Price Theory as Prophylactic against Popular Fallacies

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Abstract

The articles collected in the three-volume set of *Chicago Price Theory* illustrate elements of continuity and change in the development of the Chicago School. Its editors stress a continuity in price theory at Chicago that runs from Frank Knight to Gary Becker. Our main contribution in this review essay is to emphasize the discontinuity in the Chicago price theory tradition between the Knight/Viner/Simons generation and the post-war Friedman/Stigler/Becker generation. Moreover, we argue that a more logical continuation runs from the Knight/Viner/Simons generation to the Alchian/Buchanan/Coase generation of Chicago price theory. The element of continuity we stress is one of understanding price theory as a study of market adjustment and adaptation under alternative institutional arrangements, rather than using price theory to identify a unique solution to an allocative problem. Whereas the former understanding of price theory was underemphasized under Friedman/Stigler/Becker, the latter understanding of Chicago price theory tradition was continued by Alchian/Buchanan/Coase.

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“Academic economics is primarily useful, both to the student and to the political leader, as a prophylactic against popular fallacies.” – Henry Simons (1983, p. 3)

I. Introduction

In his forthcoming *Journal of Economic Literature* article, Glen Weyl defines price theory as an “analysis that reduces rich and often incompletely-specified models into ‘prices’ (approximately) sufficient to characterize solutions to simple allocative problems” (2015). The array of prices prevailing on the market, in other words, solve the problem of allocating scarce time of economic actors and the resources in their possession to their highest valued uses. Price *theory* is about understanding how this “solution” is brought about through the interaction of individuals and depicting the consequences of such interaction. From its foundations in Alfred Marshall’s *Principles of Economics* to Gary Becker’s *Economic Theory*, the hallmark of research and teaching in the *Chicago* price theory tradition has what Becker refers to more accurately as “practical general equilibrium analysis” (Becker 1971, p. 5) for real-world empirical applications.

It is this richness and diversity in the research and teaching of Chicago price theory, as exemplified by the collection of classic papers and book chapters brought together by Hammond, Medema, and Singleton, that makes this edited volume truly worthy of praise and interest to all students and scholars of economics.1 As shown by the complete list of the table of contents provided in an appendix below, the breadth and depth of the topics covered in *Chicago Price Theory* extend from methodology, consumer behavior, and production, to public policy and welfare economics.

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The underlying theme of our essay is that an examination of the evolution of price theory throughout the history of “Chicago School” economists reveals a shift in analytical emphasis from the institutional arrangements that provide “the social organization of economic activity” (Knight 2013 [1933], Vol. I, p. 176, italics original), to the relentless and unflinching application of the rational choice analysis to all human behavior (Becker 2013 [1976], Vol. I, p. 294). It is often argued that at its core there is a logical continuity that runs from Frank Knight to Gary Becker in “Chicago price theory”. Melvin Reder, for example, argued that the Chicago economics of the 1930’s was the precursor of what became Chicago economics in the 1960’s and 1970’s, with Frank Knight being the “baton passer” of Chicago price theory, first to Milton Friedman and George Stigler, and eventually to Gary Becker (2013 [1982], Vol. I, p. 138).

The association of price theory with the University of Chicago, according to Glen Weyl, is largely an outgrowth of a segregation of “Chicago” from the rest of the economics profession during the critical decades when that "baton" was being passed -- 1940s and 1950s. During the second half of the 20th century microeconomic theory moved increasingly away from elaborating elementary price theory and towards the formulation of proofs of the existence, uniqueness, and stability of general competitive equilibrium. The Arrow-Hahn-Debreu project was a far cry from the persistent and consistent application of the economic way of thinking in the early development of neoclassical price theory from Phillip Wicksteed to Frank Knight. Henry Simons summarized this early project in the economic way of thinking as follows:

2 It is probably useful to remember that Friedman and Stigler overlapped as students during the 1930s, and were students of the Frank Knight/Jacob Viner/Henry Simons tradition, but their return to Chicago to join the faculty was first Friedman in 1946 and then Stigler in 1958. Becker was a student in the 1950s and joined the faculty in 1968. The "Tight Prior Equilibrium" assumption that Reder talks about comes to be embedded in the hard-core of Chicago price theory more or less with the work of Stigler and Becker, even more so than Friedman, and as such is a defining characteristic of the approach only in the late 1950s onward.
Traditional price theory consists primarily in analysis of the pricing process under a free enterprise economy – under a system characterized by private property, free contract, and free exchange. Assuming given underlying conditions (given conditions, broadly, as to tastes, technology, resources, and ownership), it attempts to show how consumption and production are controlled through the pricing process and, above all, to describe (a) the arrangements under which the system will be in equilibrium and (b) how departure from the equilibrium arrangements will set in motion forces to restore equilibrium. The central conception of price theory is that of an equilibrium adjustment with respect to relative prices and relative production. (Simons 1983, p. 6, emphasis added)

As this quote and the epigraph from Simons written above suggests, the University of Chicago economist, both through their graduate teaching of price theory as well as through their research, understood that the purpose of their efforts was to prevent the spread of popular fallacies in economic discussions. According to Knight, for example, economics is applied common-sense and the puzzle for the economists is why men too often ignore the basic teachings of economics. As he argued in his presidential address to the American Economic Association, “The serious fact is that the bulk of the really important things that economics has to teach are things that people would see for themselves if they were willing to see” (Knight 1951, p.4). The study of economics opens one’s eyes to a world in which individuals are not trapped in a zero-sum game, or worse, a negative-sum game, but one in which it is possible to engage in productive specialization and peaceful social cooperation. Knight as well as other economists of the pre-WWII Chicago price theory tradition realized that the harmony of interests and unintended results of the invisible hand did not operate in an institutional vacuum.

As already mentioned, it is our contention that this emphasis on the institutional framework within which prices emerge to guide exchange and productive activity receded to the background of analysis in Chicago price theory after WWII. What came to the foreground was the analysis of the price system as providing a sufficient solution to allocation problems. This derivation of what Reder refers to as the “Tight Prior Equilibrium” was utilized to
impose intellectual discipline in our understanding of complex realities. This version of the Chicago School came to define the economic approach of human behavior with “maximizing behavior, maximizing equilibrium, and stable preferences” (Becker 2013 [1976], Vol I., p. 294) as the working hypotheses for the examination of all social phenomena. The implication of this theoretical perspective is that prevailing prices equal marginal costs, and all least cost technologies are being employed in production. In short, after fully accounting for all of the costs and benefits in decision-making, the optimal course will be revealed to have already been chosen by rational actors through the filter of competitive markets. Chicago price theory in the Friedman/Stigler/Becker generation was not defined by the comparative analysis of the institutional conditions within which the constant adjustments and adaptations by economic actors to changing conditions produces a tendency towards equilibrium, as it had been under the Knight/Simons/Viner generation. Instead, price theory in the hands of Friedman/Stigler/Becker became an exercise in defining the optimality conditions given any situation within which human actors find themselves.

If price theory is to be a “prophylactic against popular fallacies,” then it seems vital to ask which approach proves to be more effective in addressing popular fallacies in economic theory and policy, particularly the notion that government is a necessary corrective to a litany of “market failures.” Our essay will be framed in terms of this inquiry. As Hammond, Medema, and Singleton of Chicago Price Theory indicate, the evolution of the Chicago price theory tradition has neither been necessarily chronological nor exclusive to its development within the Department of Economics at the University of Chicago (2013, Vol. I, p. xix). But we push this argument a bit farther and argue that it is outside the University of Chicago that the logical continuation of Chicago price theory in the Knightian tradition had been passed to another generation of “Chicago” economists, namely Armen Alchian,
James Buchanan, and Ronald Coase, who developed an alternative branch of price theory at UCLA and UVA. The UCLA property-rights school and the Virginia School of Political Economy as they developed in the 1950’s to the 1970’s drew analytic attention to the “economic forces at work” (Alchian 1977) with its emphasis on exchange and the institutions within which exchange takes place in market and non-market settings. As we explain, the UCLA and Virginia School developments also draw on the early Austrian School and the London School of Economics tradition that was inspired by the Austrian branch of neoclassical price theory (see Buchanan 1999 [1969]; Buchanan and Thirlby 1981 [1973]).

The Alchian/Buchanan/Coase generation of price theorists, we ultimately conclude, provides the more effective “prophylactic against the popular fallacies” of market failure and the notion that government intervention will correct such failures. Rather than explain away the notion of market failures by way of the "Tight Prior Equilibrium" assumption, this “neglected branch of Chicago price theory” (see Boettke and Candela 2014) emphasized the importance of comparative institutional arrangements, namely the changes in rules and property rights assignments that generate market processes, which ameliorate “market failures” such as externalities, asymmetric information, and monopoly power.

There is no doubt that a coherent narrative could be told linking the Knight/Viner/Simons generation to the Friedman/Stigler/Becker generation at a methodological, analytical, and ideological level. However, rather than stressing the continuity between these two generations of Chicago school, we argue that emphasizing the discontinuities is perhaps where a more fruitful interpretative schema will be found, particularly for understanding the evolution of modern economic theory. Furthermore, in bringing such discontinuities to the foreground of analysis, the continuity running from Knight/Viner/Simons to Alchian/Buchanan/Coase will perhaps become more apparent.
and illustrate what elements of Chicago price theory had become lost in the more dominant paradigm of Friedman/Stigler/Becker.

II. Chicago Price Theory: A View from Virginia

In 1946, after serving his country in the Navy during WWII, James Buchanan enrolled at the University of Chicago to pursue his PhD in economics. Buchanan’s class notes from all 3 courses he took in price theory at Chicago survive and are at the moment in the process of being properly archived for future use by scholars at George Mason University. Buchanan learned Chicago Price Theory from Knight and then two sections with the newly hired Milton Friedman.

Friedman’s hiring at Chicago is a story in and of itself, and has recently been the subject of work by David Mitch (forthcoming), and also can be gleaned from the correspondence between Friedman and Stigler in the wonderful volume, Making Chicago Price Theory, edited by J. Daniel Hammond and Claire H. Hammond (2006). As it turns out, the department was split on the hiring of either George Stigler or Paul Samuelson, and that split led to the choice of Milton Friedman. All 3 of these towering figures in post-WWII economics were students at Chicago during the 1930s, and this episode of departmental politics and academic gamesmanship once again demonstrates just how fundamentally human the enterprise of science is, and the contingent nature of the evolution of scientific progress. It would be hard to imagine what the “Chicago School of Economics” would be if it were not for Milton Friedman, yet he could easily have not ended up teaching there. Had the

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3 We gratefully acknowledge the Center for Study of Public Choice in cooperation with the George Mason University Library for granting us access to this archival material

4 As Reder states, “The Economics Department had approved an offer to Stigler in 1946, but due to an unsatisfactory interview (with Stigler), the President of the University, Ernest Colwell, refused to approve it. The position was then offered to Friedman who (evidently) had better luck with the University Administration” (2013 [1982], Vol. I, p. 141).
Cowles Commission folks won the battle Stigler would most likely not have ended up there later as well. But Friedman and Stigler did end up at Chicago, and, along with Becker, they reconstructed Chicago Price Theory after Frank Knight, Henry Simons, and Jacob Viner passed the torch in the late 1940’s.

