

BEGRIFFSGESCHICHTE: BETWEEN THE SCYLLA OF CONCEPTUAL AND THE CHARYBDIS OF INSTITUTIONAL HISTORY OF ECONOMICS

BY

MATTHIAS KLAES

I. INTRODUCTION¹

According to a commonly held view, doctrinal history formed a largely uncontested part of the discipline of economics in the early years of the twentieth century. Economists like Edwin Cannan, Jacob Viner, and Joseph A. Schumpeter were at the same time respected economists and historians of economics. Contemporary historians of economics, on the other hand, tend to feel defensive about their field of study. The questions of why, how, and in which discipline one should pursue the history of economics is hotly debated among practitioners, while the number of universities and curricula still offering history courses is in steady decline. This is matched by a corresponding attitude among orthodox economists aptly summarized by Frank H. Hahn (1992, p. 165): "What the dead had to say, when of value, has long since been absorbed, and when we need to say it again we can generally say it much better."

Historians of economics draw diverging conclusions from the troubled relationship between the economics discipline and those who chart its history. If a suitable audience can no longer be found amongst fellow economists, the time might be ripe for forging closer links with the history of science and the field of science studies. This point, first raised forcefully by Margaret Schabas (1992), has found several supporters in recent historiographical discussions (cf. E. Roy Weintraub 1996, Ross Emmett 1997). But more importantly, the work of Philip Mirowski (1989, 1994, 2001), Roy Weintraub (1991), D. Wade Hands (1997),

Department of Management, Keele University, Staffordshire ST5 5BG UK, www.mKlaes.net. An earlier version of this paper was presented at the History of Economics Society Annual Conference in Vancouver, June 30–July 3, 2000. I would like to thank the participants of the conference session "Historiography I" for their helpful comments, in particular my discussant Esther-Mirjam Sent. I owe a special debt to Roger Backhouse for our extensive correspondence over several points raised in the paper. Stimulating comments by two anonymous referees have helped to considerably improve the initial manuscript.

¹ This paper elaborates on the historiographical discussion of my Ph.D. thesis (cf. Matthias Klaes 1998, 2002).

and Esther-Mirjam Sent (1999a) testifies that such a cross-fertilization is already well under way. Sent (1999b) has proposed to call this different outlook "institutional" history of economics.

The current of institutional history is countered by those who feel that the history of economics is essentially part of the discipline of economics and should be practised by economists in economics departments. While they largely accept that no *a priori* argument will convince modern economists that they should study history, they also feel that the history of economics should continue to provide a resource for internal appraisal and criticism (cf. Roger Backhouse 1995). The reason is that contrary to historians and sociologists of science, for example, many historians of economics have not left their original departments: they understand themselves as practicing economists, keen to communicate with the discipline on a conceptual level. Frequently this takes the form of engaging in "conceptual history," which may be broadly defined as an attempt to trace the development of one or several concepts over time. Typical examples are George J. Stigler's (1950a, 1950b) "The Development of Utility Theory," Robert B. Ekelund and Robert F. Hébert's "Consumer Surplus: The First Hundred Years," or Kenneth G. Dennis's (1977) "*Competition" in the History of Economic Thought*.

A few caveats are in order at this stage. First, on the face of it, it seems that to talk of institutional versus conceptual history simply represents a reflection of the old internalism-externalism debate in the history of science. This appearance is deceptive, however. If one takes seriously the suggestion that theories are social institutions, as institutional history of economics does, then the internal—external dualism at the heart of the debate collapses (cf. Steven Shapin 1992). Second, some might claim that the historiographical arguments put forward by institutional historians of economics amount to little more than a rhetorical "smoke screen," while in practice their histories differ little from some of the traditional work in the history of economics, such as R. D. Collison Black's (1960) Economic Thought and the Irish Question, or Donald Winch's (1969) Economics and Policy. What this claim asserts is that good work in the history of economics has frequently incorporated social historical perspectives and, hence, that there is nothing new in institutional history. It should be noted, though, that drawing a distinction between conceptual and institutional history is not the same as arguing that institutional history constitutes a radical break with established genres in the history of economics.²

² In a direct response to the charge, the point that one should stress is that institutional history claims to be different not on historiographic but on philosophical grounds, in quite the same way as David Bloor (1976) begs to differ from what he calls the "sociology of error" in the historiographical program of Imre Lakatos (1971). Bloor radically questions Lakatos's commitment regarding the rational aspects of scientific knowledge as self-explanatory. Compare this to the conclusion Black (1960, p. 311) draws from his historical study of the interdependencies of economic theory and policy: "[T]here have been cases where ideology has impeded economic understanding and action. But there is also evidence to suggest that ideology can be overcome ..." Institutional historians see the social—"ideology" in Black's terms—not as the force that may spoil the acquisition of scientific knowledge, but as its very building blocks. The aim of Mirowski (2001) is not merely to argue that a social event, the Second World War, influenced the development of economic knowledge, but to show that practices originating during the Second World War continue to constitute what counts as economic knowledge today.

Recent controversies, like the exchange between Lawrence Birken (1988, 1994) and Jeff Lipkis (1993), or the online discussion that followed Anthony Brewer's (1996) reaction to James P. Henderson's (1996) editorial on the *HES* Discussion List, leave no doubt that the tension between institutional and conceptual history of economics continues to occupy our discipline. The aim of this paper is to establish some common ground between the two outlooks on how to practice history of economics. Can one study economics on a purely conceptual basis in a way compatible with new perspectives that draw from the sociology of scientific knowledge (SSK) literature? I will approach this question on the basis of the work of Reinhart Koselleck (cf. Koselleck 1979). Koselleck's historiography of *Begriffsgeschichte*, which constitutes a distinct approach to conceptual history, seeks to establish conceptual history as a complementary and necessary aide to social history. If sound, Koselleck's argument should carry over to the dispute between conceptual and institutional approaches in the history of economics.

Bearing in mind the sympathies of institutional history of economics with the science studies literature, the paper discusses Koselleck's approach from an SSK perspective. I first contrast two different ways of pursuing conceptual history, starting with an approach indebted to the history of ideas. Compared to this idealist form of conceptual history, which traces concepts as implicit assumptions or habits of thought, Koselleck's *Begriffsgeschichte* locates concepts in historically situated social practices.³ In accordance with Emile Durkheim's (1938, p. 14) first rule of sociological method-social facts should be considered as thingsone may thus describe it as a naturalistic form of studying concepts.⁴ Subsequently, I identify two central features Koselleck ascribes to concepts: their independent role as social factors, and their inherent ambiguity. The first feature remains underexplored in the historiographical literature, and I suggest illuminating it through attempts in SSK to describe concepts as social institutions. In the second part of the paper, the historiographical discussion is complemented by a case study, which, in an attempt to operationalize *Begriffsgeschichte* for the history of economics, traces the emergence of the concept of transaction costs as a social institution.

II. KOSELLECK'S BEGRIFFSGESCHICHTE

The methodological basis of *Begriffsgeschichte* draws from a German tradition associated with the work of Otto Brunner (1939)⁵ and brought to fruition by Reinhart Koselleck (1979).⁶ Brunner insisted that the historian should analyze

³ In retaining the German term *Begriffsgeschichte* for Koselleck's approach, I follow the practice of his translator (cf. Keith Tribe 1985).

⁴ The idealism—naturalism terminology is borrowed from the SSK literature (cf. Barry Barnes, David Bloor, and John Henry 1996).

⁵ For an evaluation of Brunner's work, also in the light of his position in respect to the contemporary political events in Germany, see Howard Kaminsky and James Van Horn Melton (1992).

⁶ For a general introduction to Koselleck's work, see Keith Tribe (1985).

the past as far as possible on the basis of its own concepts.⁷ Koselleck has elaborated on the historiographical foundations of this version of conceptual history. His starting point is the proposition that the historian can make a pragmatic distinction between concepts and other words on the basis of careful exegesis (Koselleck 1972b). Hence, concepts are understood as a certain class of words. They become a concrete entity, the occurrence of which can be traced empirically in historical texts.⁸ It is this commitment to concepts as linguistic entities on the textual level that distinguishes *Begriffsgeschichte* from conventional forms of conceptual history. Koselleck suggests that concepts go beyond other words in two respects. First, they assume the status of social factors in their own right, and second, they are subject to systematic ambiguity. Let us investigate these two distinctive characteristics in turn.

Concepts As Social Factors In Their Own Right

In order to illustrate the social dimension he ascribes to concepts, Koselleck draws attention to the important position that certain words occupy in the social and political context of a society. The word "state," for example, summarizes the horizon of experience which is linked to domination, jurisdiction, military matters, and a whole range of other domains which, taken together, define a society. "Concepts are thus the concentrate of several substantial meanings" (Koselleck 1972b, p. 84). In Koselleck's understanding, concepts form the condensation of a rich collection of historical experiences into a single word. In fact, they are regarded as having achieved the status of independent social factors. On the one hand, and together with many other words, they point to particular aspects of the world. On the other hand, they are themselves part of these aspects. Koselleck describes this property of concepts in the following way:

Sense and reference can be thought separately. However, in the case of concepts, sense and reference coincide insofar as the diversity of historical reality and historical experience enters the ambiguity of a word in such a way that it can only receive its meaning in this one word, can only be grasped by this word (Koselleck 1972a, p. 120).⁹

Koselleck does not further specify how we should imagine the coincidence of sense and reference in a concept. However, he seems to be concerned with the peculiar position of concepts between the conceptual realm and the "material" realm of the social. A concept, according to his definition, is not merely indicative of the socio-political circumstances to which it refers, it is a factor within them (Koselleck 1972b, p. 84). In a way, it refers back to itself.

⁷ For an example of the application of this historiography to the history of economics see O. Brunner (1952).

