

## **Managing - According to Williamson, or to Coase?**

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### *Abstract*

In 1937 Ronald H. Coase famously suggested micro economists did not understand the 'nature of the firm' and could not answer his 'killer questions': Why firms existed? Why their boundaries and internal arrangements were as they were? Why their performance was so varied? Given private firms are the 'engines' of our capitalist system Coase's charge was piercing. What could management schools teach without a clear notion of the entity/phenomena being managed? Faced with the same questions, management theorists adopted two 'Mother-metaphors'; the firm as (1) a rationally designed and administered 'machine' or (2) an integrated community. The first presumed good management led to more efficient resource-use; the second to employees' greater commitment to the firm's goals. Strategy theorists adopted a third metaphor, (3) the firm as an actor pursuing profit in imperfect lumpy markets. Yet few management theorists conceded Coase's critique also applied to these metaphors. The reason is 'economic entropy'; all transactions incur 'positive transaction costs' - frictions - so firms must create fresh economic value to overcome these. None of the metaphors explained this. Nor could the questions be answered by theories of leadership or entrepreneurship based on the same metaphors. A fourth 'positive transaction economics' metaphor was needed to help economists and management theorists deal with real-world managing, leadership, and entrepreneurship. Crucially, Coase suggested it would hinge on the Knightian uncertainties that made the neoclassical assumptions of perfect markets and zero-cost transacting irrelevant. In the 1970s micro economists took up Coase's ideas and created New Institutional Economics (NIE). The paper explores NIE's genesis, viability, and managerial implications. Among our conclusions; Williamson's theories are limited and Coase's subtler intuitions have yet to be fleshed out.

Keywords: Transaction Cost, Coase, Williamson, entrepreneurship, theory of the firm

## *Background*

The popular story is that in the 1950s, after many decades of being 'much cited but little used', Coase's 1937 paper was rediscovered as a less mathematical and more realistic way of looking at firms; its key novelty being 'transaction cost' (TC) the unavoidable costs of doing business in our real and uncertain world. In the 1970s micro economists used TCs to construct a new analysis - New Institutional Economics (NIE). Several NIE authors have since won the Swedish Riksbank Prize (the 'Economic Nobel'); including Coase in 1991 and Oliver E. Williamson in 2009. Management theorists could then add NIE metaphors to their current inventory of ideas about firms. But they were slow to appreciate that Coase's intuitions threatened their preceding metaphors; the firm as a machine, or as a community, or as a profit-seeking entity in imperfect markets. Positive transaction costs show managing could not be abstracted from the real world, a 'state of nature' that must be explored empirically. In which case, rational decision-making alone was no longer sufficient to theorizing managing, whether that be designing, motivating, or strategizing. Managers had to deal with their firm's situation and its specific facts. No general model would suffice. For example, marriage may seem a general concept, but not for the parties concerned. Coase implied the essence of managing was not adjusting a universal model to a unique situation. Rather the other way around. Actors are engaged with details; generalizations might inform their situation, but could never dictate their actions. Notwithstanding this, most of us continue take rational models of firms 'for granted', vainly searching for their general characteristics. Coase showed this project was no longer viable - triggered by the option to work 'across markets' - to 'buy' instead of 'make'. Post NIE, many management theorists find comfort in viewing firms as loci of 'less loss', that managing's basic logic is loss-reduction - in Williamson's language, 'economizing' TCs.

This overlooks the corollary. TCs threaten the entire economic analysis unless there are complementary mechanisms to create new economic value - at least sufficient to cover the losses remaining after managers have reduced them as far as they are able. This paper treats 'the firm' as a locus of value-creation by contrasting Coase's and Williamson's treatments of TCs. Its initial sections explore how the new economic metaphor emerged

from denying perfect markets and naïve rationality. But the implications remain muddy. One conclusion is that TCs are the costs of dealing with Knightian uncertainty; they are not factor costs. No uncertainty, no TCs, and no firm. A second is that Williamson's views, now mainstream, overlook the value-creation necessary to the 'positive-TC' approach Coase called for in his Nobel speech. At the same time, Coase's intuitions were promising but not explicated. Note, though, that he used 'entrepreneur' 24 times in his 1937 paper; 'transaction cost' not once.

Making sense of Coase is a cottage industry, given his idiosyncrasy, sharpness, and the stories he told about himself (Coase, 1991a, 1991b, 1991c, 1991d, 1991e). Yet his intuitions about how economic activity might lead to new economic value were based on personal experience of business and business people. While profound they were never well-articulated - so we risk crediting him with responding to influences he eschewed and ideas he would have rejected. But some things are clear. While often considered similar, Williamson's TC analysis differed substantially from Coase's. Given the considerable impact of NIE on the management literature (e.g. Foss, Foss, & Klein, 2017; Furubotn, 2001; Hodgson, 1998; Hovenkamp, 1990; Khalil, 1995; Macher & Richman, 2008; Madhok, 1996; Masten, 1993; Vanberg, 1989) there is less critique than seems due (Ankarloo & Palermo, 2004; Ghoshal, 2005; Ghoshal, Bartlett, & Moran, 1999; Hodgson, 2010; Kay, 2015).