But let’s go back to Buchanan’s notes from Knight’s class before we get started in our discussion of this magnificent three volume collection organized by Hammond, Medema and Singleton. Buchanan often stressed that prior to Knight’s class he was a socialist in political leanings, but after a few weeks of Knight’s class he was weaned off of his socialist predilections and afterwards understood the power of the price system and the competitive market economy to coordinate economic affairs so that peaceful cooperation and productive specialization would be achieved among free individuals. On that first day of Knight’s class, Buchanan’s notes have Knight explaining the following:

Neo-Classical Tradition --- Theoretical principles based on a priori sources.

Historical economics } both factual as opposed to
   } American institutionalism
Statistical economics } theoretical

Keynes – opposed to neo-classical economics

The required textbooks for Knight’s class were Marshall’s Principles of Economics and Stigler’s The Theory of Price. The overall reading list that was provided to all graduate students and which was to form the common knowledge for graduate students in the 1930-1940s also

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5 A history of the Cowles Commission and its influence on the transformation of economic science during the critical decades of the mid-20th century is a most worthy topic. At Chicago, the Cowles Commission for Economic Research was at Chicago from 1939 until 1955, when Tjalling Koopmans moved the research group to Yale and renamed it the Cowles Foundation. The battles between Cowles and Chicago Price Theory are critical to understanding the segregation that Weyl talks about, but also our thesis about the institutional analysis and exchange perspective version of Chicago Price Theory being neglected.
contained Bohm-Bawerk, Wicksteed, Wicksell, Mises, and Hayek. Recently, *Economics in the Rear-View Mirror* posted the reading list from Jacob Viner’s price theory class from Milton Friedman’s notes, and we can see that Menger, Wieser, and Bohm-Bawerk were featured prominently. From our perspective, it is important to stress that these reading lists provide evidence that in a critical sense, circa 1930’s and 1940’s, the so-called “Austrian school” was simply part of the common knowledge that all students of ‘neoclassical’ price theory were expected to learn.”

In that first set of notes from Knight’s class, Buchanan is learning about the important insights of the classical economists, the role of economic efficiency, the difference between the physical sciences and the social sciences, and the moral framework of liberalism. Buchanan’s vantage point is unique because his student experience falls smack in the middle of the transition from the first generation of the Chicago price theory tradition (dominated by Knight and Viner) to the second generation (of Friedman and Stigler) which would evolve to the third generation (defined by Becker). Buchanan began graduate school at Chicago in 1946, which is also when Friedman joined the faculty.

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7 This was not just the case for graduate students being educated at the University of Chicago. While interviewing F.A. Hayek in 1978 at UCLA, Alchian discusses his education in the Economics Department at Stanford University, where he began graduate studies in 1934. Among the main texts used in his first year, Alchian talks about one of them being Hayek’s *Prices and Production*. In the interview, Alchian remarks to Hayek that the book “has a particularly warm place in my heart.” Furthermore, he also states “it was a book that set a tone of thinking for me” (quoted from Hayek 1983, p. 381) in thinking about economic theory in terms of relative price adjustments.

In addition, Ronald Coase was educated at the London School of Economics (LSE), where began his studies for a Bachelor of Commerce degree in 1929. Before enrolling as an undergraduate at the LSE, Coase had already been exposed to the ideas of the Austrian School, where he attended a lecture in 1928 at the LSE given by Ludwig von Mises (Kitch 1983, p. 211). While attending the LSE, Coase came under the influence of F.A. Hayek and Arnold Plant, the former arriving in 1931 as Tooke Professor of Economic Science and Statistics and the latter being appointed Professor of Commerce in 1930. Both as a student (1929-1932) and later as a faculty member (1935-1951), the development of Coase’s argument in “The Nature of the Firm” (1937) was heavily influenced by the Socialist Calculation Debate as communicated to him through Plant and Hayek.
As Hammond, Medema and Singleton (2013, p. xiii-xxvii) explain in their introductory essay to *Chicago Price Theory*, while there is definitely a discernable continuity in the history of Chicago price theory, there are also tensions and points of disjunction at a methodological, method, and application level. As stressed in several of the interpretative papers on the teaching of economics at Chicago (found in Vol. 1), Knight was decidedly non-empiricist in a way that the later Chicago school would come to be defined by their strong commitment to empiricism. On a slightly different yet also ironic point, Buchanan stressed a disjuncture between what he termed the “Old Chicago School” and the “New Chicago School” and he emphasized how the “New Chicago School” tended to ignore the institutional framework within which economic activity takes place. Thus the “New Chicago School” didn’t pay enough attention to how dysfunctions in the framework could distort the operation of the market economy (see Buchanan 2010).

### III. A Neglected Branch of Chicago Price Theory

Throughout the time covered in this collection, the intellectual alternatives of Chicago price theory included not only German historicism, American institutionalism, and Keynesian macroeconomics, but also through the Cowles Commission (later Foundation) the formalistic development of competitive equilibrium theory, which eventually embodied a new consensus in Mas-Colell, Whinston, and Green’s *Microeconomic Theory* (1995). The underlying element unifying the Chicago price theory tradition, which differentiated it from its intellectual alternatives, is its recognition of rational choice as an axiom of economic science. As Frank Knight argues in *The Ethics of Competition*:

> there is a science of economics, a true, and even exact, science, which reaches laws as universal as those of mathematics and mechanics…There are no laws regarding the content of economic behaviour, but there are laws universally valid as to its form…We cannot tell what particular goods any person will
desire, but we can be sure that within limits he will prefer more of any good to less, and that there will be limits beyond which the opposite will be true (1997 [1935], p. 127)

However, Knight did not equate economic science as a whole with rational choice. Rather, economics as science consisted of the logic of rational choice, which was deductive and \textit{a priori}, as well as subsidiary empirical propositions of time and place, namely institutions. While Knight considered economic theory as \textit{a priori} and a necessary condition for “the analysis of social interaction and coordination through the price mechanism” (1997 [1935], p. 132), he did not consider it sufficient for understanding how relative price adjustments structure the trade-offs of rational decision-making as well as generate a tendency towards equilibrium. For Knight, the axiom of rational choice underlying economic theory was always \textit{institutionally contingent}. Thus economic science for Knight consisted of pure theory, which is deductive in nature, as well as applied theory, which is inductive and structures the logic of rational choice within a particular set of institutional arrangements. Thus, the laws of economics:

work within an institutional setting, and upon institutional material; institutions supply much of their content and furnish the machinery by which they work themselves out, more or less quickly and completely, in different actual situations. Institutions may determine the alternatives of choice and fix the limits of freedom of choice, but the general laws of choice among competing motives or goods are not institutional – unless rational thinking and an objective world are institutions, an interpretation which would make the term meaningless (1997 [1935], p. 129).

Thus, for Knight economics was a social science, but one which could derive universal laws about human action that had the same ontological status as the natural sciences, yet accounted for the open-ended creativity and complexity of human choice. However, the new consensus in economic reasoning among the generation of economists educated since the 1990s, trained with Mas-Colell, Whinston, and Green’s \textit{Microeconomic Theory}, constitutes a new intellectual alternative, which we refer to as “formalistic historicism”, with an effort to
substitute a tool-kit for the analysis of particular problems for economic theory as conceptualized by Knight (see Boettke 2012a, p. 316-329). That is, antithetical to the last point made by Knight, formalistic historicism represents a vision of economic science in which human action reveals only particular truths specific to time and place, not universal economic laws, yet uses formal language (i.e. mathematics) to prove any particular proposition, purging the human actor of any choice within an institutional context. Therefore, under a given set of institutional conditions, the logic of choice does not yield a tendency towards a unique equilibrium, but a multiple set of possible equilibria which does not necessarily hold in all the cases with similar circumstances.

To earlier generations of economists, as emphasized by Knight, there were certain universal propositions about how the world worked that followed from neoclassical analysis that could be expressed in various languages, including mathematics. As the classical political economist Nassau Senior argues, the political economist:

must necessarily reason, from assumptions, not from facts. It is built upon hypotheses strictly analogous to those which, under the name of definitions, are the foundation of the other abstract sciences. Geometry presupposes an arbitrary definition of a line, 'that which has length but not breadth.' Just in the same manner does Political Economy presuppose an arbitrary definition of man, as a being who invariably does that by which he may obtain the greatest amount of necessaries, conveniences, and luxuries, with the smallest quantity of labour and physical self-denial with which they can be obtained in the existing state of knowledge. It is true that this definition of man is not formally prefixed to any work on Political Economy, as the definition of a line is prefixed to Euclid's Elements; and in proportion as, by being so prefixed, it would be less in danger of being forgotten, we may see ground for regret that it is not done. It is proper that what is assumed in every particular case, should once for all be brought before the mind in its full extent, by being somewhere formally stated as a general maxim… Political Economy, therefore, reasons from assumed premises—from premises which might be totally without foundation in fact, and which are not pretended to be universally in accordance with it. The conclusions of Political Economy, consequently, like those of geometry, are only true, as the common phrase is, in the abstract; that is, they are only true under certain suppositions in which none but general causes-causes common to the whole class of cases under consideration-are taken into account (Senior 1852, pp. 60-61).
From Nassau Senior to Frank Knight, economists were all apriorists of some sort or another. Economic theorems, as these economists contended, were derived from “self-evident” axioms. Far from out of step, this is the way that economic theorizing was done by classical as well as economists of the pre-WWII Chicago School.

