Knut Wicksell and Contemporary Political Economy

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Abstract

After briefly sketching the life and times of Knut Wicksell, three primary lines of contribution are examined to illustrate Wicksell's contemporary relevance. The first is Wicksell's treatment of capital and production in relation to the theory of marginal productivity. The second is Wicksell's contribution to monetary theory, economic stability, and coordinationist macroeconomics. The third is Wicksell's contribution to just taxation and the theory of public finance. While portions of each of these three examinations will be purely descriptive, considerable attention will also be given in each part to some centemporary themes that can plausiblly be claimed to reflect a Wicksellian orientation.

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Suppose someone were to compile a list of all economists whose published work spanned the 19th and 20th centuries, and were then to ask contemporary economists to rank those earlier economists. I am positive that Knut Wicksell would appear in the top ten in that subsequent ranking. He would most likely make the top five, and would surely receive a good number of votes for number one. This strong reputation was achieved, moreover, by someone who turned to economics only around the age of 40, and who then pursued economics mostly on a part-time basis because journalism and social agitation were continually making claims on his time. I shall begin this presentation by sketching briefly Wicksell's life and work, after which I shall describe and

examine the three areas of Wicksell's work that account for most of his scholarly reputation. These are his contributions to marginal productivity theory, his integration of capital and money to provide a framework for exploring macro fluctuations, and his theorizing about public finance and collective action.

I should perhaps note that it is not my intent here to engage in any effort at historical reconstruction. Rather, my intent is to undertake a form of contemporaneous reflection upon some of the places where Wicksell's work speaks to contemporary issues in economic theory, thereby placing Wicksell within the "extended present," to use a term from Kenneth Boulding (1971). Let me give a brief illustration of the distinction I have in mind. David Davidson was a contemporary of Wicksell's who engaged in a substantial controversy with Wicksell over the conditions for monetary stability. Where Wicksell argued that stable prices would promote stability, Davidson argued that Wicksell's own framework required falling prices. An effort at historical construction would seek to bring the reader into the context of those debates, giving the reader a sense of watching the action unfold. My focus on contemporaneous reflection would seek only to explore whether Wicksell's formulations have any relevance for contemporary discussion.[1]

Knut Wicksell's life and work

The facts surrounding Knut Wicksell's life, while probably more interesting than those of most economists, can be relayed briefly. He entered this world in 1851, on the 20th of December. He departed nearly half-way through his 75th

year, on the 3rd of May 1926. He was the youngest of five children, three of whom were girls. His mother died when he was six. When Knut was ten, his father brought a stepmother into the house. Five years later, Knut's father died.

Wicksell was always an outstanding student, and in 1869 entered the University of Uppsala. He graduated in 1872, and then continued with advanced studies in mathematics and physics. In his early ears, Wicksell was religiously devout and participated regularly in church services. In his 23rd year, in 1874, he experienced a crisis of faith, brought on by his belief that he could not reconcile the claims of religion and the requirements of science. Wicksell chose for science, and ejected the Church from the rest of his life. He did, however, receive a Christian burial, though this was his wife's doing.

Wicksell might have seemed poised on the verge of a scholarly career in 1874, but this didn't happen. A quarter of a century would pass before Wicksell would take a place within the academy. This quarter of a century was a period of energetic activity, mostly of a journalistic nature. While he continued his mathematical studies, he became increasingly interested in the neo-Malthusian orientation toward population questions. Wicksell became increasingly active in lecturing and writing on population, immigration, birth control, alcoholism, and a variety of related issues that so firmly established his standing as a social agitator that he became a subject for cartoonists. Wicksell's fervently radical nature did not wane as he aged. In his 57th year, for instance, he was convicted and imprisoned for two months for blasphemy.[2]

In late 1885 Wicksell went to London, sponsored by a grant from the Lorén Foundation. There, he studied such economists as Walras, Jevons, and Gossen, and developed an appreciation for the application of marginalist theory to economics. He continued his journalism, but thereafter his attention was drawn increasingly to economics, which he continued to pursue by visiting a number of European universities.