⁸ This differs from the conventional understandings of concepts as mental representations or abstract entities (cf. Stephen Laurence and Eric Margolis 1999, p. 3).

⁹ Own translation of: "Wortbedeutungen und das Bedeutete können getrennt gedacht werden. Im Begriff fallen Bedeutungen und Bedeutetes insofern zusammen, als die Mannigfaltigkeit geschichtlicher Wirlichkeit und geschichtlicher Erfahrung in die Mehrdeutigkeit eines Wortes so eingeht, daß sie nur in dem einen Wort ihren Sinn erhält, begriffen wird."

In order to illustrate the naturalistic nature of concepts, Koselleck refers to the role of the concept of *Stand* in the conflict between reform groups and Junkers (country squires) in early nineteenth century Prussia. According to the traditional hierarchical order, people belonged to a certain *Stand* according to their political status or birth. Influenced by the French revolution, the aim of the reformers was to replace this vertical order with a society of "citizens" who possessed equal rights. Instead of favoring one *Stand* over another, they attempted to articulate this concept within a system of horizontal "classes" to be defined in terms of economic or legal criteria. The concept became the social arena for the battle between the two groups. The reformers sought actively to dissolve the traditional concept of *Stand*, while for the Junkers the danger of its erosion constituted at the same time a threat to their established position in society. The old social order would stand or fall with the *Stand* concept.

Koselleck's aim is not to reduce the conceptual realm fully to the social realm, though. Rather, the coincidence of conceptual and political conflict illustrates how the concept of *Stand* not merely refers to and has its place in the given state of affairs, but reaches further. Positions to be captured politically had first to be formulated linguistically, by creating concepts of the future. More generally:

there exists between concept and materiality a tension which now is transcended, now breaks out afresh, now appears insoluble. Between linguistic usage and the social materialities upon which it encroaches or to which it targets itself, there can always be registered a certain *hiatus*. The transformation of the meaning of words and the transformation of things, the change of situation and the urge to rename, correspond diversely with each other (Koselleck 1972b, p. 85, emphasis added).

Koselleck seems here to imagine the social and the conceptual realm as being situated on two planes that are interrelated in various ways but can still be distinguished from each other in virtue of a "hiatus." Let us call this dualist picture the "two-planes" view of the relationship between the social and the conceptual realm (cf. Martin Kusch 1996).

Koselleck's overall account of concepts is not fully consistent with the two planes view, however, due to the peculiar social role he attributes to concepts in the passages cited before: Concepts are expressions of the social while at the same time forming a part of it. In the two-planes metaphor, one would have to allow for the possibility that the planes "touch" each other. But if one drops the dualism, it becomes difficult to find a place for the postulated hiatus. This tension remains unresolved in Koselleck's interpretation of concepts.

In the following, I will make an attempt to gain a better understanding of Koselleck's position by comparing his arguments with a strand of research in the sociology of scientific knowledge that suggests regarding concepts as social institutions. David Bloor (1983, pp. 168–78) uses this perspective to throw some light on Wittgenstein's "language games." Once it is recognized that the language game that sustains a concept can at the same time act as the language game that sustains a social order, the content of a concept becomes intelligible as an expression of the constitution of social life. Bloor (1983, p. 110) calls this the "principle of the superposition of language games." It points out that, typically,

social institutions serve several purposes at once. The same collective phenomena that stabilize a scientific concept help stabilizing a social order.

As an example, Bloor (1983, pp. 152–55) turns to Robert Boyle, the seventeenth century chemist and natural philosopher (cf. Shapin 1980). Boyle defended a corpuscular philosophy, commonly regarded as a forerunner of the modern theory of chemical elements, which treated matter as something passive and inert. In this framework, motion could only be conceived as having its origin in the laws of nature that, for Boyle, were laid down by God. Boyle defended this theory against the Aristotelian view that sought the cause of motion within matter itself. Up to the seventeenth century, the particular behavior of water was made intelligible for example with reference to the principle that nature abhorred a "vacuum" (*horror vacui*). For Boyle, on the other hand, it was clear that nature could not abhor anything.

To understand why Boyle defended his concept of matter against those rival conceptions, Bloor points us to a second context of the language game of matter. Boyle wrote during, and in the aftermath of, a civil war. One symptom of this collapse of social order was the rise of radical Protestant sects questioning the authority of the Anglican church. Rejecting priestly intermediaries, for example, they preached that God was within all men and women and within nature in general. Boyle's corpuscular philosophy, which regarded matter as inanimate and irrational, constituted a sharp attack on attempts to regard God as the soul of the world. But in doing so, it reasserted at the same time the position of the Anglican church against the radical groups.

This study of competing accounts of matter shows a number of parallels to Koselleck's example of the contested nature of the Prussian concept of *Stand* referred to above. In more recent writing, David Bloor has been more explicit about the underlying understanding of institutions, developing a "self-referential model" of institutions and concept application drawing from the work of Gertrude E. M. Anscombe (1976) and Barry Barnes (1983).¹⁰ Pointing to the paradigmatic example of money, Bloor (1997, pp. 27–42) notes that something operates as money only if its users treat it as money. But this implies that if one tries to define money, one has to refer to an implicit agreement which itself is specified in terms of money. Object and content of the agreement are defined in each other's terms. Hence, the practice to call something money is self-referring. There is no independent object for a discourse about money. The "talk," understood in terms of the social practices that sustain the concept, and the thing talked about, coincide.

As was noted above, Koselleck identifies a similar self-referential element as the distinguishing characteristic of concepts. This suggests interpreting Koselleck's concepts as social institutions. Following Bloor's work, the peculiar position of concepts between the social and the conceptual realm becomes more transparent. As social institutions, they are on par with the other entities belonging to the social realm. In that sense, the vertical distinction drawn in the two-planes view becomes transformed into a horizontal distinction between different language

¹⁰ A similar account has recently been put forward by John Searl (1995), building on his notion of constitutive rules (cf. Searl 1969).

The Systematic Ambiguity of Concepts

Let us now turn to the second feature of Koselleck's concepts. He holds that while the potential ambiguity of other words typically disappears with the use in a particular context, concepts are subject to systematic ambiguity: "[A] concept must remain ambiguous in order to be a concept" (Koselleck 1972b, p. 84).¹² Again, Koselleck refrains from a more detailed elaboration of this point. However, he identifies an important symptom of this inherent ambiguity which he calls the "Contemporaneity of the Noncontemporaneous" contained in a concept (*Gleichzeitigkeit des Ungleichzeitigen*, Koselleck 1972b, p. 89; in the following abbreviated as "CON"). A concept may allude to meanings that originated in past usages but are no longer sustained in current practices. Their chronological supersession within a single word is the expression of a multiple stratification of meaning. As an implication for *Begriffsgeschichte*, care has to be taken when interpreting a word that is diachronically stable, a point brought home to social historians by Otto Brunner's original project.

Koselleck mentions, for example, the conceptual change of the German expression *Bürger* between the late seventeenth and early twentieth centuries, which proceeds from "burgher" via "citizen" to "bourgeois." This semantic development mirrored the changing structure of society. Hence, one should resist the temptation to impose present-day understandings on words of the past. In the history of economics, this case has been forcefully argued by Keith Tribe's (1978) investigation of notions such as "land" and "labour" in the pre-classical literature.

Koselleck's CON points beyond a criticism of rational reconstructionism, however. It questions not just the preconception of a diachronic stability of concepts. The attention paid to the overlapping of past meanings, present usage, and expectations of the future also renders the synchronic stability of concepts problematic, because several strata of meanings may coexist at any given moment in time. Koselleck (1972b, p. 84) draws his inspiration from a passage in Friedrich Nietzsche's *Genealogy of Morality* (1981, p. 820).¹³ "All concepts which semiotically comprise an entire process escape definition; only that which has no history is definable." Nietzsche writes this as a generalized conclusion of an

¹¹ In Bloor's theory, the conceptual is not fully reduced to the social realm, due to an important idealist dimension of his account of social objects which stands alongside his naturalistic commitment. Following Anscombe (1976), Bloor (1996, p. 358) refers to this position as "linguistic idealism." Kusch (1996, pp. 90–93) has explored the resulting picture in terms of a supervenience of the conceptual on the social level.

¹² Semantic ambiguity should be kept separate from vagueness. As T. Williamson (1994, p. 66) notes, a word may have one vague meaning or two precise ones. The meaning of "heap" is vague due to the impossibility to define how many grains of sand make a heap. The meaning of "meaning" in this footnote—as either sense or reference, for example—is ambiguous.

¹³ The translation of this passage from essay II, section 13 of the *Genealogy* constitutes an adaptation of Tribe's rendering (Koselleck 1972b, p. 84).

inquiry into the meaning of the concept of punishment, after having identified a historical aggregation of different senses into a compound notion he found very difficult to analyze.

As Karlheinz Stierle (1979, p. 165) notes, Nietzsche's insight is fundamental to the historical semantics of *Begriffsgeschichte*. It underlines the necessary connection between the synchronic and the diachronic dimensions in a historical study of concepts. *Begriffsgeschichte* must be more than a linear account of changing meanings, assumed to be readily available on the basis of synchronic exegesis. The way in which concepts are defined in *Begriffsgeschichte*, as a particular class of words that exhibit the systematic ambiguity expressed in the CON, demands a thorough study of the semiotic process which Nietzsche refers to in a diachronic, dynamic perspective. Stierle suggests speaking not of systematic ambiguity but of a "semantic continuum" which unfolds in this process. Koselleck's CON should thus be studied not just as a summative aggregation of different layers of meaning over time, but as an expression of the changing heterogeneity of this continuum.