The current situation is different and could be described as one where what is universal is the language or form in which arguments are made, but there are no unifying propositions about how the world in fact works. A great history of modern economic thought project would be to survey the dominate price theory texts in the elite PhD programs and to see how that impacts the character of economic thinking 10-20 years hence. Prior to Mas-Colell, Whinston, and Green, there was Kreps’s *A Course in Microeconomic Theory* (1990), which was preceded by Varian’s *Microeconomic Analysis* (1978) and before that there was Henderson and Quandt’s *Microeconomic Theory: A Mathematical Approach* (1958), and so forth until you trace back to Marshall and Stigler. But the character of economics shifts with each changing core textbook used to teach economics. Samuelson’s *Foundations of Economic Analysis* (1947) compels those schooled in its approach to view the scientific enterprise of economic differently than say those who trained working through Friedman’s *Price Theory* (1962), or Stigler’s *The Theory of Price* (1946) let alone Armen Alchian’s *University Economics* (1964). To put this another way, Walrasian economics is different from Marshallian economics, and Wicksteedian economics is different from both. Chicago price theory is decidedly Marshallian, but perhaps more accurately -- at least in the Knight/Viner/Simons tradition as Wicksteedian. Friedman once famously said that we curtsey to Marshall, but we walk with Walras. But for Knight, it might have been more accurate to say that he didn't
curtsey or walk, but instead waltzed with Wicksteed -- as economics was in his hands an elegant dance through the complexities of life.\footnote{Wicksteed’s analysis of how the system achieves equilibrium is different from either Walras or Marshall. “Wicksteed’s approach,” Lionel Robbins (1932, p. xix) writes in his introduction to The Common-Sense of Political Economy, “is by no means the same as Pareto’s. His analysis of the conditions of equilibrium is much less an end in itself, much more a tool with which to explain the tendencies of any given situation.” Wicksteed’s economics is an economics of active human decision makers, adjusting their behavior to one another to realize gains from trade, and thus the gains from social cooperation under the division of labor. Wicksteed represents an interesting, yet under explored, connection between Chicago and LSE as The Common-Sense of Political Economy was a standard on the reading lists at both schools. Buchanan’s Cost and Choice (1999 [1969]) identifies Wicksteed as one of the critical thinkers in the persistent and consistent application of opportunity cost reasoning which could be taken as foundational for the economic way of thinking.}

Gary Becker often said that it was from Friedman that he learned that economics is not just a clever game to be played by smart academics, but a vital tool for understanding the world in which we live. There is something in that claim that sets Chicago price theory apart from the teaching of economics at the other elite centers of excellence in economic research and graduate education. In fact, earlier in this decade, the Becker Center at University of Chicago ran an intense summer “boot” camp in Chicago Price Theory for graduate students at other elite programs precisely because of the belief that a generation of economists were not learning the right lessons about economic theory and in particular about market theory and the price system. Cleverness is no doubt valuable in an individual thinker, but not as much as creativity and certainly not as much as the consistent and persistent pursuit of the logic of economic analysis and careful empirical analysis.

Back in the 1980’s, a visitor from Harvard at George Mason University described the difference between Chicago and Harvard/MIT in terms of the graduate student education as follows --- ‘we study the same models of the market and the price system as they do at Chicago, but at Chicago they actually believe the models, where at Harvard/MIT we don’t.’ In many ways this characterization translates into the “saltwater” versus “freshwater” debates in the public imagination of economic discourse. The “freshwater” thinkers rely on...
abstract models of the economy to show the superiority of free markets while the “saltwater” economists show the fragility of these models to real-world imperfections. As economists trained in the Virginia School of Political Economy, where the point is to reconcile and marry the best ideas from the property rights economics (Alchian), law and economics (Coase), public choice analysis (Buchanan), and market-process economics (Mises, Hayek, and Kirzner), the authors of this essay believe that both Harvard/MIT and Chicago had framed the debate the wrong way (see Buchanan 2015, p. 260).

We value the Chicago persistence and the Harvard/MIT skepticism of unrealistic depictions. In the 1980’s, for example, Stiglitz in many ways seemed to have the better argument to Stigler on information economics, and to Lucas on macroeconomics of unemployment. If not the "better" argument, Stiglitz seems to offer an approach that is at least a more subtle and sophisticated modeling of the complexities of economic reality. However, both schools of thought are guilty of the fact that their modeling of prices as sufficient statistics are as serviceable to defenders of the market as well as its critics: they allow the economist either to condemn capitalism for failing to measure up to the model of perfect competition, or to praise capitalism as a utopia of perfect knowledge and rational expectations. Whether the “Tight Prior Equilibrium” assumption is held as an “as if” description of reality in the case of Chicago economists or as a normative benchmark for policy evaluation in the case of Harvard/MIT economists, “in both cases the heuristic value of equilibrium is sacrificed” (Boettke 1997, p. 24). In a world of uncertainty and constant change, the equilibrium model aids the analysis by providing a “foil”, or a “method of contrast” thought experiment that enables the theorist to isolate the consequences of change.9 What the Chicago “Tight Prior Equilibrium” and the Harvard/MIT “market failure” schools

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9 In “The Use of Knowledge in Society”, Hayek writes that “It is, perhaps, worth stressing that economic problems arise always and only in consequence of change” (2013 [1945], Vol. I, p. 243).
missed was that the “success” or “failure” market prices to deliver information is fundamentally a contextual question of a comparative institutional nature. Certain institutional arrangements, Hayek (1937) argued, are more conducive to the discovery and utilization of the knowledge necessary for the complex coordination of economic plans to emerge through processes of exchange and production. As he contends, the division of knowledge “is quite analogous to, and at least as important as,” the division of labor (1937, p.49). How is it, Hayek asks, that “the spontaneous interactions of a number of people, each possessing only bits of knowledge, brings about a state of affairs in which prices correspond to costs, etc” (1937, p. 49). Rather than focusing on how alternative institutional environments impact this social learning process, we too often “fall in effect back on the assumption that everybody knows everything and so evade any real solution of the problem” (1937, p. 49). In short, from this perspective, the Chicago “Tight Prior Equilibrium” ‘solves’ the problem by denying it, while the Harvard/MIT “market failure” deny any solution is possible within the system.

Perhaps it is useful to remember that the professional consensus was entirely different in economics from the time of Knight/Viner/Simons to the emerging post-WWII Chicago School of Friedman/Stigler/Becker. In American academic circles, Samuelson’s Economics (1948) and Foundations of Economic Analysis (1947) had effectively cornered the educational market at the undergraduate and graduate level, respectively, and in the process transformed opinion within the community of economic researchers and teachers to such an extent that the prevailing conventional wisdom by 1960 was the Keynesian focus on macroeconomic aggregate demand volatility, and microeconomic inefficiency due to monopoly power, externalities, and public goods. As we have stressed, since this essay is about price theory, we leave the macroeconomic debate alone. But in microeconomics there
were three ways in which the academic economist responded to the Samuelsonian argument concerning pervasive “market failure” by emphasizing either (1) conceptual clarity, or (2) the role of institutional arrangements and (3) entrepreneurial solutions. For ease of exposition, we will combine comparative institutional analysis with entrepreneurship into one category and juxtapose with conceptual clarity.

From the “price theory as prophylactic” perspective, the different type of argumentative responses raises the question as to whether or not the proposed argument is intellectually robust to the original critique. For an argument to be intellectually robust, it requires the academic economist not only grant their opponent the most charitable interpretation of their argument, but also engage in an immanent response on the terms established by the opponent, not a transcendent response that denies the problem that others believe they have identified exists. (Boettke 2012b, p. 512) But in engaging the immanent critique, the argument moves from intellectual robustness to institutional robustness. That is, by engaging one’s intellectual opponent by granting them a charitable interpretation of market failure theory, one must draw upon the robustness of institutional/entrepreneurial solutions in ameliorating the presence of market failures.

An institutionally robust argument would take into account the worst-case scenario of knowledge problems associated with the mobilization of the dispersed knowledge throughout the economic system, and the problems of opportunistic behavior associated with ensuring incentive compatibilities in any proposed institutional remedy to social ills. Private actors, as well as public entities, must continually adjust and adapt to the circumstances of knowledge problems and the problems of opportunism. To ignore these problems is only to doom proposed institutional solutions as impracticable due to either incoherence and “impossibility” or vulnerability to strategic behavior on the part of opportunistic actors.
In the subsections that follow, we will compare the Friedman/Stigler/Becker branch of Chicago price theory with the Alchian/Buchanan/Coase branch theory in terms of the two argumentative strategies listed above to address the notion of market failure. What will be shown is that conceptual clarity, exemplified by the use of the “Tight Prior Equilibrium” by Friedman, Stigler, and Becker, will prove not to be intellectually robust. Instead, Alchian, Buchanan, and Coase, by emphasizing the role of institutional arrangements and the entrepreneurial solutions, offer not only an intellectually robust argument, but offer an institutionally robust solution. To sharpen our exposition, consider the recent critique of the market economy offered by George Akerlof and Robert Shiller in *Phishing for Phools*:

However, free markets do not just deliver this cornucopia that people want. They also create an economic equilibrium that is highly suitable for economic enterprises that manipulate or distort our judgement, using business practices that are analogous to biological cancers that make their home in the normal equilibrium of the human body...Insofar as we have any weakness in knowing what we really want, and also insofar as such a weakness can be profitably generated and primed, markets will seize the opportunity to take us in on those weaknesses. They will zoom in and take advantage of us. They will phish us for phools (2015, p. x).

How would the different approaches take up their challenge? Conceptual clarity would reveal the intellectual incoherence in Akerlof and Shiller’s presentation. On the other hand, the institutional/entrepreneurial approach would begin by stating, for sake of argument, that Akerlof and Shiller have indeed identified a serious problem. However, the analysis would shift to how alternative institutional arrangements and entrepreneurial innovations in the market can ameliorate the identified failures. Institutional problems demand institutional solutions. From an institutional/entrepreneurial perspective, today’s inefficiencies are tomorrow’s profit opportunities for alert individuals who can correctly identify and fix the problem.
1. Conceptual Clarity

The hallmark of the Friedman/Stigler/Becker generation of Chicago economists was to utilize conceptual clarity to expose the loose reasoning involved in identifying so-called market failures. The idea behind using conceptual clarity is to provide a hermetically sealed, water-tight argument that transcended the existence of market failure by correctly identifying the marginal costs and marginal benefits of any given market situation. As we stated in the introduction, Friedman/Stigler/Becker utilized price theory as a sufficient solution for analyzing market equilibrium. The description of perfectly competitive equilibrium is confined to “defining conditions in which its conclusions are already implicitly contained and which may conceivably exist but of which it does not tell us how they can ever be brought about” (Hayek 1948, p. 94). This rendition of Chicago price theory is characterized as follows:

First, the theory exudes confidence that rational behavior succeeds in realizing mutually beneficial exchange opportunities. Second, it counts the individual – whether consumer, laborer, or business owner – as unimportant, despite its reliance on self-interested behavior; it uses aggregations of the behavior of individuals to construct its equilibria, and in doing so it deprives the individual of any force in the economic system. Third, it relies on Marshall’s two-bladed scissors, supply and demand, to construct these aggregations of the behavior of individuals (Demsetz 2013 [1993], Vol I, p. 96).