In 1893, at age 41, Wicksell saw the publication of his first book-length contribution to economic theory. This was *Value, Capital, and Rent*, which quickly became a well-regarded statement of marginal utility, capital, and the structure of production. Despite the book's outstanding achievement, Wicksell recognized that the university authorities were not going to award him the doctorate for it. So he changed fields of study to fiscal law, and wrote a study on tax incidence that brought him the doctorate in 1895. [3]

While turning to the study of law and moving through the curriculum at twice the normal pace, Wicksell continued to pursue his economic investigations. He published a second classic-to-be, *Interest and Prices*, in 1898. This was a substantial statement on monetary theory, where Wicksell presented his alternative to the quantity theory of money and developed the distinction between the natural and the loan or market rate of interest that came quickly to occupy a prominent place in monetary theory. Despite possessing a publication record that would ensure him a secure place in anyone's Economics Hall of Fame, Wicksell still had no academic position, though he was now getting close. He finally received a docent position in Uppsala in 1899, and then took a temporary

position in Lund in 1900. That position became permanent in 1901, the same year that the first volume of *his Lectures on Political Economy* was published. He stayed there until his retirement in 1916, when he returned to Stockholm.

Wicksell died ten years later, and his wife, Anna Bugge, whom he married in Paris in 1889, died two years later. They had two sons, Sven, born in 1890 and Finn, born in 1893. Anna and Knut fell upon one of the most painful of life's possible experiences, when they had to bury one of their children. This they did in 1913, when Finn, a 19 year old medical student at the time, did not survive his fall from a window. Sven, by contrast, lived to bury both of his parents, surviving his mother by 11 years.

Primary analytical contributions

While Wicksell's contributions to economic analysis are dispersed across more than 100 items, the central features of the contributions on which his reputation rests can be found in five books. Two of these have already been noted, *Value, Capital, and Rent* (1893) and *Interest and Prices* (1898). Refinements and extensions of the themes portrayed in those volumes were presented in his two volumes of *Lectures on Political Economy* (1901, 1906), with the first volume exploring value and distribution and the second volume exploring money. The fifth volume was Wicksell's contribution to public finance, *Finanztheoretische Untersuchungen* (1896). This book contained three essays, the second of which made Wicksell a household word among public finance scholars after it was translated and published as "A New Principle of Just

Taxation" in *the Classics in the Theory of Public Finance*, edited by Richard Musgrave and Alan Peacock.

In the presentation and discussion of Wicksell's work that follows, I organize the material into three parts. First I consider Wicksell's contribution to theories of capital, production, and marginal productivity. Wicksell followed Eugon Böhm-Bawerk (1884-89) in adopting an orientation that conceptualized production as a sequence of stages, where consumer goods at the bottom are supported by a structure of capital goods. Some of those capital goods are close in time to where they will yield consumer goods, while others are far away. What governs this structure of production, what might loosely be called the length of the production structure, is the rate of time preference held by people within the society in conjunction with the potential yield from new forms of capital goods. This Wicksell described in *Value, Capital, and Rent*, along with further examination in *Lectures on Political Economy, I*.

Second, I examine Wicksell's contribution to money, interest, and economic stability. In Wicksell's formulation, as well as in Böhm-Bawerk's, interest was not just one more price to take its place with all other market prices. Rather, interest infused itself throughout the entire network of prices. Indeed, the structure of production was what it was and not something else because the rate of interest was what it was and not something else. For instance, a decline in interest that followed a fall in time preference would alter the entire structure of prices. This, in turn, would make the production of relatively higher-order capital goods more profitable relative to lower-order capital goods, which would bring

about a change in the structure of production. Monetary changes could thus affect production relationships throughout a society, through changes in the market rate of interest. Wicksell's contributions on these matters are presented in *Interest and Prices* and *Lectures on Political Economy, II*.