Coase and Williamson differed on 'transaction', 'transaction cost' and, most fundamentally, on 'uncertainty' - and thus on 'the firm'. One key to this intellectual archeology is Frank Knight's *The Economic Organization*, sometimes considered the most influential economic text of the modern era (Knight, 2013:vii). The paper turns on our protagonists' different appreciations of Knightian uncertainty (KU) and its impact on the economic activity (Knight 1921; Knight, 2013). A second key is Wesley Hohfeld's work, influential in the US from the 1920s onwards, especially in 1948 when Coase spent 9 months in the US researching broadcasting regulation (Wang, 2014). Hohfeld is little cited today and no mention of his work can be found in Coase's *oeuvre*. But Hohfeld was pivotal for John R. Commons, generally credited with introducing the term 'transaction' into economics as well as to shaping the 'old' institutional economics (Hodgson, 2003; Langlois,

1989, 2017; Schweikhardt, 1988). Coase's immersion in US 'legal realist' or 'functionalist' thinking while researching broadcasting regulation (Calabresi, 2003; Kalman, 1986; Williamson, 1996b) informed his BBC book (Coase, 1950).

Coase's paper on the Federal Communications Commission (FCC) raised the possibility of auctioning broadcasting spectrum (Coase, 1959:15), citing Herzel (Herzel, 1952). Herzel's suggestion reflected Hohfeld's views on 'rights, duties, and obligations'. Earlier property law was dubbed 'sovereign'. Property rights were absolute; an owner was free to do whatever s/he willed with the property 'owned'. Against this doctrine Hohfeld pointed out property rights were always problematic in a political economy based on laws; for property-rights were never absolute. Rather than being sovereign, they were better specified as their 'owners' rights to use, dispose, and exclude', complementing the owners' 'obligations and duties'. Owners were neither sovereigns nor States but always citizen-subjects whose rights were defined and bounded by the superior authority's laws. Wireless spectrum property rights were especially problematic given there was nothing tangible about them.

This paper suggests Coase was significantly influenced by Hohfeldian thinking and thereby carried over aspects of the 'old institutionalist' program - in spite of his famous dismissal of it as 'piles of data waiting for a theory or a fire' (Coase, 1984; Schweikhardt, Scorsone, & Doidge, 2015). He welcomed institutional attempts to bring aspects of social analysis into economics (Calabresi, 2003:2119; Madhok, 1996; Merrill & Smith, 2001; Vanberg, 1989; Williamson, 1996a, 1996c). Though not a legal scholar, he focused on the impact of the law - building up the *Chicago Journal of Law and Economics* to push this line of thought. He felt that any economics detached from law, surely a crucial feature of the real world, was irrelevant 'blackboard mathematics'. Throughout his long life he pilloried his colleagues' labors on the irrelevant, insisting they attend to the specifics of the situation, as in the 'case studies' he favored over mathematical models. But where did Coase look for realism and relevance? Philosophers know realism is a tricky notion. One discussion is around the realism of an analysts' assumptions. Much influenced by Karl Popper, Milton Friedman argued prediction was the true test of theory, that the realism of the theory's

assumptions was irrelevant (Friedman, 1953; Williamson, 2008). Herbert Simon countered that the purpose of theory was explanation, that assumptions connected theorizing to the world we experience (Simon, 1963).

Coase aligned with Simon, believing 'the specifics' were where realism and relevance - and profit - were to be found. This had profound methodological implications. The Aristotelian distinction between the general and particular runs throughout this paper (Devereux, 1986). As William Blake wrote in the margins to his Reynolds' *Discourses*, ca. 1808: "To generalize is to be an idiot. To particularize is the alone distinction of merit. General knowledges are those knowledges that idiots possess". The positivist assumption is that theory, being general, even universal, thereby captures what is objective and real, independent of what we think. It may be that an economy is an objective reality, independent of those involved, whose iron laws can be discovered and presented as determining or limiting our practice. But a more relevant epistemology starts out by focusing on our experiences, always particular, specific, and situated. We live one moment at a time and in only one time and place, never in 'the general'.

Neoclassical economists adopt 'rational man' (homogeneous and universal) specifically to escape the heterogeneity, uniqueness, and idiosyncrasies of experience. Though some psychologists seek general rules of perception, bias, behavior, etc., others explore the nature and drivers of the individuality we experience. Allport distinguished between (a) human personality (a universal construct) and (b) Bill's personality (something specific and experienced), and adopted Windelband's terms 'nomothetic' and 'idiographic' (Allport, 1962:405). Prediction is nomothetic, the aim of scientific theorizing about what we presume real; explanation is idiographic, paying attention to the specifics, experience, observation, uniqueness, initial conditions, etc. (Tsoukas, 1989). Note history's stories are idiographic, though expressed in language with a degree of generality - unavoidable, for that is how language communicates, never able to capture experience fully.