This conception of price theory is one in which rational behavior, price formation, and market equilibrium are not *by-products* of competitive activity within an underlying institutional framework, but are assumed *ex-ante* to be already approximated by the analysis.

The “Tight Prior Equilibrium” is a state in which “all actions are perfectly coordinated, each market participant dovetailing his decisions with those which he (with complete accuracy) anticipates others will make”, and all individual plans approximate complete coordination (Kirzner 1973, p. 218). The “Tight Prior Equilibrium” is utilized as a benchmark not only to
defend a particular theoretical meaning of competition, but also extended to applied topics such as the economics of information and industrial organization.

In “The Economics of Information” (2013 [1961], Vol. I) Stigler argues that individuals will optimally search for the information necessary to accomplish their goals in the market. Unlike Hayek, Stigler treated the concept of information like an objective commodity, for which individuals deliberately search but in an optimal manner by comparing the marginal cost of information with the marginal benefit of continuing to search for it (Boettke 2002, p. 265). In other words, Stigler joined the informational content of markets with the assumption that equilibrium models should be seen as describing actual behavior. In Stigler’s view, there was economic ignorance in the real world, but it was an optimal level of ignorance. As he puts it, “Ignorance is like subzero weather: by a sufficient expenditure its effects upon people can be kept within tolerable or even comfortable bounds, but it would be wholly uneconomic entirely to eliminate all of its effects” (2013 [1961], Vol. I, p. 659).

Stigler showed that the Law of One Price was not inherent in the structure of the “Tight Prior Equilibrium”, but arises only in the special case where the information costs about offer prices are negligible and transaction costs are identical for all possible trading pairs (e.g. on an organized exchange). The attempt to eliminate the remaining ignorance would be inefficient, entailing searches for information that were more costly than the benefits they could produce. Thus in the presence of search costs the existence of multiple prices was shown to be compatible, even required by efficiency. For Stigler, information acquisition does not entail entrepreneurial discovery through rivalrous competition in the market, but represents a costly factor of production in the efficient allocation of output. As Stigler writes in “Information in the Labor Market” (2013 [1962], Vol. III, p. 580), “the
function of information is to prevent less efficient employers from obtaining labor, and inefficient workers from obtaining better jobs. In a regime of ignorance, Enrico Fermi would have been a gardener, Von Neumann a checkout clerk at a drugstore”. By denying the existence of genuine ignorance, Stigler treats price as a sufficient statistic for efficient resource allocation, embodying all available information.

However, in making the move to transform the “Tight Prior equilibrium” as an “as if” description of reality, Stigler’s version of information economics proved not to be intellectually robust against the arguments provided by Stiglitz and Grossman (1976). To counter the Stiglerian argument of informational efficiency, Stiglitz and Grossman argued that prices would be informationally inefficient. Following an immanent criticism strategy, Stiglitz and Grossman take the “Tight Prior Equilibrium” claim seriously, but utilize it as a normative benchmark rather than as an “as if” description of reality. Maximizing agents acting on market prices alone would, they conclude, undersupply knowledge of market conditions:

But there is a fundamental problem; if, as one would expect, individuals eventually come to realize that the futures price is a perfect predictor of the future spot price, then they will no longer base their demands on their own information, but rather base it solely on the market information. Since the futures price predicts the spot price perfectly (with zero variance) there is no need for hedging and there will be no trade. But without trade, there is no market; but without a market; their beliefs will differ. This paradox can be put another way. If the market aggregated their information perfectly, individuals' demands would not be based on their own information, but then, how would it be possible for markets to aggregate information perfectly? (Grossman and Stiglitz 1976, p. 250).

Stiglitz and Grossman would regard this statement as a counterargument that rejects both Stigler as well as Hayek’s rendition of the informational superiority of markets. While this rejection may apply to Stigler, with whom Stiglitz and Grossman argue in terms of equilibrium, Hayek’s discussion of the competitive market process and price formation was

Chicago price theory, especially in terms of perfect competition, “leaves no room for the survival of incompetency. In equilibrium, owners of firms, as suppliers of goods, do not waste resources” (Demsetz 2013 [1993], Vol. I, pp. 103-104). It is not simply the case that the effects of monopoly power are negligible in the long-run due to the threat of entry and exit by other competitors (see Harberger 2013 [1954], Vol. II). For Stigler, the presumed existence of monopoly power and the ability of the firm to restrict output and raise prices is a failure of the economist to conceptually clarify the scope of competition in the industry.

In “The Extent and Bases of Monopoly” (2013 [1942], Vol II.), Stigler is led “unambiguously to the conclusion that the major factor in the decline of competition has been governmental support of monopoly” (2013 [1942], Vol. II, p.484). In the other sectors of the economy which have allegedly become monopolistic through market competition, “A reasonable approximation is all that is needed” (2013 [1943], Vol. II, p. 467). Stigler identifies two “grave defects” with the use of statistics measuring concentration ratios for particular industries. The first is the omission of imports that compete with products made by domestic industries, such as automobiles. By including imports, the extent of monopoly in the domestic automobile industry would be greatly minimized. Overlooking the presence of

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10 As Arnold Harberger states regarding the welfare loss generated by monopoly misallocation of resources, “we have labored at each stage to get a big estimate of the welfare loss, and we have come out in the end with less than a tenth of a per cent of the national income” (2013 [1954], Vol. II, p. 592).
substitutes of a particular product is another grave defect in measuring market concentration, “making it reasonably certain that monopolistic powers are in general small” (Stigler 2013 [1943], Vol. III, p. 472). Moreover, the inclusion of secondary markets, such as a used-car market, into statistical analyses of market concentration would further minimize the extent of monopoly power. For Stigler, “it is doubtful whether the monopoly question will ever receive much illumination from large scale statistical investigations” (Stigler 2013 [1943], Vol. III, p. 472).

We agree with Stigler that governmental support is *prima facie* evidence for the presence of monopoly power as well as the fact that statistical investigations between monopoly power and market concentration overestimate the extent of monopoly. However, the idea that the notion of competition as a process is analogous to the market structure of perfect competition “is based on an incorrect understanding of competition or rivalry”¹¹ (Demsetz 1968, p.55). Moreover, judging *empirically* the degree of concentration in an industry in terms of perfect competition by itself does not yield any *a priori* relationship between market concentration and competition. If we are to simply deny the existence of monopoly power by assuming it away empirically, or fitting the observed market structure in terms of perfect competition, then what prophylactic is left for the free market against the popular fallacy that there exists a *theoretical* relationship between market concentration and competition?

Harold Demsetz¹² argued in “Why Regulate Utilities?” that “The important thing that needs stressing is that *we have no theory that allows us to deduce from the observable degree of*

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¹¹ McNulty makes this same point in “Economic Theory and the Meaning of Competition,” where he states “Clearly, the failure to distinguish between the idea of competition and the idea of market structure is at the root of much of the ambiguity concerning the meaning of competition (1968, p. 641).

¹² Our late colleague Henry G. Manne, the founder of the Law & Economics Center at George Mason University, had pointed out to us in an earlier draft of our paper “Alchian, Buchanan, and Coase: A Neglected
concentration in particular market whether or not price and output are competitive” (emphasis original, 1968, pp. 59-60). Competition is not inconsistent with market concentration when we consider the distinction between “competition for the field” and “competition within the field” (Demsetz 1968, p. 57, fn. 7). If the meaning of competition is one of a dynamic process of entrepreneurial discovery, then whether or not competition within the field approximates a particular market structure, such as monopoly or perfect competition, matters much less than whether or not the rules of game obstruct the entry of competitors.

The importance of this latter point is illustrated by the supposed necessity of public policy in regulating natural monopolies. The general argument for the regulation of monopoly, such as in the case of public utilities, is twofold. First, allowing one firm to operate will allow it to expand unencumbered to exploit economies of scale and minimize average costs. Secondly, a public utility that achieves its monopoly position even through market competition will, after driving out its competitors, restrict quantity and raise price to monopoly levels, resulting in a deadweight losses and a deviation from perfect competition. Yet what Demsetz pointed out was that the alleged threat of market failure in the hands of natural monopoly was a problem regarding property rights assignments for the industry, not the absence of competition within the industry. The idea that without economies of scale there would “excessive duplication” by competing firms “is a problem of externalities and not of scale economies” (Demsetz 1968, p. 63), the latter of which are internalized when property rights include the right of sale (Demsetz 1967, p. 349). Secondly, although a single firm may ultimately survive for efficiency reasons, as long as residual claimancy over the firm can be transferred, there is no clear or necessary reason for

Branch of Chicago Price Theory” the importance of including Demsetz amongst those economists of the UCLA/UVA branch of the Chicago Price theory tradition, particularly of his pivotal role in developing the economics of property rights and the theory of the firm along with Alchian. It is in honor of him that we gratefully acknowledge his excellent comments and incorporate them into this paper.
production scale economies to decrease the number of bidders who compete to be the single supplier (Demsetz 1968, p. 57). As Hayek states, “A monopoly based on superior efficiency, on the other hand, does comparatively little harm so long as it is assured that it will disappear as soon as anyone else becomes more efficient in providing satisfaction to the consumers” (1948, p. 105).

2 Alternative Institutional Arrangements and Entrepreneurial Solutions

As the preceding paragraphs demonstrate, the conceptual clarity of a market failure often leads to an analysis of alternative institutional arrangements. For Hayek, as well as Alchian, Buchanan, and Coase, price theory rests on “what institutional arrangements are necessary in order that the unknown persons who have knowledge specially suited to a particular task are most likely to be attracted to that task” (1948, p. 95). In building his case about the informational dysfunctions of a market economy, Stiglitz may have raised some critical issues to a Stiglerian rendition of “information economics,” but he did not have the superior argument to a properly understood Hayek and the exchange perspective of economics as developed in their own way by Alchian, Buchanan, and Coase. Each developed a theory of the institutional robustness of the market economy to reconcile conflicts through the Smithian process of the “higgling and bargaining of the market, according to that sort of rough equality which, though not exact, is sufficient for carrying on the business of common life” (1981 [1776], p. 49). Situations of social conflict are turned into opportunities for mutual gain through social cooperation. This “alchemy” of the market is accomplished by the

13 “The chief concern of the great individualist writers,” Hayek (1948, 12-13) writes, “was indeed to find a set of institutions by which man could be induced, by his own choice and from the motives which determined his ordinary conduct, to contribute as much as possible to the need of all others; and their discovery was the system of private property did provide such inducements to a much greater extent than had yet been understood.” (emphasis added)
rearrangement of the institutional environment within which economic actors pursue their plans, or through the entrepreneurial recognition by some within the process who recognize that today’s inefficiency is potentially tomorrow’s profit if they are able to address the problem successfully.