Historical exegesis, from Koselleck's perspective, is thus no longer able to provide accurate and comprehensive period-specific reconstructions of concepts. Significantly, this results not from the difficulties inherent in the task of the historian to unlock the past, but from an *a priori* limitation to the explicit accessibility of concepts. While this point does not receive full attention in Koselleck's historical work, Kari Palonen (1985, 1989) makes it his very point of departure. His elaboration of Koselleck's approach directs attention to the synchronic diversity of conceptual usage, resisting the *a priori* assumption of a common core behind the range of usages encountered (Kari Palonen 1985, p. 13). Accordingly, the historical reconstruction of a concept should not be preoccupied with drawing out its meanings and associations on the collective level. Instead, more attention needs to be paid to the analysis of the different individual conceptions linked to a given word. This means actively drawing out the contours of the semantic continuum associated with a concept by studying many individual concept invocations. In Palonen's (1989, p. 16) words, concepts downright demand the formation of different conceptions and interpretations. This explains the attention Koselleck's *Begriffsgeschichte* pays to concepts, seeing them not as collectively held ideas but as empirically traceable words. Methodologically, it is only the stable textual entity of the word that is taken as the boundary of the semantic continuum.

III. EXAMPLE: A *BEGRIFFSGESCHICTE* OF TRANSACTION COSTS

After having spelled out the foundations of *Begriffsgeschichte* as a naturalistic version of conceptual history—one committed to locating concepts both as concrete textual entities and as social institutions—this section seeks to implement it. It explores the emergence and growth of the concept of transaction costs in the economic literature. In doing so, it supplements the more conventional accounts presented in Klaes (2000a, 2000b) with a documentation of the gradual

institutionalization of the concept from its occurrence in the 1950s to the foundation of the International Society for the New Institutional Economics in 1996. In a second step, an attempt will be made to gain a clearer understanding of the internal structure of the emerging institution by operationalizing Koselleck's CON to allow the compilation of a conceptual profile depicting the semantic continuum of transaction costs. Hence, the aim is to find empirical support for the two distinguishing characteristics of Koselleckian concepts: their status as social institutions, and their systematic ambiguity.

The Emergence of the Transaction Cost Concept as an Institution

One crucial issue for a theory of social institutions is to account for their origin. Rather than describing this process in minute detail from one instance of concept invocation to the next, the method of presentation chosen here is inspired by Bruno Latour's (1987; cf. Latour and Steve Woolgar 1979) discussion of the role of positive and negative modalities in the collective process of "fact-making." Latour (1987, pp. 22–29) is interested in the social process through which a statement is gradually accepted as a fact. He describes this process as a step-bystep detaching of an initial statement from the context from which it originated. Thus, a commonly accepted fact "A = X" (for example "Protein A has structure X") can be traced back to the conditions of its production: "In a recent article, Scientist S has claimed to have discovered that [A = X]." Note that in this statement, the factual status of "A = X" has changed. The fate of the prospective fact is now in the hands of the scientific community. Further investigation might strengthen the case of scientist S: "A team of the highly reputable laboratory L was able to replicate the finding of S that [A = X]." Latour calls such a sentence a positive modality because it solidifies the factual status of the original statement. On the other hand, the sentence, "By troubling coincidence, X is also the structure of contaminant C which incompetent investigators might fail to completely remove from a sample of A, weakens the factual status of A = X." In Latour's terminology, it represents a negative modality.

The following analysis draws its intuition from Latour's positive modalities. Instead of looking at the factualization of statements, attention is directed to the incremental institutionalization of concepts. In the place of tracing the stabilization of statements, the focus will be on the process by which an individual expression achieves the status of an institution, and hence can be regarded as a Koselleckian concept. The modality of a concept is thus the modus of its appearance (or form of usage) that indicates its status among the group of individuals who collectively endorse it. This requires using "modality" in a slightly different sense from Latour. Latour (1987, pp. 22–23) regards the sentences that subsequently qualify the original proclamation of a fact as the modalities of this proclamation. As our concern relates to Koselleckian concepts instead of sentences, modalities in the sense employed here refer to the linguistic markers that attend the use of a particular word.¹⁴ The results of this analysis

¹⁴ Both uses of "modality" should be distinguished from the technical meaning of the term in the philosophical literature (cf. Walter Brugger 1976).

are presented as a sequence of citations which, through the changing modality of the concept of transaction costs, mark important steps in its gradual establishment as an institution. Consciously, these citations are presented outside their historical context, to draw attention to the manifestation of the process on the linguistic level of conceptual modalities.

To give an impression of the field of alternative expressions available in the discourse of economics before the emergence of the concept of transaction costs, it is worth taking a look at John Hicks's discussion of the rationale for holding cash rather than investing in interest bearing assets:

(1) The most obvious sort of *friction*, and undoubtedly one of the most important, is the *cost of transferring assets* from one form to another ... Thus a person is deterred from investing money for short periods, partly because of *brokerage charges* and *stamp duties*, partly because it is not worth the *bother* ... The net advantage to be derived from investing a given quantity of money consists of the interest or profit earned less the *cost of investment* (Hicks 1935, p. 6).

To this one can also add the terms "transfer costs," "marketing costs," and "trading costs," which were also current in the contemporary literature. From the limited perspective of hindsight, these last three categories in particular seem equally suited to perform the tasks subsequently assigned to the notion of transaction costs. However, economists picked one particular notion out of the range of possible alternatives. The origin of the process can be found in the work of Jacob Marschak:¹⁵

(2) This property reflects the existence of a "cost of transaction" ... (Marschak 1950, p. 88).¹⁶

In this citation, the notion has not yet found a stable form that would differentiate it from the general practice of economists of ascribing costs to various entities. In the next passage the order of terms is reversed. While in (2), the term "cost" serves as an attribute to "transaction," the latter now becomes an attribute of the former:

(3) The convexity of (4:2) expresses then the fact that, whenever ... the individual has exchanged one commodity against another (say 1 against 2), he had to sacrifice, in addition, positive amounts of at least one of the N commodities: *the so called transaction cost* (in money paid to advertising agents or brokers, or in one's own leisure, etc.) (Marschak 1950, p. 88).

Both in (2) and (3) the newly introduced expression is still qualified by quotation marks or figures of speech such as "so called." The unstable nature of the concept thus expressed is confirmed by an article of Karl Brunner who, while directly commenting on Marschak, refers to transaction costs in the form used in (2).

¹⁵ It is notoriously difficult, given the breadth of the literature in question, to state with confidence that Marschak (1950) was the first to speak of "transaction costs" in economics It seems likely that the expression itself originated outside academic economics in the sphere of financial markets, where brokerage fees and market transactions are part of everyday discourse

¹⁶ The full literature references to (2), (3), (5)–(7), and (9)–(13) can be found in Appendix 1.

(4) The starting point was given by the important notion of the "cost of transaction" (K. Brunner 1951, p. 169).

A similar emergence of the concept can be observed in William J. Baumol's seminal article on the cash balance approach to the transactions demand for money, who uses the ordinary language expression "broker's fee" in a technical sense, emphasised again by the use of quotation marks:

(5) The term "broker's fee" is not meant to be taken literally (Baumol 1952, p. 546, note 2).

In the course of his article, the full conversion into a technical term can be witnessed step by step:

(6) [N]ote that any receipts exceeding anticipated disbursements will be invested, since, eventually, interest earnings must exceed ("*brokerage*") cost of investment (Baumol 1952, p. 547).

(7) Clearly this argument neglects the *transactions costs* involved in making and collecting such loans (the "broker's fee") (Baumol 1952, p. 550).

The initial term "broker's fee" first transmutes into a "brokerage cost" and finally into a "transactions cost." In the following decade, the concept underwent a slowly accelerating diffusion process. By the early 1970s, it had stabilized sufficiently for the first explicit and pronounced appearance in an introductory economics textbook:

(8) The great significance of the costs of negotiating contracts and policing property rights—called *transactions costs*—can be seen by imagining a world in which these costs were absent (Armen Alchian and William R. Allen 1972, p. 240).

The novel nature of the term is still indicated by the use of italics, followed by an explanation of its meaning.¹⁷ A similarly qualified use, this time indicated by quotation marks, can be witnessed in its first appearance in the title of a journal article:

(9) H. Laurence Miller (1965). "On 'Liquidity' and 'Transaction Costs'." Southern Economic Journal.

The first unqualified appearance in a title can be observed shortly afterwards:

(10) Steven N. S. Cheung (1969b). "Transaction Costs, Risk Aversion, and the Choice of Contractual Arrangements." Journal of Law and Economics.

In 1971, finally, one finds a nice example of the appearance of the concept in a title of an article published in a journal at the mathematical core of the discipline:

(11) Frank H. Hahn (1971). "Equilibrium with *Transaction Costs*." *Econometrica*.

¹⁷ In the original source, only the term "transactions" in the above citation is typeset in italics.

Gradually, the concept is used to identify and, in the case of Eirik G. Furubotn and Svetozar Pejovich, even define, discussions and sub-fields in economics:

(12) Alistair M. Ulph and David T. Ulph (1975). "*Transaction Costs* in General Equilibrium Theory—A Survey." *Economica*.

(13) [S]everal crucial changes are introduced [by the property rights literature] into the theory of production and exchange ... Third, *transactions costs* are recognized as being greater than zero in virtually all cases of practical importance (Furubotn and Pejovich 1972, p. 1137).

In the 1970s, it becomes increasingly difficult to find instances of the qualifiers and modifiers used in (2), (3), (8), and (9). In 1979, Oliver E. Williamson introduces the concept as the name for a new research program:

(14) O. E. Williamson (1979). "Transaction-Cost Economics: The Governance of Contractual Relations." Journal of Law and Economics.