Third, I examine Wicksell's contribution to public finance. His major book on public finance was published in 1896*, Finanztheoretische Untersuchungen*. The first of the books' three essays undertook an analysis of tax incidence while making use of Böhm-Bawerk's framework of a structure of production. This essay on tax incidence has been vastly overshadowed by his second essay on a new principle of just taxation. This essay asked what kind of institutional framework for parliamentary governance might make it possible for the state to act as a productive participant within the economic life of a society. Hardly anyone would dispute the statement that a government should expand its services so long as the value that is created exceeds the cost that people must bear through the value they must sacrifice to pay for those services. But how might this situation actually be achieved? The difficulty of the challenge has led many scholars to avoid it, either by refusing to examine government or by asserting that the appropriate budgetary magnitudes are tautologically those that governments establish. In contrast to those scholars, Wicksell approached the topic directly. He advanced an institutional framework for accomplishing this end, and in so doing showed how the Pareto principle could be made applicable to the state, which is something that Pareto did not think possible.[4]

Capital, production, and stationary states

A huge turn-of-the-century controversy developed among economists over the laws of return.[5] The marginal productivity theory of factor pricing held that the prices paid to inputs were equal to the values of their marginal products. All units of a like input receive the price received by the marginal input. This formulation brought the problem of adding up or product exhaustion to the foreground of analytical attention. Let total output be produced by the two inputs, labor and capital. Each unit of labor is priced at its marginal product, and so is each unit of capital. The total amount paid to labor is the product of the marginal product of labor and the amount of labor. Similarly, the total amount paid to capital is the product of the marginal product of capital and the amount of capital.

The problem of product exhaustion concerns whether the total amount paid to the inputs adds up to the total amount of product. Logically, there are three possibilities. One is where input payments are exactly equal to the total product. This would seem to be a happy situation, much like a clerk whose cash box balances at the end of a day. As with the case of the clerk, there are two situations that are not so conducive to a restful repose. One is over-exhaustion of the product. Not enough product is available for factors to be paid according to their marginal products. People will have to accept less than the values of their marginal products to cover the deficiency. The other unhappy situation is under-exhaustion. In this case, there is product left over after factors have been paid according to their marginal products. There is a surplus value for someone to capture or otherwise distribute.

The theorists of the time were attracted to the nice properties of exact exhaustion. A regime of free competition would seem more pleasant if it turned out that payments according to marginal productivity were to equal exactly the amount produced within the economy. A theorem from Euler showed that this would happen if output in a society were generated according to a production function that was linear and homogeneous. The aggregate production function acquired a significance in economic discourse that it has never lost, despite its obviously fictive character. Where some authors were content to postulate linear homogeneity as an assumption and proceed, Wicksell took the argument further. Suppose exact exhaustion did not prevail. This would mean either that some people were getting too much or too little, in comparison with their marginal products. Under free competition, this situation was not consistent with a stationary state. People would be repelled from situations where they were asked to take less than their marginal products. They would be attracted into situations where they could receive more than their marginal products. Hence, a stationary equilibrium will require product exhaustion. This does not require some production function to be linearly homogeneous, but only that an existing production function share a point of tangency with such a function.

Product exhaustion under free competition was thought by many to be an important attribute of a social order based on free competition. Many of the turn-of-the-century economists participated in the controversy over marginal productivity ethics, as illustrated by a claim to the effect that justice resides in free competition and a linearly homogeneous production function. Such notables

as Leon Walras, Vilfredo Pareto, and John Bates Clark argued that free competition was a process that maximized welfare within a society. If each trade improves the welfare of the traders, and if free competition is just a name for a gigantic network of such trades, it would seem tempting to advance such a claim.

Wicksell did not join those who advanced this claim. He rejected marginal productivity ethics on the grounds of what is now known as the second theorem of welfare economics. The first theorem reflects what was just stated, namely that free competition generates an allocation of resources where it is impossible to make one person better off without making someone else worse off. The second theorem states that there are an indefinite number of such competitive allocations, with one such allocation being transformable into another through an appropriate set of lump sum taxes and transfers. The second theorem makes any welfare evaluation of free competition contingent upon an evaluation of the initial starting points possessed by the various participants.