From this perspective, private property rights are “entrepreneurial filters” (see Boettke and Candela, forthcoming). By structuring the costs and benefits of exchange, private property rights economize on the emergence of certain patterns of behavior by 1) filtering in productive entrepreneurship, leading to a more efficient partitioning of property rights and the amelioration of market failures as its unintended outcome, and 2) filtering out unproductive entrepreneurship that leads to a politicized redistribution of property rights and the exacerbation of market failures as its unintended consequence. Well defined private property rights and entrepreneurial action generate a convergence of private and social costs by incentivizing the concentration of rewards and costs more directly on the individual decision-maker and enabling individuals to specialize in applying their particularized knowledge of time and circumstance in the discovery of previously unnoticed profit opportunities, conducive to reducing the presence of monopoly power, asymmetric information, and externalities (Alchian 1965, p. 823).

Economics is about exchange and the institutions within which exchange takes place. The “exchange” branch of the Chicago price theory tradition constantly draws analytical attention to the study of how individuals bargain towards efficient solutions. This neglect is manifested not by a lack of recognition. Otherwise, articles by Alchian, Buchanan, and Coase would not be reproduced in these volumes. Rather, if we take “Tight Prior Equilibrium” assumption as the “Chicago View” (2013, p. 141), as Reder puts it, dominating Chicago price theory, then what is neglected in the Chicago price theory tradition is the logical extension of
institutional analysis from Knight/Viner/Simons to its continuation under Alchian/Buchanan/Coase, namely in their pioneering of property rights economics, Public Choice, and law and economics, respectively, each of which extended and contributed to a more refined elaboration of the theory of the *market process*. Critical to our narrative is to note how in their respective work Alchian, Buchanan and Coase all followed Buchanan’s rendition of the market process in “What Should Economists Do?”, one in which the market is viewed from an “exchange paradigm”, not an “allocation paradigm” (see Coyne 2010, Kohn 2007, Kohn 2004, and Wagner 2007). As Buchanan states:

> A market is not competitive by assumption or by construction. A market *becomes* competitive, and competitive rules *come to be* established as institutions emerge to place limits on individual behavior patterns. It is this *becoming* process, brought about by the continuous pressure of human behavior in exchange, that is the central part of our discipline, if we have one, not the dry-rot of postulated perfection (italics original 1964, p. 218).

The “dry rot” of the model of perfectly competitive equilibrium is that it transforms “individual choice behavior from a social-institutional context to a physical-computational one” (Buchanan 1964, p. 218). In such a model, price is a sufficient statistic to a complex allocation problem, but “surely this is nonsensical social science” (Buchanan 1964, p. 218). It is a situation, by construction, in which competition and exchange along multiple margins of adjustment have been ruled out.

Central to the *common-sense of political economy* from Phillip Wicksteed and later to economists of the Chicago School was the notion of the “equimarginal principle”, which stipulates that individuals will pursue a maximum amount of utility along both monetary and non-monetary margins of utility adjustment until they are fully equalized to each other.\(^{15,16}\)

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\(^{14}\) For a further elaboration on the “exchange paradigm” in economics, see Volume 20, Issue 2-3, September 2007 Special Issue on Value and Exchange of *The Review of Austrian Economics*.

\(^{15}\) Regarding the role of monetary prices in generating mutual adjustments according to the equimarginal principle, Alfred Marshall (emphasis added, 1997 [1920], pp. 117-118) writes: “This illustrates a general
This principle is not a condition of the market that is assumed \textit{ex ante}. Rather, it is through the competitive market process and “\textit{the systematic way in which plan revisions are made as a consequence of the disappointment of earlier plans}” (emphasis original, Kirzner 1962, p. 381) that these multiple margins of adjustment are discovered \textit{ex post}. As Kirzner further elaborates, the market process is one in which:

price signals themselves are \textit{developed} through a process of learning that is governed step by step by the interim sets of prices; it is the latter process to which we refer as a process of communication of information. This learning process at the same time nudges individual plans into closer and closer coordination. The rule is simple and obvious: coordination of information ensures coordination of action (emphasis original, Kirzner 1973, p. 219).

The equimarginal principle is realized only when all plans completely dovetail, but when individuals are disappointed in the fulfillment of their goals (i.e. pursuing maximum utility), then a tendency will arise among individuals to systematically revise their decisions. This systematic revision of plans generates the market process in which different courses of action will be pursued until each plan gives an equal amount of marginal benefit. These margins of adjustment are not only pecuniary, but also non-pecuniary in nature as well, and different institutional arrangements will determine the relative cost of adjusting on these principle, which may be expressed thus: – if a person has a thing which he can put to several uses, he will distribute it among these uses in such a way that it has the same marginal utility in all. For if it had a greater marginal utility in one use than another, he would gain by taking away some of it from the second use and applying it to the first…But when commodities have become very numerous and highly specialized, there is urgent need for the free use of money, or general purchasing power; for that alone can be applied easily in an unlimited variety of purchases. And in a money-economy, good management is shown by \textit{so adjusting the margins of suspense on each line of expenditure that the marginal utility of a shilling’s worth of goods on each line shall be the same}.

\textsuperscript{16} As Wicksteed writes in The Common Sense of Political Economy (italics original 1910, pp. 183-184) illustrating how social cooperation under the division labor is generated along multiple margins of adjustment through the price system: “That London is fed day by day, although no one sees to it, is itself a fact so stupendous as to excuse, if it does not justify, the most exultant paens that were ever sung in hour of the laissez-faire laissez-passer theory of social organisation. What a testimony to the efficiency of the economic nexus is borne by the very fact that we regard it as abnormal that any man should perish for want of any one of a thousand things, no one of which he can either make or do for himself. When we see the world, in virtue of its millions of mutual adjustments, carrying itself on from day to day, and ask, ‘Who sees to it all?’ and receive no answer, we can well understand the religious awe and enthusiasm with which an earlier generation of economists contemplated those ‘economic harmonies’, in virtue of which each individual, in serving himself, of necessity serves his neighbour,”
margins. Moreover, alternative institutional arrangements not only determine the conditions within which money prices emerged, but it also generates pricing on non-monetary margins as well. Alchian argued that:

“The more ‘side’ conditions asked the less money price available, with private property, the open-market provides each person the broadest opportunities to find exchanges on the best terms possible…The old principle of ‘equalizing differentials’ applies to all exchange – not merely to labor and wage markets. The lower is one desired component, the larger must be the equalising differential. The lower is the monetary payment asked by the seller, the more will he be able to get it in non-monetary forms of equalising differentials” (emphasis original 1967, p. 371).

These “side” conditions included non-monetary preferences for beauty, love, environmental pollution, and racial discrimination. How individuals negotiate these multiple margins of adjustment will be determined by their relative costs, which in turn are determined by the rules of the game, namely the ability to transfer private property rights.

Alchian and Kessel (2013 [1962], Vol. III) argue in “Competition, Monopoly, and the Pursuit of Monopoly” that the direction in which relative costs are affected by activities or variables that enhances a person’s utility are not a function of differing market structures, but are a function differing property rights arrangements. For example, they argue that the tendency for monopolistic enterprises to discriminate based on sex, race, and religion more than competitive enterprises, or more generally, why the former pursues greater nonpecuniary wealth relative to pecuniary wealth than the latter is because monopolistic enterprises are constrained in their ability to maximize monetary profits. Therefore, since wealth cannot be taken as monetary income in the form of private property, the relative costs of earning greater monetary profits will be higher. Owners therefore have relatively weak incentives to try to increase profits through more efficient management or operation. Firm owners will then have relatively strong incentives to use the resources of the firm for their own personal interests, but in ways that will count as company costs. These
expenditures are consistent with utility maximization since it is relative cheaper for the firm owner to indulge his non-monetary preferences, which may include larger officers, prettier secretaries, and hiring employees of a certain race or creed (2013 [1962], Vol. III, p. 508-510).

For Coase as well as Alchian, because of the existence of positive transaction costs in the real world, what are traded on the market are not physical goods and services, but rights to perform certain actions with such goods and services, including the rights to discriminate or pollute on different margins. As Coase argues in the “The Problem of Social Cost”, “If factors of production are thought of as rights, it becomes easier to understand that the right to do something which has a harmful effect (such as the creation of smoke, noise, smells, etc.) is also a factor of production” (2013 [1960], Vol. III, p. 697). What came to be dubbed as the Coase Theorem was first formulated by Stigler in his 3rd edition of *The Theory of Price* (1966, p. 113), in which he “asserts that under perfect competition private and social costs will be equal.” That is, in a world of zero transaction costs and well-defined property rights, the outcome of the bargaining between individuals will be that which maximizes the value of output, irrespective of the initial assignment of property rights.

While Stigler’s rendition of the Coase Theorem follows from a particular reading of Coase’s original argument, it hides the significance of Coase’s argument, which were threefold. The first significance was that it undermined the public policy conclusion of Arthur Pigou’s analysis of externalities, which required taxation to reduce the overproduction of a negative externality or subsidies to increase the under provision of a positive externality, so as to render social marginal costs and benefits equal to private marginal costs and benefits, respectively. Given that Pigou had based his argument in terms of perfect competition, Coase’s analysis of the Pigouvian remedy for externalities, namely
government regulation, would be either redundant or non-operational for the internalization of externalities. Under a zero-transaction cost scenario, government action would be redundant because any divergence between private and social costs would be negotiated away between conflicting parties through private bargaining, irrespective of the initial assignment of property rights (Coase 1992, p.717). However, in a world of positive transaction costs, Coase argued that government regulation in the form of taxation or subsidies would be non-operational because government officials would lack the requisite knowledge to set the appropriate tax or subsidy to align private costs and benefits with social costs and benefits. For Coase, the provision of markets is an “entrepreneurial activity,” (1988, p. 8) in which market failures and other impediments to the gains from trade “are easily handled by normal price theory, whereas the absence of transaction costs in the theory makes the effect of a reduction in them difficult to incorporate into the analysis” (emphasis added, Coase 1988, p. 9-10).