The new economic metaphor for managing must bring nomothetic and idiographic together. The deepest differences between Coase and Williamson were that Coase was

inclined to the idiographic, methodologically prioritizing attention to the particulars. This could illuminate the actor's options and help them deal with the challenges of inhabiting a real socio-economy. Williamson, in contrast, engaged the neoclassical nomothetic project, today's mainstream, searching for theory that would dictate optimal choosing. They also differed crucially on Knightian uncertainty (KU). While Williamson wrote of 'uncertainty', his understanding differed greatly from Knight's (Boudreaux & Holcombe, 1989; Hodgson, 2011; Nash, 2006). KU was also key to Coase's thinking; it is what inhibited nomothetic theory's relevance to the 'real world'. Knight's intuition was that absent KU there would be no firms. Coase's intuition was similar, that absent positive TCs there would be no firms. It followed that in the context of managing under KU or positive TCs, when firms might exist, there could be no purely nomothetic theory of the firm. The deeper conclusion was that 'the firm' is a profoundly idiographic concept, just as is the human individual. We understand ourselves idiographically, through our differences, not as instances of some nomothetic model. This has many ramifications, especially for those interested in managing in the real world, in creating new economic value rather than playing optimization games.

There are many puzzles about Coase's work, especially its greater impact on legal scholars than on economists. While it has prompted a new generation of scholarship and taken us well beyond the 'firms exist when make is cheaper than buy', Coasian ideas have yet to impact management theorizing thoroughly. The history is that, especially after the 1959 *Foundation Reports* (R. Gordon & Howell, 1959; Pierson & Others, 1959), the management discipline prioritized 'rigorous' nomothetic analysis, pushing aside 'softer', idiographic and historical methods of 'general management' – thus moving away from Coase's program and closer to Williamson's. But management theorists have more pressing reasons than have micro economists to puzzle about profit and the private firm as the politically legitimated apparatus to generate it. A new generation of writers is focusing on entrepreneurship, leadership, innovation, and the dynamics essential to a practical understanding of firms, despite having no tenable theory of the firm. Likewise, few see the firm as the politically situated instrument Coase knew it to be. There is urgency here, for many developed economies are implementing neoliberal policies that 'privatize' and so

deliver public sector agencies into the hands of private firms, even as we know little about how they work (Veldman, 2013). The discussions about globalization, the Precariat, and inequity, such as Piketty's or the protests about 'maximizing shareholder value' (MSV), imply the 'footloose private firm' cannot avoid generating both profit and inequity and is therefore - as Buffett described derivatives in 2002 - a 'financial weapon of mass destruction'. Coase's theorizing implied a necessary link between profit and inequity.

Neoclassical economics' focus is on individuals' perfect rationality and maximizing exchange; it is 'hard'. NIE is 'softer', embracing power, culture, and history along with 'imperfect' people. But the resulting inter-penetration of categories leads to confusion and mainstream theorists' displeasure. Coase's insight was to presume the different modes of organization are economic choices - so leading to different costs - and towards an economic explanation of why managers might favor one mode of organization rather than another. The choice would not be based on OB/OT notions of power or personal flourishing. Coase's 1937 paper linked 'organization' and 'cost', but offered no clear 'theory of the firm'. Rather he set out a program for researching the plurality of influences over a specific real-world firm's formation, operation, and survival (Coase, 1988a). He considered his principal achievement was to suggest why firms existed and so set out a research program into how firms divided up the functions they performed for the economy, illuminating the boundary between its private and public sectors (Coase, 1972). Towards the end of his life he saw rejecting neoclassical economics' zero-TC assumption led not only towards understanding 'the firm', a previously unexplained phenomenon of democratic capitalism, but also towards a radically new kind of 'positive TC' economics. This has yet to be articulated.

Williamson was among those leading the effort to flesh out NIE. He saw Coase's insights as 'fundamental' but that his analysis was "not operationalized in a fashion that permits one to assess the efficacy of completing transactions between firms and markets in a systematic way" (Williamson, 1975:3). This critique was extended later (Williamson, 1981:1546; 1985:78n7). At least in principle, OT and OB already offered alternative modes of organizing that could be costed comparatively, so leading to a rigorous theory of managing as 'economizing'. Much current OB and OT research is in this direction. Chandler

made suggestions about the efficiency of alternative 'structures' (Chandler, 1962). Williamson showed how OT and OB ideas could reshape the economic analysis of managers' choices. He argued for four levels of analysis; (1) sociological, about society at large, (2) society's existing institutions including firms, laws, and norms, (3) firm-level governance or managerial control, and (4) a rigorous post-NIE economics. He claimed NIE dealt with levels 2 and 3. His 'transaction cost economics' (TCE) - the most recognizable part of NIE - brought 'governance' into micro economic analysis. Specifically, managers had to deal with the costs arising from 'bounded rationality, opportunism, uncertainty, small numbers phenomena, and information impactedness' (Williamson, 1975:257). Williamson argued TCE was an 'empirical success story' because research supported his hypothesis that managers reduced these costs by bringing OT and OB principles into their organizing (Williamson, 1999). Given such support, he anticipated TCE developing into a rigorous nomothetic theory (Williamson, 2016).

Coase accepted the NIE label but that did not stop him berating his colleagues for their failure to develop relevant theory (Coase, 1982, 1984, 2002; Coase & Wang, 2012; Hsiung, 2004). His 1937 paper hoped for an 'exact' analysis that would save Marshallian 'substitution at the margin' as the foundation of the new economics. His letters to his friend Fowler around the time revealed their concern with firm boundaries and size (Coase, 1991d) and, following Knight, they wondered why, if managers were indeed able to reduce costs and so explain a firm's existence, it would not then expand into a monopoly (Knight 1921:xxi). At the same time Coase noted the categories 'firm' and 'market' were muddy. Markets are moving patterns of individual economic events, they do not 'exist' as identifiable entities. Sometimes there are markets within firms.

