereafter, she received a favorable decision. The decision, which granted her \$700 per month, also granted her Medicaid, which allowed her to secure a Ventricular Assist Device that has allowed her to live a more full life with her family again.

Source: LSC Client Success Stories.

## [ CLIENT STORY ]

4



**Jill | Indiana | Housing** | Jill, a senior and legal guardian of two young granddaughters, faced possible homelessness. Jill's sole income came from Social Security Disability benefits, which qualified her for Section 8 subsidized housing. When Jill's apartment was cited for not meeting Section 8 standards, the landlord refused to make the repairs, and the housing authority stopped its payments. The landlord filed an eviction notice for failure to pay rent despite Jill's attempts to continue paying her portion of the rent. A legal aid attorney represented Jill in small claims court, and Jill and her two granddaughters were allowed to stay in the apartment while she searched for another suitable place to live. Without an eviction on her record, Jill retained her Section 8 eligibility and found a new, safe home for her granddaughters.

Source: LSC Client Success Stories.



Figure 3, ctd.

[ CLIENT STORY ]

5



**Michaela | New Jersey | Veterans** | Michaela is a lifelong New Jersey resident, always living there except for six years serving in the armed forces in the 1990s. While stationed in Alabama, she divorced, but a name change was not included in the divorce. As a result, when she returned to New Jersey after her service ended, she was compelled to obtain a driver's license using her married name. Michaela used her maiden name in all other matters, causing issues in the various aspects of her life that involve identification (e.g., finances, utilities, leases, etc.). A legal aid attorney represented Michaela in a name change, permitting her to resume use of her maiden name and to once and for all clarify her identification in all aspects of her life.

Source: LSC Client Success Stories.

[ CLIENT STORY ]

6



**Donna | New York | Domestic Violence** | Donna, a rural resident of New York State, suffered from severe mental health problems resulting from domestic violence and the sexual abuse of one of her children. She did not feel comfortable speaking about her situation before contacting an LSC grantee, who helped her address various civil legal problems she was facing. Specifically, the legal aid attorney helped Donna avoid a workfare sanction by the local Department of Social Services and won her SSI appeal, permanently removing her from the county welfare rolls. Donna received over \$40,000 in retroactive SSI benefits, which has allowed her to establish her own home and provide a college education for her child.

[ CLIENT STORY ]

7



**Bud | West Virginia | Veteran Benefits** | Bud is a 68 year-old Vietnam veteran who had been receiving his Marine pension benefits for the past eight years. After a government clerk keyed in the wrong social security number, his benefits were suspended. Moreover, the Department of Veterans Affairs (VA) deemed the money he had been receiving as overpayment and threatened action against him. Bud tried to correct his record, but he was having a difficult time and, meanwhile, his savings were being depleted. An attorney with an LSC grantee's Veteran's Assistance Program worked with the Social Security office, the VA, and the Internal Revenue Service, and was eventually able to establish Bud's identity, win reinstatement of his pension, and resolve the false overpayment issue.

Source: LSC Client Success Stories.

[ CLIENT STORY ]

8



**Frida | Washington | Domestic Violence** | Frida, a domestic violence survivor, and her four children, fled abuse at the hands of her husband. The children were sexually molested by their father, confined to the house, and repeatedly threatened with weapons. During the subsequent divorce, the husband was granted unsupervised telephone contact with the children. When one child became suicidal, a legal aid attorney helped Frida secure an order to stop the phone calls. The grantee was able to secure a lifetime protection order and child support. Frida has since started her own business, and her children are doing well in therapy.

Source: LSC Client Success Stories.

[ CLIENT STORY ]

9



**Helen | Pennsylvania | Income Maintenance** | Helen is a 68-year-old widow whose only income is a monthly Social Security Administration (SSA) widow's benefit. When she sought help from an LSC grantee, she was scared, vulnerable and overwhelmed. She had just received a letter from the SSA indicating they had overpaid her \$47,000 and notifying her that they would stop her monthly benefit payment until the debt was repaid. The legal aid attorney found that the overpayment was caused by fraudulent conduct by Helen's late ex-husband that occurred after their divorce and long after they had separated. The attorney helped Helen resolve the situation, and she continued to receive her SSA widow's benefit.