Secondly, it disregards the significance of alternative institutional arrangements, such as law, property rights, and money for mitigating social conflict in a world of positive transaction costs (Coase 1992: 717). The problems that Coase illustrated regarding the Pigouvian solution to externalities were not only made in “The Problem of Social Cost,” but were implicit in a previous article, “The Federal Communications Commission” (1959), dealing with the problem of allocating radio and television frequencies. Coase argued the following:

This "novel theory" (novel with Adam Smith) is, of course, that the allocation of resources should be determined by the forces of the market rather than as a result of government decisions. Quite apart from the mallocations which are the result of political pressures, an administrative agency which attempts to perform the function normally carried out by the pricing mechanism operates under two handicaps. First of all, it lacks the precise monetary measure of benefit and cost provided by the market. Second, it cannot, by the nature of things, be in possession of all the relevant
information possessed by the managers of every business which uses or might use radio frequencies, to say nothing of the preferences of consumers for the various goods and services in the production of which radio frequencies could be used (1959, p. 18).

In this quote, Coase’s approach to comparative institutional analysis is combining the insights developed by Mises and Hayek on economic calculation and those of Buchanan on public choice and interest group politics. Coase’s quote is a restatement of Mises-Hayek argument (1920; 1922; see also Boettke 1998) that absent the ability to exchange property rights and utilize money prices to assess the relative scarcity of resources, government officials will not be able allocate resources efficiently. Government officials are precluded from access to the information possessed by business managers, not because of lack of effort or incentive, but because the type of knowledge generated through the market process is contextual, meaning that it can only arise and be communicated through the exchange of private property rights utilizing money prices as the common denominator of exchange (Hayek 2013 [1945], Vol. I).

Without the requisite market knowledge about the relative scarcity of resources provided by money prices, government officials will not know how to allocate resources in the general interest. Rather, they will be motivated to allocate resources based on the only knowledge available to political officials, namely to exercise discretion over such resources for their own private gain, which is by concentrating benefits on well-organized and well-informed special interest groups and dispersing costs on the ill-organized and ill-informed general population. Coasean political economy is fundamentally about processes of conflict resolution under alternative institutional arrangements, and not the assumption that conflicts are automatically bargained away without cost. Exchange relations reconcile conflict, but any approach that pre-reconciles such exchange relations necessarily is going to be missing the point of Coase. Scarcity implies competition is ubiquitous, but the manner in which
competition manifests itself is institutionally contingent. A Stiglerian rendition of the Coase Theorem assumes away not only competitive processes, but also the importance of institutions in providing alternative possibilities of bargaining towards conflict resolution, which Coase was advocating in assessing comparative institutional arrangements.

Third, by rendering Coasean political economy in terms of the “Tight Prior Equilibrium,” Stigler conceals the logical continuity in Coase’s argument against Pigou from that made by Frank Knight in his article “Some Fallacies in the Interpretation of Social Coast” (2013 [1924], Vol III). In his criticism of Pigou, Knight is illustrating that the equimarginal principle is necessary, but not a sufficient condition for the equalization of social cost and private cost (2013 [1924], Vol III., pp. 595-596). Knight criticizes the argument made by Pigou that individual profit-seeking will lead to a divergence in private and social costs, such as that between the overuse of a high-quality resource and the underutilization of a low-quality resource, namely roads. As a result, the equimarginal principle will fail to operate, requiring government action to tax the use of the high-quality roads and subsidize the use of the low-quality roads. However, what is sufficient for the operation of the equimarginal principle and internalization of externalities are well-defined private property rights, rendering Pigouvian remedies to externalities unnecessary and redundant. As Knight states:

*It is in fact the social function of ownership to prevent this excessive investment in superior situations.* Professor Pigou’s logic in regard to the roads is, as logic, quite unexceptionable. Its weakness is one frequently met with in economic theorizing, namely that the assumptions diverge in essential respects form the facts of real economic situations. *The most essential feature of competitive conditions is reversed, the feature namely, of the private ownership of the factors practically significant for production.* If the roads are assumed to be subject to private appropriation and exploitation, precisely the ideal situation which would be established by the imaginary tax will be brought through the operation of ordinary economic motives (emphasis added, Knight 2013 [1924], Vol. III, pp. 597-598)
In the last part of the quote, Knight is illustrating how the invisible hand of the market process aligns individual self-interest with the public interest via the incentive structure of private property rights. This rendition of the market process is what was passed onto the Alchian/Buchanan/Coase generation of Chicago price theory and what was lost in translation once the “Tight Prior Equilibrium” came to define the methodological position of Chicago price theory. As Israel Kirzner states, “despite the careful attention which so original a ‘Chicagoan’ as Professor Knight has devoted to the theory of uncertainty and profit, the entrepreneur hardly occupies the center of attention in ‘Chicago’ economics” (1967, p.106), specifically the Chicago economics of Friedman, Stigler, and Becker. To this point, Knight argued the following:

The problem of conditions of equilibrium among given forces – “statics” in the proper sense – is often important in economics, but is after all subsidiary, as indeed it is in physical mechanics. The larger question is that of whether the forces acting under given conditions tend to produce an equilibrium, and if so how, and if not what is their tendency; that is, it is a problem in dynamics. This type of problem has been too largely passed over hitherto, leaving a fatal gap in the science (1997 [1935], p. 133).

This gap that Knight talks about is one which Israel Kirzner attempted to fill in price theory as it always been understood by economists going back to Adam Smith. Kirzner’s rendition of the market process in *Market Theory and the Price System* (1963) is important here because it can be understood as bridging a gap between the neoclassical view of the market, which he learned from Stigler’s *Theory of Price* as a graduate student at New York University, and what he understood from Mises as well as Knight and Wicksteed about the dynamic adjustments of individuals according to patterns imposed by the activities of other individuals. Consider how Kirzner develops this notion of the market process as communicating knowledge to facilitate the mutual dovetailing of individual plans towards equilibrium:

If a market is not in equilibrium, we have seen, this must be the result of ignorance by market participants of relevant market information. The
market process, as always, performs its functions by impressing upon those making decisions those essential items of knowledge that are sufficient to guide them to make decisions as if they possessed the complete knowledge of the underlying facts (2011 [1963], p. 240).

The reason we bring Kirzner into our discussion on Chicago price theory is to emphasize our alternative account about where to find a logical continuation running within the broader “Chicago” school. Returning to the thesis stated in our introduction, we argued that while indeed a logical continuation can be drawn from Frank Knight to Gary Becker, as emphasized by Hammond, Medema, and Singleton, Kirzner’s exposition of price theory in *Market Theory and the Price System* reveals that Stigler and later Becker took a logical turn that diverged from Frank Knight. What Kirzner sought to communicate in his textbook that differed from Stigler’s *The Theory of Price*, not to mention Becker’s *Economic Theory*, were the basic insights about price theory that he learned not only from Mises and Knight about the role of the entrepreneur in a dynamic market process, but also how both Austrians and “Chicagoans” shared a *common* knowledge embodied in price theory as it was understood not only by Menger and Bohm-Bawerk, but also Marshall and Wicksteed (2011 [1963], p.xvii).

This common knowledge included not only the equilibrium properties of markets as discussed in Stigler and Kirzner, but more importantly it also recognized that the bulk of economic explanation focused on the coordinative processes of continual adjustment that is guided by relative price movements and the lure of profits as well as the discipline of losses.

The role in which relative prices guide production “amid the bewildering throng of economic possibilities” (Mises 1951, p. 117) is twofold. First, prices serve the *ex ante* role of guiding production in their capacity as relative prices. Secondly, prices serve an *ex post* role of assessing previous economic decisions in their capacity as inputs into profit and loss accounting. Overall, the constellation of relative prices serve a discovery role in their capacity of steering the adjustments and adaptations that follow from the discrepancy between the *ex*
ante expectations and the ex post realizations in market experimentation. This process of adjustment never takes place in an institutional vacuum, but “is conditioned by certain social institutions. It can operate only in an institutional setting of the division of labor and private ownership of the means of production in which goods and services of all orders are bought and sold against a generally used medium of exchange, i.e., money” (Mises 1966 [1949], p. 229).

Conceptual clarity, however, presumes that prices reveal all available information, such that we can redraw cost curves so we have an optimal amount of deception and ignorance and thus the market system is not threatened from any divergences in private and social cost. Our perspective is that the myriad of institutional innovations made by alert entrepreneurs ameliorate the deceptions and curtail the phishing. By not acknowledging the possibility of any market failure, conceptual clarity throws the baby out with the bathwater. That is, once the problem of market failure has been assumed away, it also rules out any possibility of an institutional/entrepreneurial solution to market failures. We argue that markets 'fail' all the time but the market system works to constantly adjust and erase such failures.

In concluding this section, we should emphasize that we are not unsympathetic to the notion of conceptual clarity in addressing market failure. However, many of the mistaken attacks on the free-market, “Chicago Fundamentalism” (Freedman 2008), and that Chicago economics is a “well funded”, though not a “well founded” line of research (Stiglitz 1994, p. 120) stem from the same analytical starting point with which Chicago price theorists have defended the free market: preoccupation with the optimality conditions of the “Tight Prior Equilibrium”. Both adherents to and critics of this rendition of Chicago price theory have overlooked the institutional arrangements within which entrepreneurial solutions are
discovered for the amelioration of market failure. The more effective argumentative strategy is not to assume away the existence of market failure \textit{ex-ante} by pre-reconciling the plans of individuals with conditions of equilibrium. Rather, it is to admit the existence of problems such as asymmetric information, externalities, and monopoly power but identify institutional solutions, such as the clarification, enforcement, and (re)assignment of property rights. Once property rights are well-defined, if no mutual consistency of individual plans exists, it will be in the interest of the parties to continue to seek a better situation than they are currently realizing because property rights provide individuals the incentive to do so. The exchange of property rights generates relative prices that guide our decision making, profits lure us in our decisions, and losses discipline us in our decisions. This is how the price system impresses upon us the essential items of knowledge required for plan coordination and alleviation of market failure and the amelioration of social ills.

\textbf{IV. Chicago Economics, Welfare Economics, and Constitutional Political Economy}

Whether or not the “Tight Prior Equilibrium” conceptually clarifies the “efficiency” of market phenomena also has implications for public economics, welfare economics, and the role of the economists as a reformer. To understand this we can contrast the arguments made by Stigler in “The New Welfare Economics” (2013 [1943], Vol. III) and Buchanan in “Positive Economics, Welfare Economics, and Political Economy” (1959). Whereas Buchanan’s approach to welfare economics focuses on modifying the rules of the game, Stigler proceeds to argue for conceptual clarity within the given structure of existing rules.