In the next decade, the consolidated status of the concept is exemplified by its appearance as a separate entry in the most important dictionary of the discipline:

(15) Jürg Niehans (1987). "Transaction Costs." In John Eatwell, Murray Milgate, and Peter Newman: The New Palgrave: A Dictionary of Economics.

By the early 1990s, the status of the concept has increased to the extent that it becomes used in the titles of books:

(16) Mark Casson (1991) The Economics of Business Culture: Game Theory, Transaction Costs, and Economic Performance.

The crowning achievement of the growth of the concept of transaction costs in economics so far, however, has been the foundation of a scholarly society that is partly defined in its terms: In 1996, the International Society for New Institutional Economics became established, with Ronald H. Coase as its first, Douglass C. North as its second, and Oliver Williamson as its third president. The scope of the society is defined as follows:

(17) The Society aims to bring together scholars in countries all over the world who are working on *transaction costs*, contracting, political rules of the game, the rule of law, norms and culture, and so on ... (Coase and North 1998, p. 4).

From its emergence in 1950, the concept of transaction costs has thus progressed through initial stages of *ad hoc* introduction and qualified use, before it appeared in journal titles, became a textbook and survey topic, assumed the status of the name of a paradigm, made its way into dictionaries and book titles, and finally co-defines the activities of a quickly growing international society that has been presided over by two Nobel Laureates of the economic profession. This qualitative account of the growth of the transaction cost concept provides the historical skeleton of the gradual priming of the concept as a social institution.

A Substantiation of Koselleck's "Contemporaneity of the Noncontemporaneous"

The preceding discussion has thrown some empirical light on the development of concepts as institutions. The remainder of this section investigates the second

characteristic of Koselleckian concepts: their systematic ambiguity, prominently expressed in Koselleck's CON (1972b). The transaction cost concept is well suited for this task, as it is non-controversial to argue that it is subject to systematic ambiguity. The transaction cost literature itself is full of statements to this effect. Why do people carry money? How can one explain the existence of firms? Does the kind of legal system in operation matter from an economic point of view? These are just some of the questions economists have tried to answer with the help of the concept of transaction costs. Yet, there is a surprising scarcity of systematic elaboration of its content and a pervasive heterogeneity of its usage by practising economists. This has led a number of authors to criticize transaction costs for being "vague," "ill-defined," and not well suited for theoretical analysis (cf. H. L. Miller 1965, Niehans 1969, Harold T. Shapiro 1971, James E. Krier and D. Montgomery 1973, Steven N. S. Cheung 1974 for early statements; L. E. Davies 1986, Douglas W. Allen 1991, and Avinash K. Dixit 1996 for more recent ones). Nevertheless, and in spite of appeals to drop it from the economic vocabulary altogether, the actual use of the term in the literature is continually growing.

Hence, if one measures the success of a concept by how widely it is used, precision of definition does not seem to be a success factor. As the previous subsection sought to illustrate, this phenomenon can be accounted for in terms of the growth of an institution, and the institutional literature supplies ample evidence for the positive-feedback effects operative in such growth (cf. Geoffrey M. Hodgson 1993). Let us now turn to the more specific suggestion, that the systematic ambiguity of Koselleckian concepts is expressed in usage patterns reflecting the CON. Koselleck himself demonstrated the CON through his detailed hermeneutic case studies of the history of numerous concepts (cf. Koselleck 1979). Kari Palonen (1985, 1989) has applied his interpretation of Begriffsgeschichte in a similar vein to the history of the concept of politics. In the following, a more quantitatively minded approach to the CON will be pursued. The aim is to depict the CON graphically, by finding a representation for the various layers of meaning present in a given concept, and by tracing the development of layers over time. In short, the suggestion is to look at the "conceptual profile" of the transaction cost concept (cf. Figure 1).

Figure 1 is derived from the table in Appendix 2. This table maps 70 explicit invocations of the term "transaction costs" identified in the economic literature between 1950 and 1975 (cf. Appendix 1) onto five general headings.¹⁸ These headings, instead of being imposed by the historian, have been obtained in an inductive way, by aggregating similar interpretations across individual authors. The resulting headings consist of the three categories of search, contracting, and

¹⁸ Sources have been identified by two heuristics First, a search of the on-line *Periodicals Contents Index* (http://pci.chadwyck.com) for the occurrence of the notion of transaction costs in the title has been performed, supplemented by a title search in the *EconLit* database. In addition, a systematic browsing of title headings in the *Index of Economic Articles* was undertaken for the early part of the focus period (1935–1955). Secondly, citations to key transaction cost authors were followed up with help of the *Social Sciences Citation Index*. Methodologically, it should be noted that apart from "transaction costs" one also finds "transactions costs" and other variants in the literature. Linguistically, these may be regarded as representing different word forms of the transaction cost concept; the corpus comprises thus all word forms (cf. John Lyons 1977, pp. 18–19).

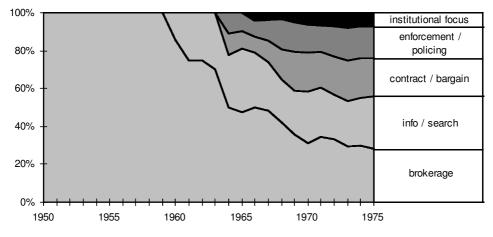


Figure 1. The conceptual profile of transaction costs, 1950-75.

policing costs by which Carl J. Dahlman (1979) has tried to define transaction costs, amended on the one hand by the narrow interpretation of brokerage as the archetypical cost of buying and selling in financial markets, which was encountered in the monetary literature, and on the other hand by the emerging use of the term as a general category of comparative institutional analysis. In this last sense, transaction costs not only arise in markets but are more broadly assigned to economic institutions. Figure 1 represents the accumulated instances of a specific interpretation over time. For example, if an author like Marschak (1950) interpreted transaction costs in terms of brokerage charges, he would increase the number of authors counted under "brokerage" by one. If an author supported several categories at once, the count for each category individually is increased by one. The result of this procedure-which aims to do justice of the heterogeneity of the semantic continuum in that it does not construct semantic layers as groups of authors but in cutting across the historically encountered usage pattern of each year—can be grasped intuitively by imagining it as the outcome of a vote of all authors in favor of or against the individual conceptual components they endorse in their writing. Figure 1 reflects the yearly outcomes of these hypothetical elections, expressed in percentage terms.

The resulting pattern needs to be seen in the light of the underlying assumption that the interpretation of a particular author is taken as fixed from the year of its first publication unless his subsequent writings suggest otherwise. A second restriction is due to the limitations imposed by translating the results of textual exegesis into the comparatively crude notation of the five chosen categories. A final restriction is due to the degrees of freedom that exist in the choice of the conceptual components. However, the suggested classification is of a heuristic nature to identify the presence of and development of various semantic layers. Different classifications will lead to different layers, but the overall pattern of an increasing broadness, starting from the original monetary interpretation, should not alter much as a result. Moreover, both the categories and the classification of authors are based on the conclusions reached in a detailed critical exegesis of the sources in the corpus (cf. Klaes 1998, Chapters III–V). Different interpretations of certain texts might alter the classification of the interpretation of a particular author in the above scheme. Nevertheless, the conclusions drawn from the aggregate of the 70 interpretations should, within certain limits, be robust in respect to different readings of individual sources.

Bearing these qualifications in mind, one can relate the conceptual profile of Figure 1 to Koselleck's CON. The profile illustrates the sedimentation of an increasing number of semantic layers on top of each other as postulated. The CON implies that every application of the concept resonates with these layers. If judged within the adopted perspective, which regards concepts as social institutions, the conceptual profile offers one possible representation for how individual concept applications blend into each other to establish a conceptual polymorphicity on the collective level, which in turn reflects back on how the concept is understood by individuals who, for example, diagnose it as "vague" or "ill-defined".

CONCLUSION

In this paper, I have discussed *Begriffsgeschichte* as a naturalistic alternative to conventional forms of conceptual history closely related to the history of ideas. As the comparison with David Bloor's work revealed, the naturalistic basis of *Begriffsgeschichte* consists in understanding concepts as social institutions. Concepts, according to Reinhart Koselleck, represent words the self-referential property of which establishes them as social factors alongside the other institutions studied by the social historian. They achieve this status in virtue of their inherent ambiguity, making the semantic layers of which they consist reach across all concept invocations of a given period (the synchronic dimension) and from the past seamlessly into the future (the diachronic dimension). Koselleck has described this interplay of the synchronic and diachronic dimension as the CON. The "conceptual profile" developed above is an attempt to make the CON amenable to empirical research. It adds to the study of the institutional growth of a concept a semantic dimension, illustrated by the changing "modalities" in which the concept of transaction costs appeared in the literature.

Where does this leave *Begriffsgeschichte* in respect to the two currents of conceptual and institutional history of economics described at the beginning of the paper? *Begriffsgeschichte* methodologically concentrates on the source material in which the concepts it studies have developed. This gives it a distinct "internalist" flavor of concentrating on the detailed exegesis of economic texts that should appeal to those who are reluctant to leave traditional doctrinal history behind in order to embrace the new fields of science studies. At the same time, however, an understanding of concepts as social institutions places *Begriffsgeschichte* firmly within the domain of social history. Koselleck has argued this point along three dimensions. In the first instance, *Begriffsgeschichte* is a specialized method of source criticism, focusing on the clarification of past conceptual usage (Koselleck 1972b, pp. 78–99). Transposed to the history of economics, it is this feature that allows one—at least in principle—to engage

on the theoretical level with one's ahistorical colleagues in the economics departments.