Legal matters are central to the Coasian discourse; firms hold their assets together using the limited inventory of contract methods available. In his 1937 paper, Coase stressed the 'employment contract'. He later regretted this, calling it one of the paper's 'main weaknesses' for it led him to ignore the many other types of contract for acquiring and deploying the firm's capital (Coase, 1991b:65). Managers had to deal with multiple contracts whose character varied even as all were subordinate to the entrepreneur's vision

and the relevant social norms and corporate law, again varied. They had to estimate pricing practices, contractual arrangements, and organizational forms (Coase, 1991b:73). Given the uncertainties and complexities, their choices are not likely to be rigorous.

### *Williamson*

Coase was Williamson's elder by 22 years, nonetheless it helps to unpack Williamson's work before delving into Coase's subtler story. Williamson has written at length about his sources (Dahlstrom & Nygaard, 2010; Williamson, 1986, 1990a, 1996c, 2005, 2010a, 2010b, 2010c, 2014, 2016, 1990b). He is a product of the Graduate School of Industrial Administration (GSIA) at Carnegie Mellon; Simon was one of its founders (Khurana & Spender 2012). In 1960, on Charles Bonini's advice and with the GSIA Dean's encouragement, Williamson transferred from Stanford's doctoral program to GSIA's (Williamson, 1986:xiii). There, Richard Cyert, James March, and Allen Meltzer became influential. Williamson began work on 'managerial discretion', the managers' freedom to pursue goals other than profit-maximizing. Some of these might be 'personal', precipitating principal-agent issues. Williamson reported Simon's influence was 'massive'. Soon a paper he wrote for Simon's course on mathematical social science appeared in *Quarterly Journal of Economics* (Williamson, 1963) - before he was awarded his PhD in May 1963. He also had a chapter in Cyert & March's *Behavioral Theory of the Firm*, formalizing a managerial discretion model (Cyert & March, 1963:237-252).

Williamson's dissertation won a Ford Foundation Prize, though not everyone understood why (Ankarloo & Palermo, 2004; Kay, 2015; Zannetos, 1965). It was largely mathematical and quickly published by Prentice-Hall as *The Economics of Discretionary Behavior: Managerial Objectives in a Theory of the Firm* (Williamson, 1964). Williamson went on to UC Berkeley, spent the summer of 1964 at RAND, where he met Kenneth Arrow and other leading economists, spent the summer of 1965 at UCLA, and settled at U Penn's Economics Department for almost 20 years before moving back to Berkeley. But in Spring 1966, now an up-and-coming player in the US economics community, he was invited to the

US Department of Justice's Antitrust division for a year and worked on several cases: Schwinn, the Ford-Autolite merger, the P&G-Clorox merger, and the Utah Pie case. Returning to Penn, he was asked to teach a course on 'theories of institutions' which introduced him to institutional theorizing.

The DOJ and Penn experiences shifted Williamson from formal modeling towards 'institutional comparison' and a softer TC approach. He published on theorizing the firm's size (Williamson, 1967) but more importantly, on 'economizing' as a defense against charges of monopolization (Klein, Crawford, & Alchian, 1978; Williamson, 1968). His first piece on TCs was 'Vertical Integration of Production: Market Failure Considerations' which appeared in the *American Economic Review* (Williamson, 1971). It was much influenced by Arrow. Williamson cited Coase (1937) but offered no analysis. He also cited Malmgren's much overlooked paper, again without comment (Malmgren, 1961). The importance of Williamson's 1968 and 1971 papers lay in their support for Arrow's 1969 observations on monopolies. At the time monopolies were presumed to be anti-social exercises of capitalist power and so attracted antitrust legislation. Williamson showed there might be circumstances in which monopoly was a socially efficient way of organizing, a conclusion with significant political implications that eventually supported neoliberal policies and Reagan-era 'deregulation'. In these early papers Williamson noted Coase but again only in passing (Kay, 2015). Sensing his TC analysis could be extended from 'vertical integration' to management more generally, *Markets and Hierarchies (M&H)* began to take shape (Williamson, 1975). Providentially a graduate student working with Williamson (and the student's lawyer wife) introduced him to labor law. *M&H* was rejected by Brookings but eventually published by Free Press in 1975. It was quickly recognized as a major contribution to the political debate and to micro economics. Williamson was awarded a Nobel in 2009.

Williamson summarized his view of TCE many times. In *M&H* it was a novel analysis to be set against 'received micro theory, the structure-conduct-performance paradigm, the property rights tradition' (Williamson, 1975:250). Its distinctive features were: a 'value-free' focus on transactions, comparative institutional analysis, explicit provision for

'bounded rationality, opportunism, complexity/uncertainty, small numbers bargaining, organizational forms, and atmosphere', and a denial of the fiction of 'frictionless' transacting. (Asset specificity came later.) A few pages on the 'organizational failures' framework was summarized as: bounded rationality, opportunism, uncertainty, small numbers, information impactedness, and atmosphere (Williamson, 1975:257).