The tenacious hold of marginal productivity theory on the allegiance of economists is simultaneously troubling and instructive. It is troubling because of its readily apparent inadequacies. It is a totally logical construction that is disconnected from any movement of a society through time. To be sure, stationary state modeling commanded stronger allegiance among economists a century ago than it does now. Wicksell, for his part, seemed to think that a model of a stationary state was not too bad of an approximation. He thought that the 19th century was a period of rapid invention that was not likely to be repeated in the future. It is notable that marginal productivity theory has been subject to

precious little effort at direct testing that would develop independent estimates of marginal productivity and check those observations against actual factor payments. To the contrary, they typical procedure is to take observed factor payments as a measure of marginal products.

At the same time, the experience with the survival of marginal productivity theory provides excellent instruction about the often-made point that it takes a theory, not a criticism, to displace a theory. While marginal productivity theory has no independent claim to scientific validity, it is an essential building block in the edifice of contemporary general equilibrium theory. Take away marginal productivity theory, and theories concerning factor markets and business firms loose their explanatory punch.

While Wicksell developed his analysis of marginal productivity within the framework of a stationary state, he also worked with the notion of a structure of production. Within a stationary state, however, a structure of production adds nothing but analytical clutter. Consider a simple process where wine is aged eight years before it is consumed. In the stationary setting, wine that is eight years old is replaced each year by new wine, with the older wine then consumed. A Böhm-Bawerkian or Wicksellian production function would state that $X = f\left(L, K, t\right)$, where L denotes labor input, K capital input, and t the passing of time.

In the stationary state, however, the incorporation of time adds complexity without changing anything else, and so, following the razor principle articulated by William of Ockham, time should be dropped from consideration. In the same

year that new wine is laid down, wine that is eight year's old is consumed. The production of wine can be written more simply as $X = f(L, K)$. This ability to eliminate time from a structure of production, and to characterize the process of production as a circular flow instead, was articulated strongly by Joseph Schumpeter in his *Theory of Economic Development*. The economics of stationary states generated far greater analytical tractability with the mathematical techniques that economists were using, which may help to give some account for the popularity of stationary state economics throughout the 20th century. To do this, of course, is to allow economics to be driven by its techniques rather than by its phenomena.[6]

A focus on a structure of production in place of a circular flow requires a vision of the economic process other than that of a stationary state. The methods that economists have used throughout most of the 20th century, however, were more suitable for the examination of equilibrium stationary states. With the growing interest in evolutionary and other forms of non-equilibrium modeling that is now underway, I think it is quite likely that economists will come more fully to incorporate structural formulations of production into their models.[7]

Money, interest, and a coordinationist macroeconomics

The structure of production within a society is governed by time preferences and the opportunities for the productive employment of capital. Consider such an elemental aspect of life as the ability to consume potable water. The supply of potable water that is available within a society can be

expanded by the development of bottling facilities, the construction of reservoirs, and through research into such matters as the treatment and recycling of waste water and technologies for reducing evaporation. An expansion in bottling capacity will result pretty quickly in an increased availability of water. The construction of a reservoir will require a longer wait before increased water is available for consumption. The creation of a laboratory to conduct research into methods of treatment, and the technologies to implement those methods, will involve a still longer period before the fruits show up in an increased availability of water for current consumption. Research into evaporation may take even longer to yield increased supplies of potable water.

What governs the concrete structure of production within a society is the willingness of people to delay consumption, which is represented by time preference, in relation to the returns from doing so. A society whose members truly believed that the end of the world was at hand would construct neither laboratories nor reservoirs. Whether water might be bottled would depend on just what concrete duration “at hand” might refer to. In any case, lower rates of time preference within a society would correspond generally to a structure of production that included a larger number of projects whose contribution to consumption resided in the future.[8] Time preference would also play a part in governing such things as how many resources are placed into bottling and otherwise storing water, relative to resources placed into such activities as research into water purification or evaporation.

To this framework of a structure of production, Wicksell postulated the existence of two distinct rates of interest. One was the natural rate of interest. This is a purely analytical construct, as distinct from the interest rates that can be observed directly on the financial pages of newspapers. It is the rate of interest that would generate an equilibrium structure or pattern of production in light of time preferences and the returns from the creation of capital goods. As an exercise in comparative statics, a fall in the natural rate of interest would lead to a deepening of the structure of production, whereas a rise would lead to a more shallow structure of production.