Source: LSC Client Success Stories.

Figure 3, ctd.

[ CLIENT STORY ]



**Elinor | New York | Housing** | Elinor has a daughter with a disability who had to crawl four flights of stairs each day to their apartment. Her daughter spent about 30 minutes sliding down the steps to reach the wheelchair stashed under the stairwell alcove and more than an hour getting in and out of her building to attend school five days a week. When there was a vacancy on the ground floor, Elinor sought to move there, but the landlord told them “transfers” weren’t allowed. Represented by an LSC grantee lawyer, the family was able to acquire the apartment on the ground floor and maintain their \$700 rent for their three-bedroom, rent-controlled apartment.

Source: LSC Client Success Stories.

[ CLIENT STORY ]



**Charles | California | Housing** | Charles and his wife care for their elderly parents and grandchildren in their home in rural California. They first experienced financial problems when Charles’s employer reduced his work hours. Then he became ill from a life-threatening disease. He and his wife asked their lending bank for help. When the bank did not respond to their modification request, they sought help from an LSC grantee. The legal aid staff succeeded in obtaining a modification that lowered their monthly mortgage payment and established a fixed payment for principal and interest.

Source: LSC Client Success Stories.

[ CLIENT STORY ]



**Patricia | Georgia | Education** | Patricia was worried about her 13-year-old daughter, a middle-schooler diagnosed with leukemia. She was being bullied at school and, because she was often ill or hospitalized, she needed help with academics and extra time to complete assignments. After speaking with school officials, Patricia did not feel her concerns were being heard. LSC grantee lawyers worked with the school to develop a special education plan, bringing in an education specialist from the hospital where her daughter was being treated. An individual education plan (IEP) was developed, giving Patricia’s daughter the extra support she needed and permission to wear a hat to cover her bald head. School officials also addressed the bullying, making her time in school safer and more productive.

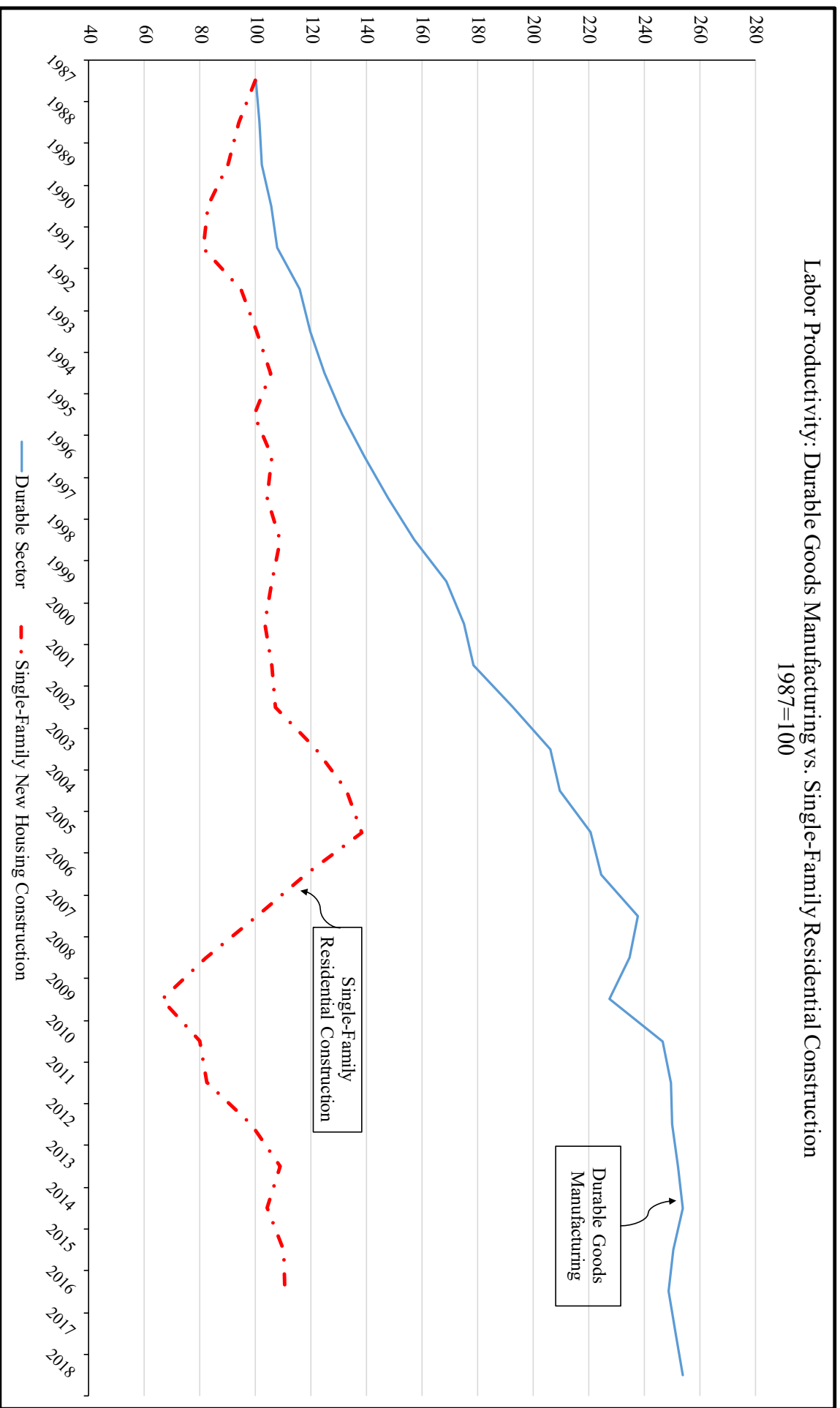
Source: LSC Client Success Stories.