In later discussion Williamson cited James M. Buchanan's shift from an 'economics of choice' to an 'economics of contract', pitting the new economics against Robbins's definition. TCE focused on the costs, merits, and weaknesses of making and enforcing contracts between parties engaged in economic activities. Given real-world contracts were invariably 'incomplete', contracted parties were in a state of 'bilateral dependency'. Efficiencies could arise as the parties 'adapted' their values and intentions, a dynamic and 'inter-temporal' process. Time was drawn into the analysis. Williamson argued that trying to design 'perfect' arrangements was a 'truncated way to study organizations'. The focus should be on contracting with employees, with other firms, and with other agents in markets. This involved 'haggling' and legal process, so was often costly. However, contracts within firms could be treated with 'forbearance', settling things by management 'fiat', so reducing costs. Williamson's Nobel citation noted he had shown how "to regard markets, firms, associations, agencies, and even households from the perspective of their contribution to the resolution of conflict", thereby introducing 'governance' into neoclassical economics. His goal was to develop a 'predictive theory of economic organization' (Williamson, 2010b:215).

### *Coase*

Some aspects of Coase's story are well known (Coase, 1988b), how he was thought a semi-invalid, attended grammar school (an artifact of the British class system), enrolled in a University of London chemistry degree, discovered a life-long distaste of mathematics, and being debarred from studying history, switched to a Bachelor of Commerce. This included a correspondence course in accounting. It all helped him enroll at LSE. He chose 'industry'

for its Part 2, given the strong UK tradition of studying the nature and history of the commercial concerns on which the Empire stood (Pollard, 1968). Ironically, by the time Coase completed his BComm he had taken no economics courses. He felt attracted to Industrial Law. But he had also taken courses with Arnold Plant, LSE's new Professor of Commerce 'with special reference to business administration'. Plant befriended Coase and his support and mentoring was crucial to Coase's career. In Plant's seminar Coase stumbled into the question that defined his life's work; when to organize economic relations within a firm, when in a market. The rest, it seemed, was history.

But it was not so simple. Coase's question presumed some fundamental, unspecified, distinction between firms and markets; but how did they differ? Coase queried the taken-for-granted. Even in his 1937 paper, there was an echo of 'why markets?' But how could his thinking develop unsupported by the concepts of firms and markets that most adopt uncritically? Coase conceded he was not an outstanding student but nonetheless, with Plant's support, was awarded a traveling scholarship to spend the academic year 1931-1932 in the US. Before the trip, Coase attended Hayek's lectures and learned about the political impact of limited knowledge and information and how it was central to any economics that dismissed perfect knowledge as irrelevant - to wit, an economics of the real world. Hayek was using Knight's *Risk, Uncertainty, and Profit* as a text (Knight 1921). Likewise Knight's *The Economic Organization* was circulating in mimeograph (Knight, 2013:x). Knight defined economics as the study of alternative modes of socio-economic organization; caste, authority, democracy, exchange (Knight, 2013:20). He also discussed the firm's boundaries and 'substitution at the margin'.

Feeling ill-equipped to talk with US economists, Coase spent most of his time with businessmen - to whom he had good access with letters of commendation from UK government and trades union officials (a benefit of the UK class system available to him as an LSE student). He also devised clever methods of gaining access. He reported talking with a Union Carbide purchasing manager in Chicago and getting a 'lively sense of the possibilities of substitution' (Coase, 1991d:39). He also attended some of Knight's lectures, but seemed not to make much of them (Coase, 1937, 1991d). In contrast, Coase's

accounting courses covered both financial and managerial accounting; the latter then called 'cost and works accounting'. It dealt with estimating manufacturing costs. You qualified as an 'estimator'. It was forward-looking, anticipating costs, not backwards-looking ledger-keeping. It helped Coase appreciate that firms comprised many varied parts with dynamic inter-relations, in contrast to the financial accountants' work to condense everything into a single P&L figure. Today's accounting students learn little about what goes on within firms, or how to cost it (Johnson & Kaplan, 1987). These courses gave Coase a novel way to address Knight's questions about firms' organization and boundaries.

Returning from the US, Coase taught at Dundee, then Liverpool. His heavy teaching load delayed the paper, eventually published in 1937 with many comments on Knight's thinking - not all favorable. To his surprise - and disappointment - the paper dropped into oblivion immediately. But by then he had joined LSE's teaching staff and married Marian Hartung, the life-long partner he met at Northwestern U during his US trip. He was asked to teach a course on the economics of the public sector, something else he knew little about. With Plant's help he discovered others knew as little, beyond the suspicion that regulation's impact was often contrary to the public interest. Which helped move Coase towards more libertarian views. In 1938 he wrote a series of articles for *The Accountant* that laid out what was later dubbed the 'London Tradition on Opportunity Costs' (Coase, 1981a). That these were 'forward looking' was crucial to his later work.

A chance LSE assignment led Coase to study the regulation of broadcasting. This turned into a life-long project with huge impact on his thinking. Throughout WW2 Coase worked for Churchill's Cabinet operations as a statistician. In 1946 he was at the UK government's office in Washington DC. There, noting military and industrial planning's ineffectiveness, he moved closer to Hayekian libertarian ideas. He also was deeply immersed in the UK government's contracts with US suppliers and discovered most were vague and 'incomplete', only functioning through the parties' 'trust'. But intra-firm politics often severely impacted their implementation. A 1948 Rockefeller grant enabled a further 9-month visit to study US broadcasting regulation, which was complicated in the intensely competitive US market, in sharp contrast with the BBC's Crown monopoly. Coase

completed his BBC report in 1950 (Coase, 1950). Invited to attend hearings, he told the panel about the US idea of auctioning broadcast spectrum. Astounded, they presumed he was making a tasteless joke. Coase saw it as a comparative institutional arrangement, that a government might either assign spectrum or make a market to trade rights to use and exclude other broadcasters.