The natural rate of interest is a kind of analytical foil that accepts the contemporary convention among economists that the real economy can be directly accessed independently of money-assisted inference. There is no room in this formulation for any recognition that money, like language, is a tool for reasoned thought. This construction leads to a general equilibrium theory of a barter economy, where money is introduced as an afterthought. The reality, of course, is that modern economic life would have been impossible without money, just as it would have been impossible without language. This formulation in terms of a general equilibrium of the real economy injects a massive fiction to attain analytical tractability, though the nature of this tradeoff is much clearer now than it was a century ago.[9]

The natural rate of interest is the imagined rate of interest that secures equilibrium within the structure of production, as this was modeled in the barter economy of general equilibrium theory. Within this equilibrium constellation of

relationships, the market rate of interest on actual loans would equal the natural rate of interest. This equality was invoked as a necessary condition for equilibrium, just as product exhaustion was invoked as a necessary condition for equilibrium.

Anything that disturbed the equality between the natural and loan rates of interest would disturb the stationary equilibrium. Any divergence between the two rates would set in motion a process of expansion or contraction. Which would occur would depend on the direction of divergence. For instance, the invention of new technologies might increase the natural rate of interest. With a loan rate that now provided entrepreneurs with profitable borrowing opportunities that were not there prior to the invention of the new technologies, a capital expansion will take place, and will continue until the two rates are restored to equality once again. Wicksell's analytics in *Interest and Prices* were of real changes that led to changes in the structure of production.

Wicksell's work on capital and money helped to generate a new approaches to the explanation of business cycles. Ludwig von Mises took the step in 1912, in his *Theory of Money and Credit*, of letting the divergence of interest rates start from an expansion in bank credit. In this case what resulted was a change in the structure of production that was only temporary. F. A. Hayek extended this neo-Wicksellian approach to business cycles in *Monetary Theory and the Trade Cycle* and *Prices and Production*. Arising around the same time as this Austrian literature on business cycles was a Swedish literature

that was developed by such scholars as Erik Lindahl, Gunnar Myrdal, and Erik Lundberg.

Both the Swedish and Austrian formulations of business cycle theory can be reasonably designated as neo-Wicksellian enterprises. After the 1976 Nobel Prize was awarded jointly to Myrdal and Hayek, I recall hearing and reading a number of commentaries to the effect that this was an award grounded in lunacy. The reasons for this alleged lunacy, however, were based on the political orientations of the mid-1970s. Myrdal was a social democrat. Hayek was a liberal in the classic tradition, or what these days is called a libertarian in the US. In the 1930s, however, Myrdal and Hayek shared a similar orientation toward economic instability. At base, instability was rooted in pricing problems due to the operation of money and credit that led to miscoordination in saving-investment relationships. Business cycles were conceptualized as products of miscoordination among market participants. Whereas we normally assert that market prices facilitate economic coordination, the neo-Wicksellian approach to cycles sought to explore how market prices might generate miscoordination.

In the business cycle literature in the 1930s, the Austrian and Swedish contributions commanded strong professional respect. This can be seen clearly by consulting such treatises as Gottfried Haberler (1937) and Alec Macfie (1934). To be sure, these were not the only approaches that were discussed at that time. A version of monetarism, associated particularly strongly with Ralph Hawtry, also commanded professional respect. Twenty years later, the length of time that Rip van Winkle napped, the professional landscape had changed dramatically. The

Austrian and Swedish approaches had disappeared from the analytical radar screens of economists. Monetarism was still present, and now the Keynesian formulations also had a mighty presence.