10

11

12

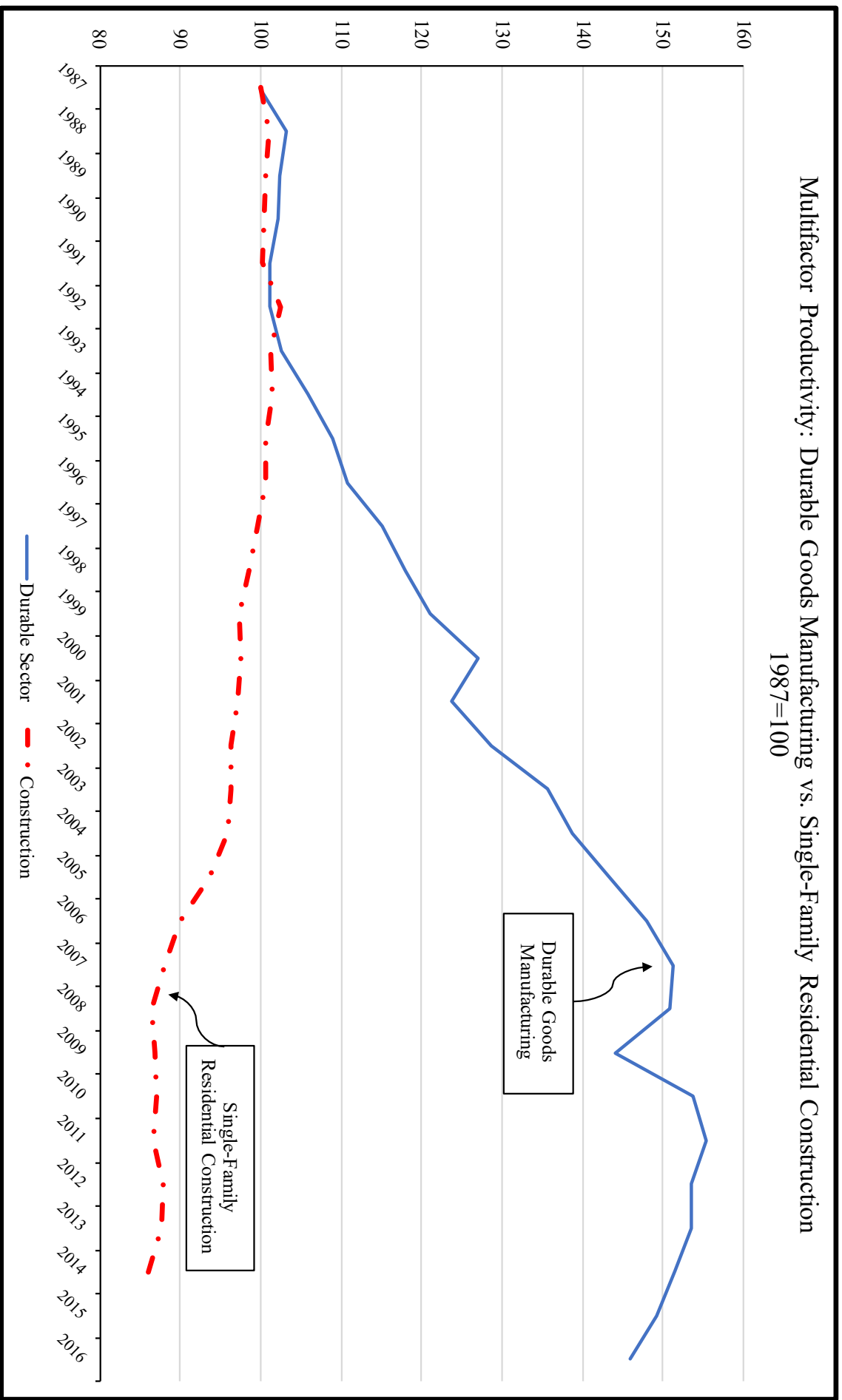
**Figure 4 – A**



\*Data on productivity of the durable sector comes from the Bureau of Labor Statistics. Data on the durable sector refers to NAICS 321, 327, 331-337, and 339, Series ID: MPU9920062. Data on productivity of single-family new housing construction is taken from Sveikauskas, Rowe, and Milderberger (2018) based on Bureau of Labor Statistics data. Data on single-family new housing construction refers to NAICS 236115.



**Figure 4 – B**



\*Data from the Bureau of Labor Statistics. Data on the durable sector refers to NAICS 321, 327, 331-337, and 339. Series ID: MPU9920012. Data on the construction sector refers to NAICS 23. Downloadable from: [https://www.bls.gov/mlp/special\\_requests/klmsmfpvg.zip](https://www.bls.gov/mlp/special_requests/klmsmfpvg.zip). Note that this measure of productivity is at a more aggregate level, as the construction sector includes both non-residential and residential construction (and, in residential, both single- and multi-family units).