In 1950, unhappy about the UK political situation, Coase accepted the University of Buffalo chair vacated by Fritz Machlup, leaving there to join Buchanan, another of Frank Knight's students, at the University of Virginia. In 1958-1959 Coase spent a year at Stanford as a Fellow, finding Thomas Kuhn's work formative. He worked up a paper about the comparative institutional arrangements in broadcasting and submitted it to the new *Journal of Law and Economics* at the Chicago Law School. He was invited to Chicago to present it. He famously overcome objections to his anti-Pigovian treatment of 'social costs' from Milton Friedman, George Stigler, and others from the Chicago School of Economics (Klink, 1994; Simpson, 1996). Coase pondered why they had difficulty, concluding it was because they misunderstood 'opportunity costs'. He later discussed this with fellow LSE student Abba Lerner who shared the London Tradition. Lerner understood it 'in a minute'. The *JL&E* editor advised Coase to cut the offending parts of the 1959 paper but he declined. But he was more successfully persuaded to re-write the paper completely (Coase, 1960:n1), which was published in 1960 as "The Problem of Social Cost". Coase's Nobel citation stands on his 1937 and 1960 papers. He was invited to a joint appointment at the Chicago Law and Business Schools where he remained until his death in 2013.

Coase's 1959 and 1960 papers were very different. In 1959 Pigou was touched on; in 1960 demolished. In 1959 there was less economics, more law, an extensive discussion of the evolution of US broadcasting regulation. Coase noted the suggestion for using the price mechanism (auctioning) had come from Herzel, a Chicago Law student (Coase, 1959:14; Herzel, 1952, 1998). Coase later asked Herzel where he got the idea and was told it came from Lerner's lectures and book (Lerner, 1944). The 1951 *Chicago Law Review* 'Comment' that precipitated Herzel's suggestion showed the scholars involved were familiar with Coase's BBC work (*Chicago Law Review*, 1951:810n54) and with Lerner's 1944 *Economics*

*of Control* (Chicago Law Review, 1951:810n53). They were also familiar with Knight's *Economic Organization*. Coase's 1950 BBC monograph did not include Herzel's suggestion; which he must have read in 1952 - but before the BBC hearings.

### *Commons & Hohfeld*

A happy aspect of Coase's and Williamson's work is that interviews with both are available on YouTube<sup>1</sup>. They add a personal dimension to their writings. Coase had a sharp sense of humor. He was committed to managers and their practices, reiterating the importance of looking at their situation's specifics, especially its legalities. He endorsed case studies and working inductively towards the general. In contrast, Williamson saw himself in the nomothetic tradition, searching for better models. He anticipated developing TCE into rigorous theory by 'uncovering and explicating the micro-analytic features' of organizational governance (Williamson, 2000:596). He proceeded from TCE's axioms: bounded rationality, opportunism, uncertainty, small numbers, asset specificity, etc. In *M&H* he set off by noting Coase (1937) and Commons (1934) and presumed managers could mitigate the TCs arising from employees' imperfection. His 'model of man' - 'imperfect' or 'opportunistic', to be monitored and managed - has been widely attacked (Ghoshal, 2005).

Williamson told readers he was picking up the Coasian program. But was he? (Kay, 2015) He also claimed Commons as a major influence, but there is a curious lacuna; he cited only Commons's 1934 book. Only later did he cite, perhaps for the first time, Commons' more influential 1924 book (Williamson, 1993). In this book Commons went to great length to define 'transaction' (Commons, 1924:68). Many of those writing about TCs seem unaware of this definition. There was no evidence of Commons's thinking in

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<sup>1</sup> <https://www.youtube.com/watch?v=fpfi0gsTjrs>  
<https://www.youtube.com/watch?v=04zFygmeCUA&t=59s>  
<https://www.youtube.com/watch?v=u-nu0Q2CQKY>  
<https://www.youtube.com/watch?v=SSYYe-x9r68&t=790s>

Williamson's writings. Even today there is considerable disagreement about the nature of a 'transaction' (e.g. Allen, 1991; Barzel, 1985) and about how much TCE has achieved, indeed whether it can be tested at all (Crook, Combs, Ketchen Jr, & Aguinis, 2013; Geyskens, Steenkamp, & Kumar, 2006; Hodgson, 2010). Williamson showed little doubt and defined transactions, both external and internal to the firm, as 'exchanges' (Williamson, 1975:124).

Rather than presuming 'in the beginning there were markets' (Williamson, 1975:20), Coase presumed individuals with a 'propensity to truck, barter, and exchange'. The problem is to know what to consider. Institutional theorists divide on whether they focus on the details of the institutional environment, in the Douglass North tradition, or on the interpersonal relations and governance processes within institutions (Williamson, 1993:457). Coase was in the second camp and began his 1960 paper by claiming economic relations are 'reciprocal', between independent parties who have incommensurate ideas and interests, but whose negotiations are constrained by relevant law (Coase, 1960). Following Plant's suspicion that laws and regulations were often 'inefficient', Coase pilloried legislators who could not or did not pay attention to the economic consequences of their legalizing.