This sudden change in 20 years is surely somewhat of a mystery, at least if it is approached in terms of conventional notions about scientific procedure. Early in this century people believed in Piltdown Man. But those beliefs quickly vanished in the face of massively disconfirming evidence that revealed the original story to have been a hoax. There is nothing about the Great Depression, however, that constitutes strong disconfirmation of the Austrian or Swedish formulations. There is nothing about the great depression that would reveal obviously superior explanatory powers for monetarist or Keynesian formulations than for the Swedish or Austrian formulations. And yet a description of the intellectual landscape written in the 1950s would differ dramatically from one written in the 1930s.[10]

It could be argued that the Keynesian orientation incorporated the Austrian and Swedish orientations. After all, Keynes also located cycles as stemming from miscoordinations between saving and investment. This much is true. Yet there are also vast differences between the two orientations. The Keynesian orientation divorces the micro and macro realms, whereas the Austrian and Swedish orientations seek to weave them into a seamless garment. For instance, Erik Lindahl (1939, pp. 51-53) distinguished micro from macro very differently than is done now. Micro referred to individuals, whereas macro referred to all forms of interaction among individual units. In this Swedish-

Austrian orientation, macro emerges out of micro interactions. One macro variable never acts directly upon another macro variable, for any such action is intermediated through micro relationships. To be sure, there are a number of signs of a growing awareness of bringing genuine coordination problems back into macro theory, a good illustration of which is Leijonhufvud (1981). I think there is a good chance that people describing the state of business cycle theory twenty years hence will refer once again to a neo-Wicksellian frame of reference, in one fashion or another.[11]

Just taxation and the theory of public finance

Two principle approaches to public finance can be identified today, and Knut Wicksell stands as the primary source of influence over one of those approaches. If those two approaches were to be identified in terms of economists who wrote a century ago, they could well be identified as the Edgeworthian and Wicksellian approaches. The Edgeworthian approach to public finance locates the state outside the economic process. The state is construed as an entity that intervenes into the economy to promote its purposes, however these might be defined. Usually these purposes are defined in terms of some notion of maximizing a social welfare function. In any case, and most significantly, the phenomenon of public finance arise out of the choices of some maximizing entity, and represent interventions into the economy to bring about different outcomes from what would otherwise have resulted.

The Wicksellian approach construes the state as a participant within the economic process. The state itself is a process or a framework of rules and procedures that governs human relationships. Fiscal phenomena do not result from the optimizing choices of some exogenous being, but rather emerge through interactions among participants within various fiscal and political processes. Those interactions, in turn, are shaped and constrained by a variety of conventions, institutions, and organizational rules. Fiscal phenomena, like market phenomena, are catallactical and not choice-theoretic phenomena.[12] The size and extent of governmental activity, within the Wicksellian orientation, is to be explained with references to the same principles that are used to explain other features of economic activity within a society. The same categories of utility, cost, demand, supply, productivity, and the like are to be brought to bear upon the explanation of fiscal phenomena as are brought to bear on the explanation of market phenomena.

Wicksell's particular institutional interest was his effort to describe a network of institutional relationships that would make it possible for people in their capacities as taxpayers reasonably to say that their tax monies were directed as they wished. The ability for people to say this would locate government on the same plane as other economic participants. Wicksell assumed that through proportional representation it would be possible to select a parliament that would serve reasonably well as a miniature model of the Swedish population. If this parliament were then bound by a rule of unanimity, its decisions would conform closely to unanimity within the underlying population.

The state would participate within the economic process on the same terms as other participants. Its size relative to that of other organizations in society would depend on the effectiveness of its officers in gaining acceptance for proposals in parliament, relative to the ability of other producers to gain favor from people.

Wicksell did not truly advocate a rule of unanimity. Rather he articulated a principle of unanimity, which he relaxed to a practical rule of approximate unanimity, which he illustrated by such notions as three-quarters and seven-eighths. Wicksell recognized that this shift to approximate unanimity involved the creation of a tradeoff. True unanimity would insure that people would not have to pay taxes for activities they were not willing to support. But it would also prove costly to any effort of trying truly to work out arrangements for collective support. Some modest movement away from unanimity might, Wicksell thought, be a reasonable compromise to expediency. James Buchanan and Gordon Tullock (1962) subsequently converted this compromise to expediency into a framework for constitutional analysis, and which can be traced through to the contemporary scholarship on public choice and constitutional economics.[13]

The Wicksellian tradeoff, as adumbrated by Buchanan and Tullock, shows some important affinities between constitutional theory and statistical decision theory. Within the framework of decision theory, there are two kinds of error. A proposition can be called true when it is false, or it can be called false when it is true. The chance of making one type of error can be reduced by imposing more stringent requirements, but this necessarily brings with it an increased chance of making the other type of error. Perfection is not possible. Errors will be

unaviodable, and all that can be controlled is the relative mixture of the two types of error.