**Figure 5 – A**



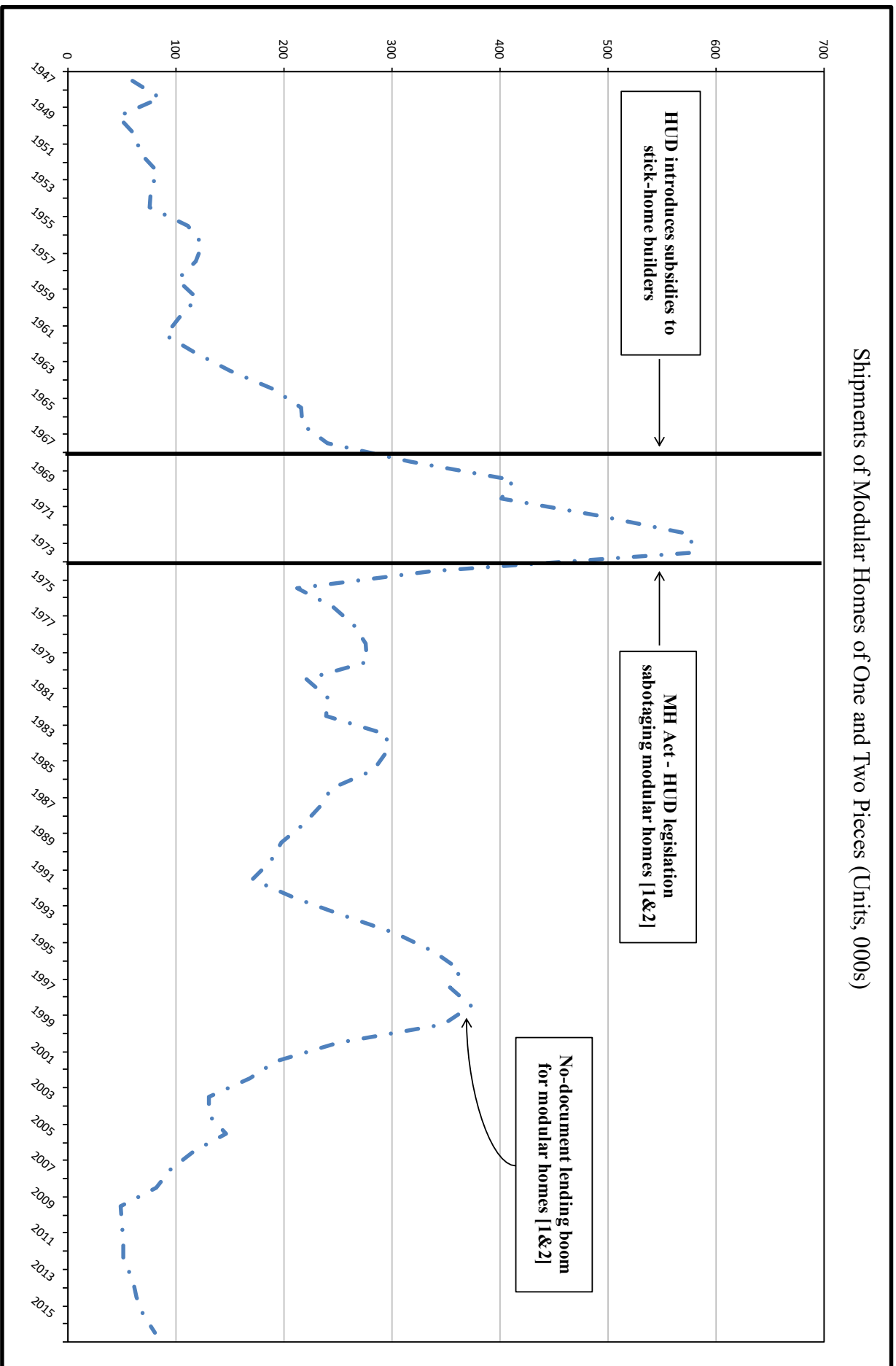


**Figure 5 – B**



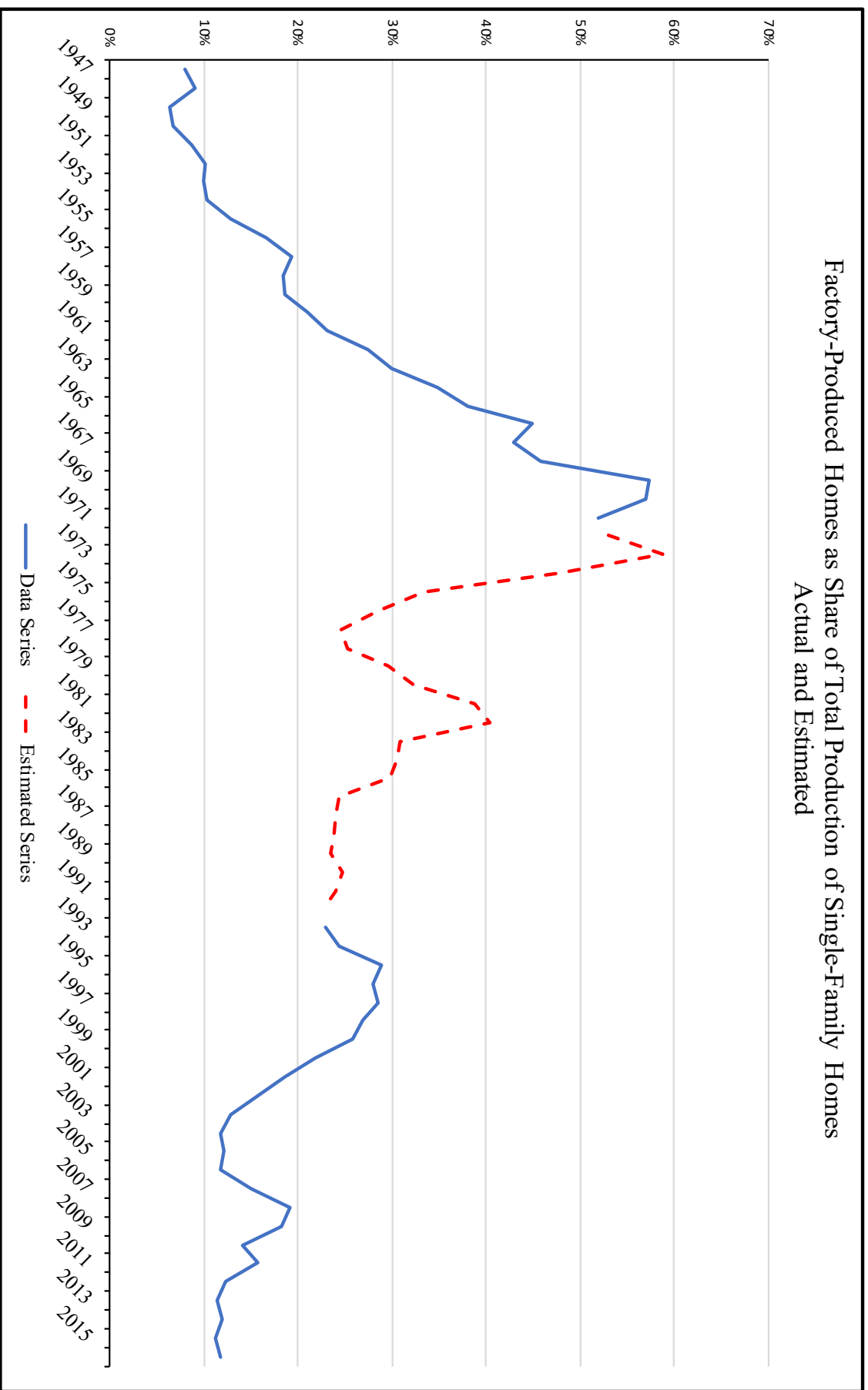
\*Nevada Housing Division-Manufactured Housing, available at: [www.mhd.nv.org](http://www.mhd.nv.org)

**Figure 6**



NB: (1) These homes are not in the statistics on housing starts or building permits. (2) Notice lending boom roughly a decade before the real estate lending boom.  
\*Data from the U.S. Census Bureau – Shipments of New Manufactured Homes, retrievable at <https://www.census.gov/data/tables/time-series/econ/mhs/shipments.html>. Data prior to 1959 for manufactured homes are available from the Historical Statistics of the United States, Millennial Edition, Part Dc, Series Dc637-652.

**Figure 7**



\*Data from the U.S. Census Bureau – Shipments of New Manufactured Homes. Data prior to 1959 for manufactured homes are available from the Historical Statistics of the United States, Millennium Edition, Part Dc, Series Dc637-652. Single-family (one) unit housing starts (both attached and unattached) following 1959 are available from the U.S. Census Bureau – New Residential Construction. Not seasonally adjusted data are used. Previous data are available from David Saskind, “Housing Starts: Background and Derivation of Estimates 1945-1982”, Construction Review, 1982. Data for modular home production up to 1969 are from the National Association of Home Manufacturers based on their own surveys and professional surveys. For the remaining three years, data are from “Modular Housing, 1972: Statistics & Specifics” by John A. Reidelbach (Modco, 1972), Page 127. From 1992 onward, the data are equal to the sum of the “Modular” and “Other” categories from “2016 Characteristics of New Housing.” Estimated series supplements manufactured home shipment data with estimated data on the production of other factory-built homes based on shipment variation.