Secondly, *Begriffsgeschichte* organizes past concept invocations in synchronic and diachronic space (according to the conceptual profile, for example), thus locating persistence and change internal to the historical development of the concept. This establishes, in a provisional methodological sense, *Begriffsgeschichte* as an autonomous domain of research (Koselleck 1972b, p. 81). And finally, *Begriffsgeschichte* represents a genuine historical claim which establishes it as a necessary complement to social history (Koselleck 1972b, pp. 88–91). Concepts are social institutions in their own right, which exert and absorb influences like any other institution studied by the social historian. Possible conceptual vehicles to address this point can be found in Bloor's principle of the superposition of language games, or in Koselleck's CON. For SSK in particular, *Begriffsgeschichte* is a way of identifying another candidate social factor capable of accounting together with other relevant factors—for a particular scientific knowledge claim.

Any attempt to occupy a middle-ground position is a risky undertaking. Proponents of the conflicting positions will either try to appropriate the position to strengthen their own program, or push it into the camp of their adversaries. Conceptual historians of economics are likely to sympathize with Begriffsgeschichte, disregarding its implicit rejection of conventional conceptual history. Begriffsgeschichte regards the content of concepts as being systematically ambiguous, and hence any attempt to historically reconstruct changing conceptual content as mistaken. Institutional historians, on the other hand, will see Begriffsgeschichte as a reactionary attempt to re-establish conceptual history in another guise, and as a preliminary and insufficient first step towards a comprehensive institutional historical account. But in this regard, the proponent of Begriffsgeschichte should stand firm. Begriffsgeschichte does not claim to subsume the realm of the social to the conceptual level. It understands itself as not more than an aide to more comprehensive institutional histories. But, by drawing attention to institutional dynamics within the conceptual level, it constitutes a *necessary* aide for institutional history, which, be it in the history of economics or SSK, has hitherto shied away from historical semantics as being dangerously internalist. To give an example, the systematic ambiguity of the transaction cost concept can be regarded as one of the constitutive factors underlying the successful institutionalization of the new institutional economics, which in turn is an important explanatory factor of the diffusion of Coase's "The Nature of the Firm" (1937; cf. Klaes 1999). Disregarding the insights provided by the Begriffsgeschichte of transaction costs would result in an institutional history of the economics of Ronald Coase which misses a crucial explanatory link.

But less than trying to establish a middle-ground position, the overall aim of this paper has been to soften the divide between conceptual and institutional history of economics. My proposal is to approach *Begriffsgeschichte* in a way congenial to the science studies literature without sacrificing the basis for "internal" appraisal and criticism. There are only two qualifications: conceptual historians would have to add a naturalistic turn to their study of economic concepts, and institutional historians would have to develop a taste for historical semantics.

APPENDIX 1: SOURCE MATERIAL IN CHRONOLOGICAL ORDER

- 1. Marschak, Jacob. 1950. "The Rationale of the Demand for Money and of 'Money Illusion'." *Metroeconomica* 2: 71–100.
- 2. Baumol, William J. 1952. "The Transactions Demand for Cash: An Inventory Theoretic Approach." *Quarterly Journal of Economics* 56: 545–56.
- 3. Tobin, James. 1956. "The Interest-Elasticity of Transactions Demand for Cash." *Review of Economics and Statistics* 38: 241–47.
- Marschak, Jacob. 1959. "Remarks on the Economics of Information." In J. Marschak, *Economic Information*, *Decision*, *and Prediction*: *Selected Essays*, Vol. 2, Dordrecht, Holland: Reidel, 1974, pp. 91–117.
- 5. Modigliani, Franco and Merton H. Miller. 1959. "The Cost of Capital, Corporation Finance, and the Theory of Investment: Reply." *American Economic Review* 49: 655–69.
- 6. Hymer, Steven H. 1960. *The International Operations of National Firms: A Study of Foreign Direct Investment*. Ph.D. Thesis. Cambridge, MA: MIT Press, 1976.
- 7. Malmgren, Harald B. 1961. "Information, Expectations and the Theory of the Firm." *Quarterly Journal of Economics* 75: 399–421.
- 8. Miller, Merton H. and Franco Modigliani. 1961. "Dividend Policy, Growth, and the Valuation of Shares." *Journal of Business* 34: 411–33.
- 9. Arrow, Kenneth J. 1963b. "Comment [on James S. Duesenberry]." *Review of Economics and Statistics* 45: S24–27.
- 10. Alchian, Armen A. and William R. Allen. 1964. *University Economics*, 2nd printing, Belmont, CA: Wadsworth.
- 11. Brunner, Karl and Allan H. Meltzer. 1964. "Some Further Investigations of Demand and Supply Functions for Money." *Journal of Finance* 19: 240–83.
- Arrow, Kenneth J. 1965. "Uncertainty and the Welfare Economics of Medical Care: Reply (The Implications of Transaction Costs and Adjustment Lags)." *American Economic Review* 55: 154–58.
- 13. Lees, Dennis S. and Robert G. Rice. 1965. "Uncertainty and the Welfare Economics of Medical Care: Comment." *American Economic Review* 55: 140–54.
- 14. Miller, H. Laurence. 1965. "On 'Liquidity' and 'Transaction Costs'." *Southern Economic Journal* 32: 43–48.
- 15. Patinkin, Don. 1965. *Money, Interest, and Prices*, 2nd edition (international edition). New York and Tokyo: Harper & Row and Weatherhill, 1969.
- Alchian, Armen A. 1965. "Some Economics of Property Rights." In A. A. Alchian, *Economic Forces at Work*. Indianapolis, IN: Liberty Press, pp. 127–49.
- 17. Malkiel, Burton G. 1966. *The Term Structure of Interest Rates: Expectations and Behavior Patterns*. Princeton: Princeton University Press.
- 18. Miller, Merton H., and Daniel Orr. 1966. "A Model of the Demand for Money by Firms." *Quarterly Journal of Economics* 80: 413–35.
- 19. Telser, Lester. 1966. "Supply and Demand for Advertising Messages." *American Economic Review, Papers and Proceedings* 56: 457–66.

- 20. Alchian, Armen A. 1967. *Pricing and Society*. London: Institute of Economic Affairs.
- 21. Baumol, William J. and Burton G. Malkiel. 1967. "The Firm's Optimal Debt-Equity Combination and the Cost of Capital." *Quarterly Journal of Economics* 81: 547–78.
- 22. Clower, Robert W. 1967. "A Reconsideration of the Microfoundations of Monetary Theory." *Western Economic Journal* 6: 1–8.
- 23. Demsetz, Harold. 1967. "Toward a Theory of Property Rights." *American Economic Review* 57: 347–59
- 24. Calabresi, Guido. 1968. "Transaction Costs, Resource Allocation and Liability Rules: A Comment." *Journal of Law and Economics* 11: 67–73.
- 25. Demsetz, Harold. 1968. "The Cost of Transacting." Quarterly Journal of Economics 82: 33-53.
- 26. Liebeler, Wesley J. 1968. "Toward A Consumer's Antitrust Law: The Federal Trade Commission and Vertical Mergers in the Cement Industry." UCLA Law Review 15: 1153–202.
- 27. Pauly, Mark V. 1968. "The Economics of Moral Hazard: Comment." *American Economic Review* 58: 531–37.
- Arrow, Kenneth J. 1969. "The Organization of Economic Activity: Issues Pertinent to the Choice of Market versus Nonmarket Allocation." In K. J. Arrow, *Collected Papers of Kenneth J. Arrow*, Vol. 2. Oxford: Blackwell, 1983, pp. 133–55.
- 29. Clower, Robert W. 1969. "Introduction." In R. W. Clower, *Monetary Theory*. Harmondsworth, Middlesex, England: Penguin, 1973, pp. 7–21.
- 30. Eppen, Gary D. and Eugene F. Fama. 1969. "Cash Balance and Simple Dynamic Portfolio Problems with Proportional Costs." *International Economic Review* 10: 119–33.
- 31. Grossman, Herschel I. 1969. "Expectations, Transactions Costs, and Asset Demands." *Journal of Finance* 24: 491–506.
- 32. Niehans, Jürg. 1969. "Money in a Static Theory of Optimal Payments Arrangements." *Journal of Money, Credit, and Banking* 1: 706–26.
- 33. Stiglitz, Joseph E. 1969. "A Re-Examination of the Modigliani-Miller Theorem." *American Economic Review* 59: 784–93.
- 34. Cheung, Steven N. S. 1969a. *The Theory of Share Tenancy*. Chicago: University of Chicago Press.
- 35. Cheung, Steven N. S. 1969b. "Transaction Costs, Risk Aversion, and the Choice of Contractual Arrangements." *Journal of Law and Economics* 12: 23–42.
- 36. Cheung, Steven N. S. 1970. "The Structure of a Contract and the Theory of a Non-Exclusive Resource." *Journal of Law and Economics* 13: 49–70.
- 37. Davis, Lance E. and Douglass C. North. 1970. "Institutional Change and American Economic Growth: A First Step Towards a Theory of Institutional Innovation." *Journal of Economic History* 30: 131–49.
- 38. Foley, Duncan K. 1970. "Economic Equilibrium with Costly Marketing." *Journal of Economic Theory* 2: 276–91.