Stigler argues that at “the level of economic policy, then, it is totally misleading to talk of ends as individual and random; they are fundamentally collective and organized. If this conclusion be accepted, and accept it we must, the economist may properly exceed the
narrow confines of economic analysis. He may cultivate a second discipline, the
determination of the ends of his society particularly relevant to economic policy” (2013
[1943], Vol. III, p. 628). By inferring the intentions of voters from the outcomes of public
policy, following the logic of the “Tight Prior Equilibrium” consistently and persistently,
Stigler concludes that the role of the economist is to infer that voters have chosen such a
policy because they wanted it, and to say otherwise would mean the economists are
substituting his or her value judgements for those of voters, abandoning their role as a

Moreover, the presumption that there are benefits to the overall economy to a
change in public policy, such as the abolition of tariffs against imports or sugar subsidies,
according to Stigler, would imply that the economist has not properly identified all of the
costs that would entail changing such a policy. If it would have been less costly for
policymakers to compensate interest groups the capitalized value of the rents they derive
from an existing policy, then it would have been efficient for policymakers to have done so
already. Moreover, for Stigler, the idea that free trade would be a more beneficial policy to
society neglects the fact that those individuals who benefit from restrictions on trade at any
moment have supported laws which are designed to prevent trade. Stigler takes the
prevailing social consensus as the efficient equilibrium from which to assign a rational choice
explanation as to why societies choose particular policies, inferring intentions from
outcomes to understand the efficiency propositions of a particularly policy.

Like Stigler, Buchanan takes the prevailing consensus as given, but in contrast to
Stigler, he uses it as a starting-point, as opposed to an end-point, in the economist's role of
recommending reform policies, namely by discovering alternative institutional rules for
generating alternative policies. However, unlike Stigler, Buchanan combines the reformist
zeal of the economist in a manner not inconsistent with his role of a positive economist. Rather than approaching political economy from a “Tight Prior Equilibrium” approach, which takes tastes and preferences as stable and given (see Becker 2013 [1976], Vol. I, p. 294), Buchanan begins from the idea that “Political economy has a non-normative role in discovering ‘what is the structure of individual values’” (emphasis added, Buchanan 1959, p. 137). In essence, positive political economy is comparative institutional analysis.

According to Buchanan, there are two levels of political exchange that must be studied. The formation of the rules of the game is the constitutional level of analysis; and the strategic play of the game within the established rules of the game which is post-constitutional level of the analysis of politics. In Buchanan’s rendering of constitutional political economy, the two levels of analysis must be engaged since relevant questions about law and order cannot be answered unless the social philosophical analysis of “good” rules is informed by the predictive analysis of how different political institutions will operate.

In contrast to the understanding of markets in terms of ubiquitous efficiency, Buchanan argued that such an “overly restricted conception of market behavior” neglects the propensity of individuals to discover voluntarily more inclusive institutional arrangements within which efficiency emerges. Efficiency considerations are not eliminated from Buchanan’s conception, since “the motivation for individuals to engage in trade, the source of the propensity, is surely that of efficiency” (Buchanan 1964, p. 219). Rather, efficiency, or moving from a less-preferred to a more preferred position, is a constant propensity of human behavior within the rules of game, but the manner in which efficiency manifests itself is dependent on the truck, barter, and exchange of the institutions themselves. The proposition that exchange must be extended to the constitutional level rules is not inconsistent with the tendency towards efficiency within a given institutional context.
In “Positive Economics, Welfare Economics, and Political Economy” (1959), Buchanan presents an argument that combines the economist’s reformist zeal with positive analysis while avoiding the pitfalls of social engineering. The positive role that the economist can play in policy formation is one of “diagnosing social situations and presenting to the choosing individuals a set of possible changes” (Buchanan 1959, p. 127). The scope for those changes must be limited to “those social changes that may legitimately be classified as ‘changes in law,’ that is changes in the structural rules under which individuals make choices” (Buchanan 1959, p. 131).

The political economist contributes to science and reform by analyzing alternative institutional arrangements, and offering changes in the rules of the game as hypotheses to be tested in the arena of collective action. In devising such changes in the rules of the game Buchanan stresses two critical building blocks. The first building block concerns the position of the status quo. The positive political economy of reform must begin with the “here and now,” and never some imaginary start state where opposition to change is non-existent. In doing this, Buchanan is not attributing any normative weight to the status quo. All he is doing is insisting that “it is what it is” and that must be the starting point of any assessment of relevant alternatives. The second building block follows from the recognition that we begin with the “here and now,” and that is the compensation principle. Any shift in the rules of the game will change the nature of the payoffs in the game. Those who currently gain from the status quo will lose, while others currently not in a position of privilege with respect to existing institutions will gain from the change. The winners must compensate the losers in the proposed change, not because the losers have any normative claim to their existing benefits but because unless compensated the beneficiaries of the status quo will fight
to defeat any proposed changes in the structure of rules. Buchanan’s conception of positive
political economy has both positive and normative implications, which “may be summed up
in the familiar statement: There exist mutual gains from trade” (1959, p. 137). Fundamentally, for
Buchanan, “Political economy is concerned exclusively with the modifications of the rules of
the game, and this branch of the discipline has no place in the discussion of strategic action
taken by either side in the game itself” (1959, p. 133, fn. 11).

This harks back to the older Chicago Price Theory of Knight/Viner/Simons with its
focus on the relative prices in guiding the adjustments in the market system. It is not
behavioral assumptions of actors in the market or in government that drive the analysis, but
institutional variation within which economic activity is played out. In other words, same
players under different rules produce different games (see Buchanan 2008). The explanatory
variable is institutional arrangements, and not the behavioral assumptions of actors in the model.
So the problem situation that actors find themselves engaged in need not be simplified via
heroic cognitive assumptions in order for the actors to coordinate their plans, but instead
rather “thin” behavioral assumptions (i.e. individuals strive to better their situation; or they
prefer more rather than less) can be employed. Individuals can still find themselves operating
in complex environments and yet find institutional remedies that ameliorate the tensions and
enable individuals to coordinate their plans with one another. For Buchanan, the task of
economists is broader than the study of the efficiency propositions of the market; it also
includes “the study of all such cooperative trading arrangements which become merely
extensions of markets as more restrictively defined” (1964, p. 220). The example that
Buchanan provides in “What Should Economists Do?” is the draining of a local swamp.

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17 See Michael Trebilcock’s recent Dealing with Losers: The Political Economy of Policy Transitions (2015) for a current
attempt to address Tullock’s “transitional gains trap” (1975) and Buchanan’s politics as exchange. Also see
Economics understood in terms of its equilibrium properties would lead us to conclude that the voluntary provision of drainage to reduce the breeding of mosquitoes would be undersupplied by the market, generating a “failure”. Yet if we extend exchange behavior to include the rules of the game as well as social interactions emerging within such rules, individuals that would have otherwise undersupplied the drainage of a mosquito-infested swamp can modify the rules of game to generate patterns of interaction that will reduce the transaction costs of voluntarily providing of drainage, namely by “allowing for more flexible property arrangements and for introducing excluding devices” (1965, p. 14).

All of these aspects of Virginia Political Economy as discussed by Buchanan are outlined in a University of Virginia Newsletter describing the Thomas Jefferson Center for Studies in Political Economy from 1958 (p. 5):

Political economists stress the technical economic principles that one must understand in order to assess alternative arrangements for promoting peaceful cooperation and productive specialization among free men. Yet political economists go further and frankly try to bring out into the open the philosophical issues that necessarily underlie all discussions of the appropriate functions of government and all proposed economic policy measures.

Contrast this research and educational mission with the later-day Chicago Price Theory approach. As we have argued can be seen in the argumentative evolution contained in these volumes, during the Friedman/Stigler/Becker years, Chicago price theory came to be defined as a set of presumptions about observed phenomena – namely that decision makers will allocate resources under their control in such a manner that no alternative arrangement would be better. Individuals always do the best they can given their situation. And then we extrapolate from that to the system level that any arrangement so achieved, if it survives, must – by definition – be the best arrangement in the feasibility set.
There is no doubt that this understanding of the Chicago price theory tradition proved to be extremely productive, as evidenced especially in the work of George Stigler and Gary Becker. Look at whatever practice one finds in the world of human affairs – be it in the ordinary business of life, or the most exotic practice from disparate cultures ancient as well as modern – and apply the “Tight Prior Equilibrium” assumption in a consistent and persistent manner and you generate digestible explanations that are easily translated into testable hypotheses. Science, under a particular definition, moves forward. The economic approach to human behavior --- maximizing behavior, stable preferences, and market equilibrium (Becker 2013 [1976], Vol. I, p. 294) --- comes across as the natural development of the logic of economic reasoning from first principles. We live in a world of scarcity, and as such we must choose, in making those choices we must weight alternatives, and in weighing those alternatives we do the best we can with the information we have. How can anyone object to such a basic formulation of human purposiveness in striving to better their condition in the face of given constraints?

However, for our present purpose the more relevant question is whether the application of the Tight Prior Equilibrium, besides being a logical exercise, is the more effective prophylactic against popular fallacies concerning the weaknesses of will and a palsied invisible hand. Analogous to the earlier discussion of Knight’s critique of Pigou, we also find the logic of the “Tight Prior Equilibrium” to be completely valid. Yet the weakness with this argumentative strategy against market failure, harking back to Knight, is that it lacks logical soundness. For the formal conditions of equilibrium to prevail, the “Tight Prior Equilibrium” must assume that market situations are already in equilibrium and that prevailing prices are sufficient for the solution to allocative problems. In his review of Abba Lerner’s *The Economics of Control* (1944), Friedman makes the same argument against Lerner.
that Knight made against Pigou.\(^\text{18}\) By focusing on the formal conditions for an optimum, Lerner neglected the institutions and context within which economic decision-making was made. It expressed economics as if economic decision-making occurred in a vacuum. Thus, it could not appraise the administrative problems of the policies Lerner proposed or their social and political ramifications. As Friedman states:

Lerner’s acceptance of the price mechanism does not, however, mean acceptance of the particular institutional arrangements with which the price system is historically associated, namely, a free-enterprise exchange economy characterized by private ownership of the means of production (1947, p. 407).