Coase's axiomatizing 'reciprocity' (Coase, 1960:2) suggested common ground with Commons - again not cited in Coase's *oeuvre*. Commons's 1924 analytic scheme emerged from a lengthy analysis of two Hohfeld papers (Commons, 1924:65-142; Hohfeld, 1913, 1917). These had huge impact on US corporate law, yet were likewise not cited by Coase. Hohfeld's work was extremely difficult (Andrews, 1983; Corbin, 1919; Pagano & Vatiero, 2014; Radin, 1938; Schlag, 2015; Singer, 1982; Vatiero, 2010). A 1996 Williamson paper cited Hohfeld but without comment (Williamson, 1996b:390). Borrowing greatly from Hohfeld, Commons argued every real transaction was (a) reciprocal, and (b) took place between at least five notional parties whose rights, obligations, and duties varied (Figure 1). The deal was always between A and B, buyer and seller, but also with A' and B', 'opportunity' buyers and sellers who would have 'done the deal' had A and B not closed it (Commons, 1924:68). Finally, there was C, the instrument of the legal power standing over the negotiation, setting its rules and boundaries, limiting the uncertainties engaged.

	C	
A		B
A'		B'

**Figure 1: Parties to every transaction (Commons 1924:68)**

The deeper point was that the economists' notion of 'the market', the locus of a mathematically analyzable 'perfect' deal between powerless actors, was displaced by an alternative idiographic metaphor of a real negotiation process between parties in a real society. Hohfeld pushed back against nomothetic market-based views, presuming each deal unique. The resulting analysis was idiographic and 'time-bound' rather than nomothetic and 'time-less'. As business people say, "timing is everything".

Williamson put epistemological and methodological distance between himself and Coase as he drew on the nomothetic OT and OB he learned at GSIA. Ultimately Williamson presumed 'the firm' already existed, essentially bureaucratic, so dodging Coase's first 'killer question'. Williamson then focused on the way 'bounded rationality' and so on would impede the firm's otherwise costless operation. He saw TCs as a 'loss of grace' story. TCE would collate every discoverable way in which people fail to live up to 'rational man'. But was Coase headed in a better direction? The charge the 'old institutionalists' - such as Ely, Veblen, Mitchell, and Commons - 'had no theory' hides the more precise charge - they had no nomothetic theory. This, we know, is the issue that leads many to complain about economics' irrelevance despite its vast research funding, teaching, and many Nobel Prizes. As Queen Elizabeth II famously asked 'why didn't anybody notice the 2008 collapse coming?' (Power, 2012). The old institutionalists were closer to the English tradition of Alfred Marshall and John Maynard Keynes; spelt out for a generation in John Neville Keynes's *Scope and Method of Political Economy* (Keynes, 1904). This was written at Marshall's request by John Maynard's father to head off an academic catastrophe in England like the *Methodenstreit* that ultimately wiped out the German economics tradition, opening

the way for the Anglo-American disciplinary dominance that lives on today, both in the literature and the Nobel count.

Keynes *Père* argued 'useful economics' stood on three pillars (a) rigorous economic science, (b) political theory, and (c) artful execution (skilled practice). While many saw, and still see, economics as 'science', remote from life's exigencies, Keynes (and Marshall) saw it differently, as an effort to inform those inhabiting our capitalist society about the way in which its economics works - thereby to inform, not determine, their practice. In today's terms, help them act mindfully. Ironically *Scope & Method* became the 'straw man' in Friedman's famous essay "The Methodology of Positive Economics" (Friedman, 1953). Helped along by Stigler, Friedman dismissed (b) and (c), valuing theory on its ability to predict. Knight emphasized the art (Knight, 1923; 2013:8). The discussion was muddied by Coase pointing out that if transactions were costless the initial assignment of the parties' legal rights would not affect the deal they ultimately negotiated. In Stigler's hands this became the 'Coase Theorem' or 'So-Called Coase Theorem', rejected by Coase himself (e.g. Allen, 2015; Coase, 1981b; D. A. Farber, 1997; Medema & Zerbe Jr, 1999; Schlag, 2013). Coase abhorred the 'blackboard' wherein law was immaterial to the economics. Although an often a gifted writer, he chose a maladroit way to persuade his readers to focus on positive TCs, that the law's allocation of property rights was always material, and that economists could not ignore it.

The switch from nomothetic to idiographic analysis opens the analysis to much methodological criticism - some evident in the long running debates about the 'case method'. As Coase grew older and his fame increased, eventually sealed by his Nobel and the success of *JL&E*, he grew less patient with those hewing to the nomothetic path. How, he wondered, could they find professional satisfaction theorizing a world that could not exist, in reasoning that had no impact on the urgent economic issues facing the living? At the same time the implications of his own 1937 and 1960 papers were not much clarified. Neither was the contrast between his methods and those of the mainstream. Yet to the end of his life, following Knight's direction, Coase found the energy to shake his fist at his

colleagues for what he felt was their moral failure to help those living in the real socio-economy Coase (Coase, 2003; Coase & Wang, 2012).