- 39. Hirshleifer, Jack. 1970. *Investment*, *Interest*, *and Capital*, Englewood Cliffs, NJ: Prentice-Hall.
- 40. McKean, Roland N. 1970. "Products Liability: Implications of Some Changing Property Rights." *Quarterly Journal of Economics* 84: 611–26.
- 41. Pogue, Gerald A. 1970. "An Extension of the Markowitz Portfolio Selection Model to Include Variable Transactions' Costs, Short Sales, Leverage Policies and Taxes." *Journal of Finance* 25: 1005–27.
- 42. Williamson, Oliver E. 1970. Corporate Control and Business Behavior. Englewood Cliffs, NJ: Prentice-Hall.
- 43. Arrow, Kenneth J. and Frank H. Hahn. 1971. General Competitive Analysis.
- 44. Brunner, Karl and Allan H. Meltzer. 1971. "The Uses of Money: Money in the Theory of an Exchange Economy." *American Economic Review* 61: 784–805.
- 45. Crocker, Thomas D. 1971. "Externalities, Property Rights, and Transaction Costs." *Journal of Law and Economics* 14: 451–64.
- 46. Davis, Lance E. and Douglass C. North. 1971. *Institutional Change and American Economic Growth*. Cambridge: Cambridge University Press.
- 47. Demsetz, Harold. 1971. "Theoretical Efficiency in Pollution Control: Comment on Comments." *Western Economic Journal* 9: 444–46.
- 48. Devletoglou, Nicos E. 1971. "Thresholds and Transactions Costs." *Quarterly Journal of Economics* 85: 163–70.
- 49. Feige, Edgar L. and Michael Parkin. 1971. "The Optimal Quantity of Money, Bonds, Commodity Inventories, and Capital." *American Economic Review* 61: 335–49.
- 50. Hahn, Frank H. 1971. "Equilibrium with Transaction Costs." *Econometrica* 39: 417–39.
- 51. McKean, Roland N. 1971. "Discussion of 'The Vertical Integration of Production: Market Failure Considerations' by O.E. Williamson." *American Economic Review, Papers and Proceedings* 61: 124–25.
- 52. McManus, John C. 1971. "La Théorie de l'Entreprise Plurinationale." *L'Actualité Economique* 46: 667–90.
- 53. Mishan, Edward J. 1971. "Pangloss on Pollution." Swedish Journal of Economics 73: 113–20.
- 54. Niehans, Jürg. 1971. "Money and Barter in General Equilibrium with Transactions Costs." *American Economic Review* 61: 773–83.
- 55. Pye, Gordon. 1971. "A General Equilibrium Model of the Term Structure Under Transaction Costs." *Review of Economic Studies* 38: 447–55.
- 56. Sargent, Thomas J. and Neil Wallace. 1971. "Market Transaction Costs, Asset Demand Functions, and the Relative Potency of Monetary and Fiscal Policy." *Journal of Money, Credit, and Banking* 3: 469–505
- 57. Saving, Thomas R. 1971. "Transactions Costs and the Demand For Money." American Economic Review 61: 407–20.
- 58. Shapiro, Harold T. 1971. "The Efficacy of Monetary and Fiscal Policies [Comment]." Journal of Money, Credit, and Banking 3: 550-54.
- 59. Williamson, Oliver E. 1971. "The Vertical Integration of Production: Market Failure Considerations." *American Economic Review, Papers and Proceedings* 61: 112–23.

- Alchian, Armen A. and Harold Demsetz. 1972. "Production, Information Costs, and Economic Organization." *American Economic Review* 62: 777– 95.
- 61. Furubotn, Eirik G. and Svetozar Pejovich. 1972. "Property Rights and Economic Theory: A Survey of Recent Literature." *Journal of Economic Literature* 10: 1137–62.
- 62. Graham, Daniel A., Edward Jacobson, and E. Roy Weintraub. 1972. "Transactions Costs and the Convergence of a 'Trade out of Equilibrium' Adjustment Process." *International Economic Review* 13: 123–31.
- 63. Heller, Walter P. 1972. "Transactions with Set-up Costs." Journal of Economic Theory 4: 465–78.
- 64. McManus, John C. 1972. "The Theory of the International Firm." In Mark Casson, *Multinational Corporations*. Aldershot: Elgar, 1990, pp. 32–62.
- 65. North, Douglass C. 1972. "Government and the American Economy." In Lance E. Davis, Richard A. Easterlin, and William N. Parker, eds., *American Economic Growth*, New York: Harper and Row, pp. 636–64.
- 66. Posner, Richard A. 1972. *Economic Analysis of Law*. Boston: Little and Brown, 1975.
- 67. Saving, Thomas R. 1972. "Transactions Costs and the Firm's Demand for Money." *Journal of Money, Credit and Banking* 4: 245–59.
- 68. Sherman, Roger. 1972. "How Tax Policy Induces Conglomerate Merger." *National Tax Journal* 25: 521–29.
- 69. Sontheimer, Kevin. 1972. "On the Determination of Money Prices." *Journal* of Money, Credit and Banking 4: 489–508.
- 70. Stigler, George J. 1972. "The Law and Economics of Public Policy: A Plea to the Scholars." *Journal of Legal Studies* 1: 1–12.
- 71. Varaiya, P. and Roland Artle. 1972. "Locational Implications of Transaction Costs." *Swedish Journal of Economics* 74: 174–83.
- 72. Veendorp, Emiel C.H. 1972. "Money in a Static Theory of Optimal Payment Arrangements: Comment." *Journal of Money, Credit, and Banking* 4: 437–40.
- 73. Dutton, Dean S. and William P. Gramm. 1973. "Transactions Costs, the Wage Rate, and the Demand for Money." *American Economic Review* 63: 652–65.
- 74. Friend, Irwin and Marshall E. Blume. 1973. "Competitive Commissions on the New York Stock Exchange." *Journal of Finance* 28: 795–819.
- 75. Hahn, Frank H. 1973. "On Transaction Costs, Inessential Sequence Economies and Money." *Review of Economic Studies* 40: 449–61.
- 76. Hirshleifer, Jack. 1973. "Exchange Theory: The Missing Chapter." Western Economic Journal 11: 129–46.
- 77. Johnston, Ronald L. 1973. "A Decision-Making Process for the California Coastal Zone." *Southern California Law Review* 46: 513–64.
- 78. Karni, Edi. 1973. "Transactions Costs and the Demand for Media of Exchange." Western Economic Journal 11: 71-80.
- 79. Krier, James E. and D. Montgomery. 1973. "Resource Allocation, Information Cost and the Form of Government Intervention." *Natural Resources Journal* 13: 89–105.

- Reed, Clyde G. 1973. "Transactions Costs and Differential Growth in Seventeenth Century Western Europe." *Journal of Economic History* 33: 177–90.
- Reid, Joseph D. Jr. 1973. "Sharecropping as and Understandable Market Response: The Post-Bellum South." *Journal of Economic History* 33: 106– 30.
- 82. Rubinstein, Mark E. 1973. "A Mean-Variance Synthesis of Corporate Financial Theory." *Journal of Finance* 28: 167–81.
- 83. Starrett, David A. 1973. "Inefficiency and the Demand for 'Money' in a Sequence Economy." *Review of Economic Studies* 40: 437–48.
- 84. Williamson, Oliver E. 1973. "Markets and Hierarchies: Some Elementary Considerations." *American Economic Review, Papers and Proceedings* 63: 316–25.
- 85. Zabel, Edward. 1973. "Consumer Choice, Portfolio Decisions, and Transaction Costs." *Econometrica* 41: 321–35.
- 86. Cheung, Steven N.S. 1974. "A Theory of Price Control." Journal of Law and Economics 17: 53–71.
- 87. Coase, Ronald H. 1974. "The Choice of the Institutional Framework: A Comment." *Journal of Law and Economics* 17: 493–96.
- 88. Furubotn, Eirik G. and Svetozar Pejovich. 1974. *The Economics of Property Rights*. Cambridge, MA: Ballinger.
- 89. Gifford, Adam. 1974. "Transaction Costs, Uncertainty, and Externalities: A Note." *Public Choice* 19: 121–22.
- 90. Goldberg, Victor P. 1974. "Institutional Change and the Quasi-Invisible Hand." *Journal of Law and Economics* 17: 461–92.
- 91. Gould, John P. and Dan Galai. 1974. "Transactions Costs and the Relationship Between Put and Call Prices." *Journal of Financial Economics* 1: 105–29.
- 92. Heller, Walter P. 1974. "The Holding of Money Balances in General Equilibrium." *Journal of Economic Theory* 7: 93–108.
- 93. Merrill, Richard A. and E. M. Collier Jr, 1974. "'Like Mother Used to Make': An Analysis of FDA Food Standards of Identity." *Columbia Law Review* 74: 561–621.
- 94. Moomaw, Ronald L. 1974. "Vertical Integration and Monopoly: A Resolution of the Controversy." *Rivista Internazionale di Scienze Economiche e Commerciali* 21: 7–21.
- 95. Mukherjee, Robin and Edward Zabel. 1974. "Consumption and Portfolio Choices with Transaction Costs." In Michael S. Balch, Daniel L. McFadden, and Shih-yen Wu, eds., *Essays on Economic Behavior Under Uncertainty*. Amsterdam: North Holland, pp. 157–84.
- 96. North, Douglass C. 1974. *Growth and Welfare in the American Past*, 2nd edition. Englewood Cliffs, NJ: Prentice-Hall.
- 97. Randall, Alan. 1974. "Coasian Externality Theory in a Policy Context." *Natural Resources Journal* 14: 35–54.
- 98. Stiglitz, Joseph E. 1974. "On the Irrelevance of Corporate Financial Policy." *American Economic Review* 64: 851–66.