**Figure 8 – A**

**Metal Chassis in the Basement of Modular Home**



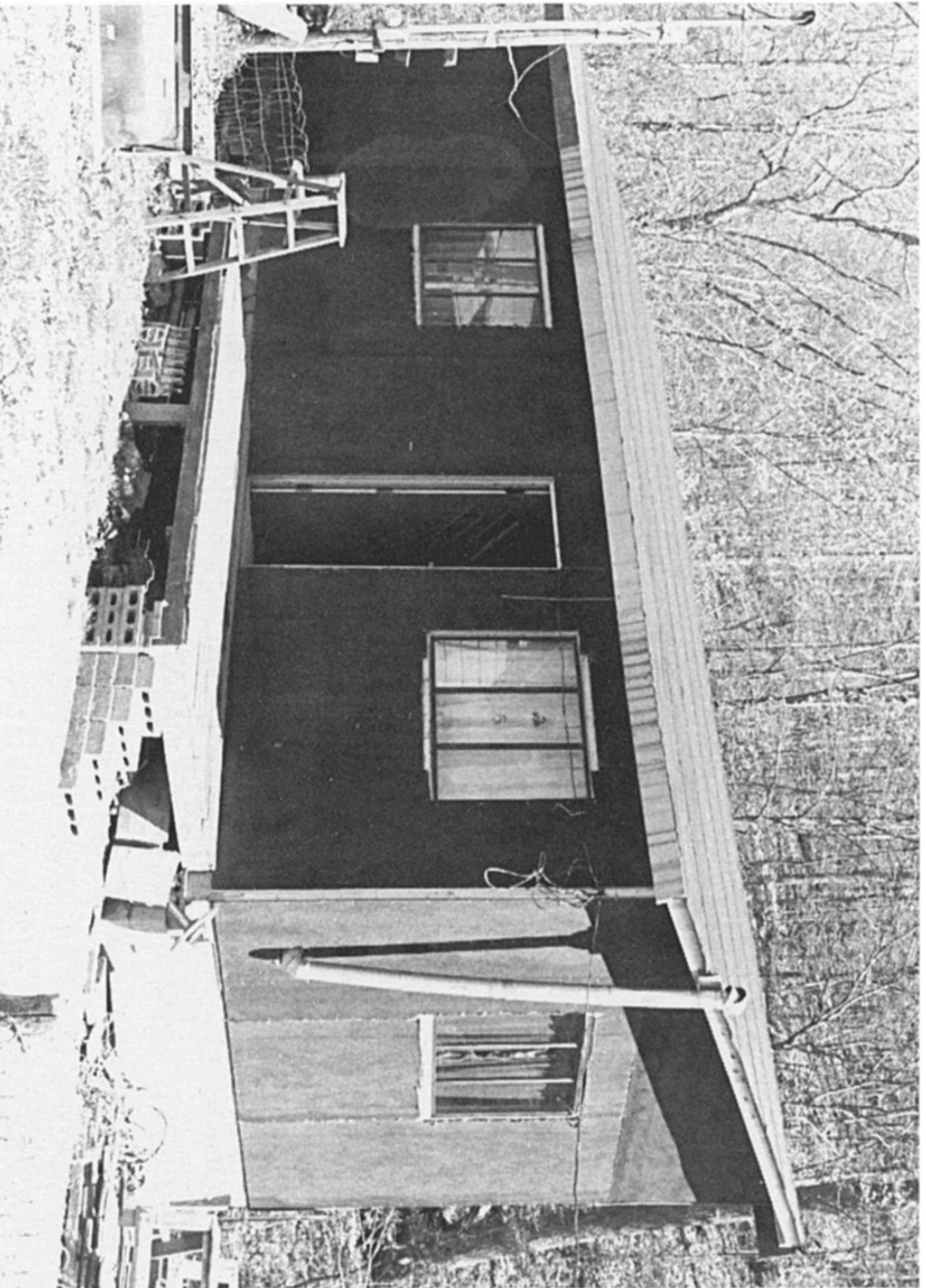
**Figure 8 – B**

**Metal Chassis in the Basement of Modular Home**





**Figure 9**

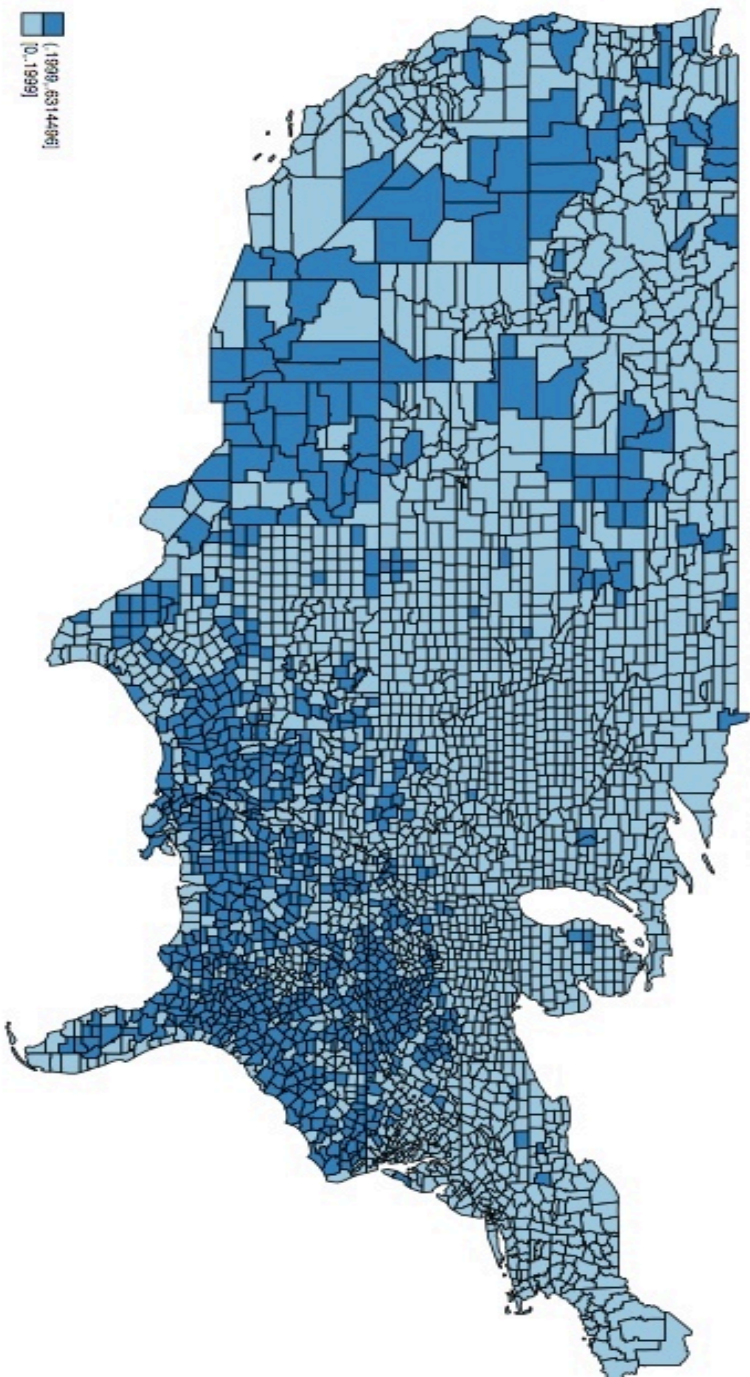


\*Permission to use this photo granted by the *Vernacular Architecture Forum*. The photo was originally reproduced in "The Half-House: Influences in the Creation of a New Form," by Charles E. Martin, *Perspectives in Vernacular Architecture*: p. 45.



Figure 10

**Ratio of Mod [1,2] (Mobile Homes) to Single-Family Homes (Stick-Built + Factory-Built)  
By County; Counties With Ratios Greater than 20 percent in Dark**



\*Data from U.S. Census Bureau American Community Survey.