For Friedman, “the formal analysis is almost entirely irrelevant to the institutional problem” (1947, p. 405), which for the academic economist is understanding what are the appropriate institutional conditions to generate the optimal allocation of resources, such that marginal social benefit equals marginal social cost. Friedman’s main criticism is that “Lerner writes as if it were possible to base conclusions about appropriate institutional arrangements almost exclusively on analysis of the formal conditions for an optimum” (1947, p. 415).

Lerner’s preoccupation with the optimality conditions of competitive equilibrium leads him to reject that prices will be sufficient for the optimal allocation in those cases when private and social costs diverge, such as when monopoly power is present. Therefore, Lerner

\(^{18}\) It could be argued, however, that Friedman is guilty of similar methodological problems as Lerner in his “The Methodology of Positive Economics” (2013 [1953], Vol. I). The central argument that Friedman makes in this paper is to refute two claims about methodology in economics: 1) A hypothesis or theory in economics is acceptable only if its assumptions are realistic; 2) The realism of the assumptions of an economic hypothesis or theory is distinct from the truth of its predictions (2013 [1953], Vol. I, p. 262). In other words, a theory can be tested by the realism of its assumptions independently of the accuracy of its predictions. He opposes these claims not only because they are “fundamentally wrong and productive of much mischief,” but also because they impede the attainment of consensus on tentative hypotheses in positive economics. For Friedman, “the ultimate goal of a positive science is the development of a theory or a hypothesis that yields valid and meaningful predictions about phenomena not yet observed.” In other words, Friedman has an instrumental view of theory in economics, such that “a theory is to be judged by its predictive power for the class of phenomena which it is intended to explain.” The validity of a hypothesis is determined in comparison of its predictions with experience. Therefore, a theory is simpler the less the initial knowledge needed to make the prediction and more fruitful the more precise its predictions. The difference in methodology that Friedman employs here and in his 1947 review of Lerner’s The Economics of Control reveals that he is a transitional figure between the Knight/Viner/Simons generation and Stigler/Becker generation of the Chicago School.
concludes that the market is inefficient and requires government intervention as the *deus ex machina* to generate a convergence of marginal and social costs. Central planners would eliminate such market failures by following a rule of pricing according to marginal cost, such that “Lerner would instruct the managers to pretend that they are operating under the conditions of perfect competition and to play at private enterprise” (1947, p. 408).

However, Lerner misses the point that prices are a necessary, though not a sufficient condition for generating a tendency towards equilibrium. Such optimality conditions do not emerge in an institutional vacuum. Without the institutional prerequisite of private property, central planners are precluded from access to the knowledge that market prices communicate and the coordinative effect such prices have on individuals in generating the conditions of equilibrium as an unintended outcome of their buying and selling through the market process. Implicit to Lerner’s argument, and to general idea that prices are sufficient solutions to allocative problems, is the implication that the valuation of the factors of production necessarily follows from the valuation of consumer goods. However, “implication is a logical relationship which can be meaningfully asserted only of propositions simultaneously present to one and the same mind” (Hayek 2013 [1945], Vol. I, p. 250).

Our point here is not to assert that all assumptions must be completely realistic. Economic theory would be impossible under such an intellectual restriction. But the policy relevance of assumptions independent of the predictive power of a theory also matters. In other words, if positive economics is to advance and make fruitful contributions to public policy, they must have a bearing on the appropriate institutional arrangements in which individuals can strive to ameliorate social conflict and achieve greater social cooperation under the division of labor.
Friedman’s arguments against Lerner are particularly relevant in another respect for discerning the proper prophylactic against popular fallacies about the market economy, one that was paramount to Knight/Viner/Simons generation of Chicago price theory and alluded to by Buchanan in describing the mission of the Thomas Jefferson Center. Institutional arrangements must also be judged by their “noneconomic implications, of which the political implications – the implications for individual liberty – are probably of the most interest and the ethical implications the most fundamental” (1947, p. 416).

The irony is that the economist who wishes to defend the efficiency of the market by utilizing the “Tight Prior Equilibrium”, namely by hermetically sealing any market situation from the presence of market failure, is also trapped under the same logical straitjacket from making any public policy recommendations or proposals of institutional reform. The logical implications of the “Tight Prior Equilibrium” for welfare economics and public policy is best stated by Stigler in his “Law or Economics?”:

[E]very durable social institution or practice is efficient, or it would not persist over time. New and experimental institutions or practices will rise to challenge the existing systems. Often the new challenges will prove to be inefficient or even counterproductive, but occasionally they will succeed in replacing the older system. Tested institutions and practices found wanting will not survive in a world of rational people. To believe the opposite is to assume that the goals are not desirable (1992, p. 459).

By this logic, Stigler argues, the presence of interest groups lobbying for import tariffs of sugar are efficient because they have stood the test of time. Although consumers incur deadweight losses from such tariffs, “lacking a cheaper way of achieving this domestic subsidy, our sugar program is efficient,” meaning that any attempt at changing the rules of the game (i.e. removing the tariffs) by the economic reformer would only generate greater rent-seeking by less efficient lobby groups and further deadweight losses than had not the economic reform attempted any change.
Becker’s argument in “A Theory of Competition of Pressure Groups for Political Influence” (1983) best exemplifies this idea that efficient institutions would survive the test of the marketplace. Becker combines the concept of political rent-seeking with the notion that governments correct for market failure. In equilibrium, competition among pressure groups for the political distribution of resources, both by those groups being subsidized and by those groups being taxed, will be such that deadweight losses will be eliminated. The implication of Becker’s argument are that those interest groups that are being subsidized are efficient presumably because they have managed to minimize the costs of lobbying for increasing subsidies and monitoring potential free riding within the interest group. As Becker states “Politically successful programs are ‘cheap’ relative to the millions of programs that are too costly to muster enough political support, where ‘cheap’ and ‘expensive’ refer to marginal deadweight costs, not to the size of taxes and subsidies” (1983, p. 381).

Competition among interest groups will also generate an efficient method of taxation because replacement of a less efficient by a more efficient tax reduces the optimal pressure by taxpayers because the marginal deadweight loss decreases. This reduction in pressure raises the subsidy to those subsidized interest groups as well as raising the net income of taxpayers. Therefore, both subsidized interest groups as well as taxpayers will exert political pressure in favor of the most efficient method of taxation because both parties are made better off. It is the rendition of the political process in terms of the “Tight Prior Equilibrium” that leads Becker to state the following: “Consequently, public enterprise may only appear to be less efficient than private enterprises because intentional subsidies are not included in the definition of ‘output.’” (italics original, Becker 1983, p. 387).

The Chicago Price theory tradition shared by Knight, Simons, and Viner to Friedman, Stigler and Becker has provided a bulwark for understanding the role of price
system in coordinating the activities of millions of individuals and undermining the case for extensive government intervention into the market economy. However, as Frédéric Bastiat argued, “The worst thing that can happen to a good cause is, not to be skillfully attacked, but to be ineptly defended” (1996 [1845], p. 107). Chicago price theory has indeed explained the role of the market economy in a free society, but once the baton was passed to the post-WWII generation of economists at the University of Chicago, the multifaceted way that individuals continually adjust and adapt to realize the gains from trade was transformed into an intellectual framework that put aside the reasons for adjustment and adaptation and focused instead on conceptual clarity that denied efficiencies and market failures.

Outside of the University of Chicago, a “neglected” branch of Chicago price theory emerged among economists Armen Alchian, James Buchanan, and Ronald Coase, who provided an understanding of the market economy not by assuming the conditions the equilibrium, but by focusing their analysis on the dynamic adjustments required in the presence of market failures. By drawing attention to institutional solutions and the role of entrepreneurial action in discovering such solutions, they illustrated how market processes ameliorate social conflict and open up the possibility of realizing the gains from productive specialization and peaceful cooperation through voluntary exchange. It is this argument we contend that fulfills Simons’ plea for academic economics, and proves to be a better prophylactic against popular fallacies.

IV. Conclusion

What Chicago Price Theory does for the reader is provide a detailed documentary record of the construction of this tradition from its origins with Knight to its modern presentation in Becker. All the classic papers are covered in the three volumes, but for the discerning reader
the critical issue is to see not only what unites the generations in the evolution, but also what
sets each generation apart. There is evidence in these volumes of “a tale of two Knights” –
the Knight that leads logically to Stigler and thus Becker, but also a Knight that leads to the
institutional economics of Coase and Buchanan. In his book *The Demand and Supply of Public
Goods*, Buchanan argued that “The economist should not be content with postulating models
and then working within such models. His task includes the derivation of the institutional
order itself from the set of elementary behavioral hypotheses with which he commences. In
this manner, genuine institutional economics becomes a significant and an important part of
fundamental economic theory” (1999 [1968], p. 5). Friedman, ironically, stands somewhere
in-between both – with his scientific work leaning more in the Stigler-Becker direction, but
his more popular writings leaning more in the Buchanan-Coase direction (see Boettke and
Candela 2016).

This interpretive puzzle about Chicago Price Theory matters because it either raises
or suppresses as a scientific and scholarly project the sort of concerns that Knight was trying
to get at with his discussions in *The Ethics of Competition* (1935), *Freedom and Reform* (1947), and
ultimately in *Intelligence and Democratic Action* (1960). Either the knowledge of price theory is
an essential component to a theory of reform (as Buchanan and Coase thought) or it is
limited to its role in explanation and prediction (as Stigler and Becker thought). The editors
of these volumes do not push the conversation in this direction, but the reader will be lead in
this direction as they work through the three volumes of classic articles if they allow
themselves to see the subtle differences in argument between Knight/Viner/Simons and
Friedman/Stigler/Becker.

Those subtle differences result, ultimately, in shifting Chicago Price Theory from a
theory about the power of the price system (within the institutional regime of private
property and freedom of contract) in guiding individuals in their consumption and production decisions so that they are accommodating the constantly changing conditions of tastes and technology to a statement of the equimarginal principle when all the efficient adjustments have in fact been accomplished. The Chicago “Tight Prior Equilibrium” imposes a logical discipline on the world of human affairs, but it does not invite an inquiry into the diversity of institutions that arise to ameliorate our human imperfections and potentially turn situations of conflict into opportunities for social cooperation. As a result, the “fresh water” economics of Chicago still leaves us thirsty, and the “saltwater” economics of MIT/Harvard cannot serve to quench our thirst, so we must look to those alternative streams of thought for satisfaction in our quest to understand the dynamics of the market process. These three volumes of *Chicago Price Theory* provide a partial map to find those alternative streams, but it requires the discerning reader to look not for continuity, but discontinuity and discord. What an exciting intellectual resource our editors have provided us with.
References


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