- 99. Tatsumi, Ken-ichi. 1974. "Transaction Costs and the Precautionary Demand for Money." *Economic Studies Quarterly* 25: 56–60.
- 100. Williamson, Oliver E. 1974. "The Economics of Antitrust: Transaction Cost Considerations." University of Pennsylvania Law Review 122: 1439–96.
- 101. Kurz, Mordecai. 1974a. "Equilibrium in a Finite Sequence of Markets with Transaction Cost." *Econometrica* 42: 1–20.
- 102. Kurz, Mordecai. 1974b. "Equilibrium with Transaction Cost and Money in a Single Market Exchange Economy." *Journal of Economic Theory* 7: 418–52.
- 103. Kurz, Mordecai. 1974c. "Arrow-Debreu Equilibrium of an Exchange Economy with Transaction Cost." *International Economic Review* 15: 699–717.
- Baumann, H.G. 1975. "Merger Theory, Property Rights and the Pattern of U.S. Direct Investment in Canada." Weltwirtschaftliches Archiv 111: 676–98.
- 105. Daly, George and J. Fred Giertz. 1975. "Externalities, Extortion, and Efficiency." *American Economic Review* 65: 997–1001.
- 106. Frenkel, Jacob A. and Richard M. Levich. 1975. "Covered Interest Arbitrage: Unexploited Profits?" *Journal of Political Economy* 83: 325–38.
- 107. Green, Jerry and Eytan Sheshinski. 1975. "Competitive Inefficiencies in the Presence of Constrained Transactions." *Journal of Economic Theory* 10: 343–57.
- 108. McManus, John C. 1975. "The Costs of Alternative Economic Organizations." *Canadian Journal of Economics* 8: 334–50.
- 109. Niehans, Jürg. 1975. "Interest and Credit in General Equilibrium with Transactions Costs." *American Economic Review* 65: 548–66.
- 110. Shubik, Martin. 1975. "The General Equilibrium Model is Incomplete and Not Adequate for the Reconciliation of Micro and Macroeconomic Theory." *Kyklos* 28: 545–73.
- Sutinen, Jon G. 1975. "The Rational Choice of Share Leasing and Implications for Efficiency." American Journal of Agricultural Economics 57: 613– 21.
- 112. Ulph, Alistair M. and David T. Ulph. 1975. "Transaction Costs in General Equilibrium Theory—A Survey." *Economica* 42: 355–72.
- 113. Williamson, Oliver E. 1975. Markets and Hierarchies: Analysis and Anti-Trust Implications: A Study in the Economics of Internal Organisation. New York: Free Press.

APPENDI	APPENDIX 2 ¹⁹ 1. Authors 2. Analysis 3. Profile											
1. Authors			2.	Analy	sis		3. Profile					
	First use	Broker age		bar-	/ Enf./ polic- ing	Instit. focus	Broker age	- Info/ search	bar-	/ Enf./ polic- ing	Instit. focus	
Marschak	1950	1					1	0	0	0	0	
Baumol	1952	1					2	0	0	0	0	
Tobin	1956	1					3	0	0	0	0	
Miller, M	1959	1					4	0	0	0	0	
Modigliani	1959	1					5	0	0	0	0	
Hymer	1960	1	1				6	1	0	0	0	
Malmgren	1961		1				6	2	0	0	0	
Arrow (a)	1963	1	1				7	3	0	0	0	
Alchian	1964	1		1	1		8	3	1	1	0	
Allen	1964	1		1	1		9	3	2	2	0	
Brunner	1964		1				9	4	2	2	0	
Meltzer	1964		1				9	5	2	2	0	
Lees	1965		1				9	6	2	2	0	
Miller, H	1965						9	6	2	2	0	
Patinkin	1965	1					10	6	2	2	0	
Rice	1965		1				10	7	2	2	0	
Malkiel	1966	1					11	7	2	2	0	
Orr	1966	1					12	7	2	2	0	

ADDENITIV 2^{19}

¹⁹ This table is based on a synthesis of three tables presented at the end of Chapters III to V of Klaes (1998). These tables categorize the transaction cost interpretations identified in the preceding analyses of the sources of the corpus (cf. Appendix 1 of this paper). The present table reflects these results, but instead of categorizing on the level of sources as done in the tables mentioned (a joint paper would count as one occurrence of the concept), it does so on the level of authors. The reason is that in the conceptual profile, the diffusion of the concept of transaction costs is studied as the growth of a social institution, which is composed of all the authors who collectively sustain it. Hence, the first column of the table lists all authors in the chronological sequence of their adoption of a particular interpretation of the concept (cf. Klaes 1998, Appendix 3). One consequence of this form of representation is the necessity to explicitly acknowledge the successive development of the concept in the work of an individual author, as is the case with Arrow, North, and Williamson (in the table, this is expressed by the letters "a," "b," and "c" after the author's name). The dating in these three cases is based on the following considerations Arrow (1963b, 1965) understood transaction costs as brokerage, search, and information costs while Arrow (1969) broadened this interpretation into a general category of comparative institutional analysis; Davis and North (1970) stressed the information dimension, North (1972) expanded the concept into a category of general institutional analysis, while North (1974) added the contracting and policing dimension; finally, Williamson (1975) broadened his earlier market centered interpretation of transaction costs (Williamson 1970) into a comparative institutional perspective. The dating of the other authors is based on the first explicit occurrence of the concept in their writing (which might be co-authored). Column 2 translates the tables of chapters III to V of Klaes (1998) into a binary code: "1" means that the respective author endorsed the particular dimension of the concept of transaction costs identified in the column label. Column 3 cumulatively counts the adoptions of a particular category by summing the "1" entries for each subcolumn of column three. For the three authors who change positions, account has been taken of the fact that the change might result in a decrease of the count of a particular column. This is the case in the switch from Arrow (a,11000) to (b,01111). Furthermore, if a particular dimension is reasserted by an author, the respective column count has not been increased.

1. Authors			2.	sis		3. Profile					
		Contr./ Enf./					Contr./ Enf./				
	First	Broker		bar-		Instit.	Broker		bar-		Instit.
	use	age	search		ing	focus	age	search		ing	focus
Telser	1966					1	12	7	2	2	1
Demsetz	1967	1		1	1		13	7	3	3	1
Calabresi	1968			1	1		13	7	4	4	1
Cheung	1968			1	1		13	7	5	5	1
Arrow (b)	1969		1	1	1	1	12	7	6	6	2
Clower	1969		1	1			12	8	7	6	2
Eppen	1969	1					13	8	7	6	2
Fama	1969	1					14	8	7	6	2
Niehans	1969		1	1			14	9	8	6	2
Davis	1970		1				14	10	8	6	2
Foley	1970	1	1			1	15	11	8	6	3
McKean	1970			1	1		15	11	9	7	3
North (a)	1970		1				15	12	9	7	3
Williamson	1970		1	1			15	13	10	7	3
Crocker	1971		1	1	1		15	14	11	8	3
Devletoglo u	1971		1				15	15	11	8	3
Feige	1971	1					16	15	11	8	3
Hahn	1971	1					17	15	11	8	3
Mishan	1971					1	17	15	11	8	4
Parkin	1971	1					18	15	11	8	4
Pye	1971	1					19	15	11	8	4
Rubinstein	1971	1					20	15	11	8	4
Saving	1971						20	15	11	8	4
Furubotn	1972			1	1		20	15	12	9	4
Graham	1972	1					21	15	12	9	4
Jacobson	1972	1					22	15	12	9	4
McManus	1972				1		22	15	12	10	4
North (b)	1972		1			1	22	15	12	10	5
Pejovich	1972			1	1		22	15	13	11	5
Sontheimer	1972						22	15	13	11	5
Stigler	1972		1	1			22	16	14	11	5
Weintraub	1972	1					23	16	14	11	5
Blurne	1973	1					24	16	14	11	5
Dutton	1973						24	16	14	11	5
Friend	1973	1					25	16	14	11	5
Gramm	1973						25	16	14	11	5
Hirshleifer	1973	1	1	1	1		26	17	15	12	5
Karni	1973		1	1			26	18	16	12	5
Krier	1973		1	1	1	1	26	19	17	13	6
Montgomery	1973		1	1	1	1	26	20	18	14	7
Reed	1973		1	1	1		26	21	19	15	7
Coase	1974		1	1	1		26	22	20	16	7
Galai	1974	1	1				27	23	20	16	7
Gould	1974	1	1				28	24	20	16	7

CONCEPTUAL AND INSTITUTIONAL HISTORY

1. Authors			2.	sis		3. Profile						
		Contr./ Enf./					Contr./ Enf./					
	First	Broker	- Info/	bar-	polic-	Instit.	Broker	- Info/	bar-	polic-	Instit.	
	use	age	search	gain	ing	focus	age	search	gain	ing	focus	
Kurz	1974	1		1	1		29	24	21	17	7	
Stiglitz	1974	1	1				30	25	21	17	7	
Baumann	1975		1		1		30	26	21	18	7	
Frenkel	1975	1	1				31	27	21	18	7	
Levich	1975	1	1				32	28	21	18	7	
North (c)	1975		1	1	1	1	32	29	22	19	7	
Shubik	1975		1				32	30	22	19	7	
Williamson(b)1975			1	1		1	32	31	23	19	8	

REFERENCES

Allen, Douglas W. 1991. "What Are Transaction Costs?" Research in Law and Economics 14: 1–18. Alchian, Armen A. and William R. Allen. 1972. University Economics, 3rd edition. London and

Belmont, CA: Prentice-Hall and Wadsworth UK.

- Anscombe, Gertrude E. M. 1976. "The Question of Linguistic Idealism." In G. E. M. Anscombe, ed., *Collected Papers*, Vol. 1. Oxford: Blackwell, 1981.
- Backhouse, Roger E. 1995. Interpreting Macroeconomics. London: Routledge.
- Barnes, Barry. 1983. "Social Life as Bootstrapped Induction." Sociology 17 (November): 524-45.
- Barnes, Barry, David Bloor, and John Henry. 1996. Scientific Knowledge: A Sociological Analysis. London: Athlone.

Birken, Lawrence. 1988. "From Macroeconomics to Microeconomics: The Marginalist Revolution in Sociocultural Perspective." *History of Political Economy* 20 (Summer): 251–64.

- —. 1994. "Intellectual History and the History of Economic Thought: A Reply to J. M. Lipkis." *History of Political Economy* 26 (Fall): 501–508.
- Black, R. D. Collison. 1960. Economic Thought and the Irish Question, 1817–1870. Cambridge: Cambridge University Press.