What holds for decision theory holds for the conduct of the state as well. In the limit, a rule of complete unanimity will prevent the error of undertaking expenditure programs that are not judged to be worthwhile to taxpayers. Unanimity will also, however, lead to a failure to undertake some volume of programs that would have been worthwhile to taxpayers, only they became buried beneath the complexities and strategies of complex bargaining processes. A reduction in the degree of consent that is required to undertake collective action reduces the error of failing to undertake beneficial activities. At the same time, however, it necessarily increases the error of undertaking activities that were not worthwhile to taxpayers, as against being worthwhile only to subsets of taxpayers because the costs were placed on others.

The present value of the Wicksellian legacy

With the passing of time a scholar's influence must almost invariably wane. Even if the scholar is dealing with eternal conundrums, his influence will almost surely diminish as new scholars come to insert their efforts into the world. Some of this will be due to new formulations, and some will be due to the development of new technologies for thinking. In any case, a scholar's influence is a wasting asset. Very few old books in the libraries find readers, and this is as it must and should be.

While Wicksell is less influential than he was a century ago, he continues nonetheless to exert a notable influence over significant precincts within economic scholarship, even if that influence is not always be recognized by contemporary practitioners. This influence is surely most notable in public finance, particularly that portion associated with public choice and constitutional economics. This influence, of course, does not reside so much in the details of Wicksell's own analytical models as in his orientation toward his subject matter. Wicksell's influence likewise remains notable in matters concerning money and the macro economy. This influence, moreover, may well experience some expansion in coming years, if coordination comes to exert an increasing claim upon the attention of economists concerned with explaining general economic conditions.

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ENDNOTES

[1] For a contemporary statement of the issues that were joined in this debate, see George Selgin (1997).

[2] To be sure, Gardlund's (1958, 249-50) description of Wicksell's prison quarters creates an image of a minimun security, country club type of arrangement, where he could have his own furniture and food. He had to scrub the floor of his cell once a week, and other than that was able pretty much to read and write as he chose.

[3] In what was normally a four-year program of study, Wicksell completed all the requirements in two years.

[4] On Wicksell and Pareto in this respect, see Hennipman (1982). More generally on the Pareto principle, see Backhaus (1980).

[5] The various historical contributions are presented and assessed in George Stigler (1941).

[6] Schumpeter, to be sure, did not take a stationary state seriously as a description of reality. Rather he had a modeling strategy were a stationary state was continually punctuated by episodes of entrepreneurial creativity.

[7] For one interesting effort to pursue non-equilibrium, as distinct from either equilibrium or disequilibrium, see Donald Katzner (1998).

[8] I think it is possible to acknowledge the general validity of this orientation toward a time structure of production without professing any ability actually to develop some measure of the average period of production within a society.

[9] Ulrich Witt (1997) explains that F. A. Hayek fell into the same trap in his neo-Wicksellian formulation of business cycle theory. He started from a model of general equilibrium, as that was the only option that was available at the time. This point of departure was, however, inconsistent with his work on the use of knowledge in society, particularly when put in the context of a process of continual development, which he came subsequently to pursue.

[10] One such description that first appeared in 1952 is Robert Gordon (1961).

[11] I expand upon this belief in Wagner (1999).

[12] I should note that I am not using catallactical as a synonym for voluntary, but as an antonym for choice. Fiscal phenomena involve a mixture of exchange and duress, both of which I regard as catallactical, as distinct from choice-theoretic phenomena. See, for instance, Wagner (1997).

[13] For an examination of the relation between Wicksell, Buchanan and Tullock, and contemporary scholarship on public choice and constitutional economics, see Richard Wagner (1988).