Bloor, David. 1983. Wittgenstein: A Social Theory of Knowledge. London: Macmillan.

—. 1996. "The Question of Linguistic Idealism Revisited." In Hans Sluga and David G. Stern, eds., *The Cambridge Companion to Wittgenstein*, Cambridge: Cambridge University Press.
—. 1997. Wittgenstein: Rules and Institutions. London: Routledge.

Brewer, Anthony. 1996. "[Reply to Henderson]" History of Economics Society Discussion List Archive, 11 November: www.eh.net/Archives/hes/nov-1996/0026.html.

Brugger, Walter. 1976. "Modalität." In W. Brugger, ed., *Philosophisches Wörterbuch*. Freiburg: Herder, 18th ed. 1990.

Brunner, Karl. 1951. "Inconsistency and Indeterminacy in Classical Economics." *Econometrica* 19 (April): 152–73.

Brunner, Otto. 1939. Land und Herrschaft, 5th edition. Darmstadt: Wissenschaftliche Buchgesellschaft, 1965.

—. 1952. "Die alt-europäische 'Ökonomik'." In O. Brunner, ed., Neue Wege der Sozialgeschichte. Göttingen: Vandenhoeck and Ruprecht, 1956.

- Casson, Mark. 1991. The Economics of Business Culture: Game Theory, Transaction Costs, and Economic Performance. Oxford: Clarendon.
- Cheung, Steven N. S. 1974. "A Theory of Price Control." Journal of Law and Economics 17 (April): 53–71.

Coase, Ronald H. 1937. "The Nature of the Firm." Economica N.S. 4 (November): 386-405.

Coase, Ronald H. and Douglass C. North. 1998. "Invitation to Join ISNIE." Newsletter of the International Society for New Institutional Economics 1 (Spring): 4.

- Dahlman, Carl J. 1979. "The Problem of Externality." *Journal of Law and Economics* 22 (October): 141–62.
- Davies, L. E. 1986. "Comment." In Stanley L. Engerman and Robert E. Gallman, eds., Long-Term Factors in American Economic Growth. Chicago and London: University of Chicago Press.

Dennis, Kenneth G. 1977. "Competition" in the History of Economic Thought. New York: Arno Press.

- Dixit, Avinash K. 1996. The Making of Economic Policy: A Transaction-Cost Politics Perspective. Cambridge, MA: MIT Press.
- Durkheim, Emile 1938. The Rules of Sociological Method, 8th edition, translated by S. A. Solovay and J. H. Mueller, edited by G. E. G. Catlin. New York and London: Free Press and Collier-Macmillan, 1966.
- Ekelund, Robert B., Jr. and Robert F. Hébert. 1985. "Consumer Surplus: The First Hundred Years." *History of Political Economy* 17 (Fall): 419–54.
- Emmett, Ross. 1997. "Reflections on 'Breaking Away': Economics as Science and the History of Economics as History of Science." *Research in the History of Economic Thought and Method*ology 15: 221–36.
- Furubotn, Eirik G. and Svetozar Pejovich. 1974. The Economics of Property Rights. Cambridge, MA: Ballinger.
- Hahn, Frank H. 1992. "Autobiographical Notes with Reflections." In Michael Szenberg, ed., *Eminent Economists.* Cambridge: Cambridge University Press, 1993.
- Hands, D. Wade. 1997. "Conjectures and Reputations: The Sociology of Scientific Knowledge and the History of Economic Thought." *History of Political Economy* 29 (Winter): 695–739.
- Henderson, James P. 1996. "Whig History of Economics is Dead—Now What?" *History of Econom*ics Society Discussion List Archive, Editorial (November): www.eh.net/HE/hes—list/Editorials/ henderson.php.
- Hicks, John R. 1935. "A Suggestion for Simplifying the Theory of Money." *Economica* N.S. 2 (February): 1–19.
- Hodgson, Geoffrey M. 1993. Economics and Evolution: Bringing Life Back Into Economics. Cambridge: Polity, 1994.
- Kaminsky, Howard and James Van Horn Melton. 1992. "Translators' Introduction." In Otto Brunner, *Land and Lordship*. Philadelphia, PA: University of Pennsylvania Press.
- Klaes, Matthias. 1998. *The Emergence of Transaction Costs in Economics: A Conceptual History*. Ph.D. Thesis Edinburgh: University of Edinburgh.
- —. 1999. "The Diffusion of 'The Nature of the Firm': A Sociology of Error?' *EIPE Seminar in Philosophy and Economics*, Erasmus University Rotterdam, 27 Oct. 1999.
- 2000a. "The History of the Concept of Transaction Costs: Neglected Aspects." Journal of the History of Economic Thought 22 (June): 191–216.
- 2000b. "The Birth of the Concept of Transaction Costs: Issues and Controversies." *Industrial* and Corporate Change 9 (December): 567–92.
- -----. 2002. Transaction Costs: A Conceptual History. Cambridge: Cambridge University Press.
- Koselleck, Reinhart. 1972a. "Begriffsgeschichte und Sozialgeschichte." In R. Koselleck, ed., Vergangene Zukunft. Frankfurt a. M.: Suhrkamp, 1979.
- —. 1972b. "Begriffsgeschichte and Social History." In R. Koselleck, ed., *Futures Past*, 1979, translated by Keith Tribe. Cambridge, MA: MIT Press, 1985.
- —. 1979. Futures Past, translated by Keith Tribe. Cambridge, MA: MIT Press, 1985.
- Kusch, Martin. 1996. "Sociophilosophy and the Sociology of Philosophical Knowledge." Acta Philosophica Fennica 61: 83–97.
- Lakatos, Imre. 1971. "History of Science and its Rational Reconstructions." In R. C. Buck and R. S. Cohen, eds., *Boston Studies in the Philosophy of Science* 8. Dordrecht: Reidel.
- Latour, Bruno. 1987. Science in Action. Cambridge, MA: Harvard University Press, 1994.
- Latour, Bruno and Steve Woolgar. 1979. Laboratory Life, 2nd edition. Princeton, NJ: Princeton University Press, 1986.
- Laurence, Stephen and Eric Margolis. 1999. "Concepts and Cognitive Science." In E. Margolis and S. Laurence, eds., *Concepts: Core Readings*. Cambridge, MA: MIT Press.
- Lipkis, Jeff M. 1993. "Historians and the History of Economic Thought: A Response to Lawrence Birken." *History of Political Economy* 25 (Spring): 85–113.
- Mirowski, Philip 1989. More Heat Than Light. Cambridge: Cambridge University Press.

-----, ed. 1994. Natural Images in Economic Thought. Cambridge: Cambridge University Press.

—. 2001. Machine Dreams. Cambridge: Cambridge University Press

- Niehans, Jürg 1987. "Transaction Costs." In John Eatwell, Murray Milgate, and Peter Newman, eds., *The New Palgrave*, vol. 4. London: Macmillan.
- Nietzsche, Friedrich. 1981. Zur Genealogie der Moral. In Karl Schlechta, ed., Friedrich Nietzsche: Werke in Drei Bänden, vol. 2. München: Hanser.
- Palonen, Kari. 1985. "Politik als Handlungsbegriff. Horizontwandel des Politikbegriffs in Deutschland 1890–1933." Commentationes Scientiarum Socialium 28, Helsinki: Finnish Society of Sciences and Letters.

- Schabas, Margaret. 1992. "Breaking Away: History of Economics as History of Science." History of Political Economy 24 (Spring): 187–203.
- Searle, John R. 1969. Speech Acts. Cambridge: Cambridge University Press.
- —. 1995. The Construction of Social Reality. London: Allen Lane.
- Sent, Esther-Mirjam. 1999a. "Military/Artificial Intelligence Military Science Policy and Herbert A. Simon," paper presented at the EIPE Workshop *Economists at War*, April 21, Erasmus University Rotterdam.

—. 1999b. "Institutional History of Economics." EAEPE Newsletter 21 (January): 8.

- Shapin, Steven. 1980. "Social Uses of Science." In George S. Rousseau and Roy Porter, eds., *The Ferment of Knowledge*. Cambridge: Cambridge University Press.
- Shapin, Steven. 1992. "Discipline and Bounding: The History and Sociology of Science as Seen Through the Externalism-Internalism Debate." *History of Science* 30 (December): 333–69.
- Shapiro, Harold T. 1971. "The Efficacy of Monetary and Fiscal Policies [Comment]." Journal of Money, Credit, and Banking 3 (May): 550–54.
- Stierle, Karheinz. 1979. "Historische Semantik und die Geschichtlichkeit der Bedeutung." In Reinhart Koselleck, ed., *Historische Semantik und Begriffsgeschichte*. Stuttgart: Klett-Cotta.
- Stigler, George J. 1950a. "The Development of Utility Theory I." *Journal of Political Economy* 58 (August): 307–27.
- —. 1950b. "The Development of Utility Theory II." Journal of Political Economy 58 (October): 373–96.
- Tribe, Keith. 1978. Land, Labour and Economic Discourse. London: Routledge & Kegan.
- —. 1985. "Translator's Introduction." In Reinhart Koselleck, *Futures Past*, translated by Keith Tribe Cambridge, MA: MIT Press, 1985.
- Weintraub, E. Roy. 1991. Stabilizing Dynamics. Cambridge: Cambridge University Press.
- Williamson, Oliver E. 1979. "Transaction-Cost Economics: The Governance of Contractual Relations." *Journal of Law and Economics* 22 (October): 233–61.
- Williamson, Timothy. 1994. Vagueness. London: Routledge.

Winch, Donald. 1969. Economics and Policy: A Historical Study. London: Hodder and Stoughton.