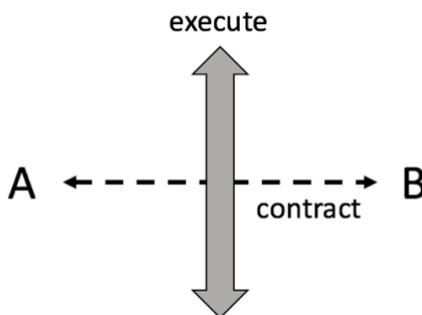
### *Uncertainty & Value Creation*

Knight's thinking shapes today's discussions about a useful and thus inherently moral and political economics - and thus about business ethics, corporate social responsibility, and much else. His influence over the Chicago school and thereby the entire field of economics was massive (Emmett, 2009; Knight, 2013; Mirowski & Nik-Khah, 2017; Overtveldt, 2007; Van Horn, Mirowski, & Stapleford, 2011). Much turns on 'taking KU seriously' (Bewley, 1998; Hoogduin, 1987; Hoogduin & Snippe, 1987; Korsgaard, Berglund, Thrane, & Blenker, 2016). Despite Coase's doubts about Knight's work in his 1937 paper, he sensed KU as key to the 'realism' he advocated throughout his life. No KU, no firms, no exchange, no economics. Knowledge, it turns out, is our imaginative response to KU, not the result of a privileged 'scientific' communication with reality. No KU, no knowledge, and even Hayek got lost here (Hayek, 1945). Ironically, no KU, no realism; if nothing is uncertain there is no contrast between the real and the not-real. Williamson and others dodged KU, preferring the 'blackboard' world of 'certainty presumed'. Williamson thought uncertainty a source of imperfection and inefficiency in this certainty, curiously citing his teacher, Herbert Simon, while missing the essence of Simon's thinking (Spender, 2013a). Note that Simon attended Knight's department as an undergraduate and surely read Knight's discussion on man's bounded rationality (BR) (Knight, 2013:15). BR is not incomplete understanding of what is known or even knowable. Rather it paints the human condition as both (a) conscious, and (b) conscious of never knowing reality, of not standing at the Archimedean Fulcrum.

Despite KU implying 'knowledge-absence', there are ways to frame it as the locus of economic value creation. The focus switches from pursuing 'perfectible knowledge', especially about markets and human weakness, and onto our creative responses as we collide with the 'knowledge absences' that impede our progress towards our chosen goals. Coase (1960) sketched an analysis of how micro-institutional inter-personal acts of

imagining, negotiating, and deal-making enabled heterogeneous parties (real actors rather than 'rational men' who see the world similarly) to create mutuality, common ground, and collaborative practice - and thereby new economic value. His 1960 paper showed how legislators often failed to 'design' optimal solutions and how, left to negotiate their own interests, the parties engaged might 'micro-institutionalize' a new 'win-win'. This micro-institutionalization provides the core to a Coasian metaphor of the firm. It is what entrepreneurs and leaders strive to make happen. It is absent from nomothetic theorizing, precisely because KU is ignored or dismissed.

Clarifying this requires some groundwork on 'transaction' and 'uncertainty'. First, as noted earlier, 'transaction' may mean 'exchange' or it may mean 'contract'. It is economical to treat it as both, mutually defining. In a Von Neumann machine computation flip-flops between two states: instruction and execution. A firm is a species of computer with (a) a knowledge-identity - perhaps labeled the entrepreneurial idea, business model, or strategy - and (b) a physical or ontological identity, assets (perhaps VRIN) and a production function, the font of entropy and, sometimes, economic value (Kraaijenbrink, Spender, & Groen, 2010). Profits arise from practice, not ideas, as the bi-modal firm 'flip-flops' between contracting and executing, direction and action, strategizing and implementing (see Figure 2). The states cannot be separated definitively without the razor of certainty; in KU circumstances, they are inherently dynamic, intertwined and mutually defining.



**Figure 2 Bi-Modal Contract/Execute Process**

Writers such as Klapp and Pitelis & Teece explored dynamic models of the firm by contrasting their different states of being (Klapp, 1975; Pitelis & Teece, 2010). Nonaka & Takeuchi's SECI analysis is the most pertinent model as 'knowledge' cycles from the development lab, where practice leads to knowledge creation, which is then transformed into economic value as senior management allocate resources (Nonaka & Takeuchi, 1995; Spender, 2013b). To those in the neoclassical tradition this is utter nonsense; no testable theory or predictions emerge (Cohen, 1935). But, countering this, rigorous economics appears incapable of explaining value-creation - or addressing Coase's questions. Rigorous choice does not create economic value. It explores correlations not causes. The methodological choice is brutal; no KU, no space for entrepreneurial judgment and imagination, so no firms and no value creation. How then to engage or 'theorize' KU with informative results?

The types of KU actors face can be parsed into (1) ignorance, (2) indeterminacy, (3) incommensurability, and (4) irrelevance (Spender, 1989:45). First, we may be '**ignorant**' of what is knowable. As Hayek and others insisted (Knight, 2013:73), the price system helps actors deal with ignorance of the information they need to make rational decisions. They can turn to 'the market' for the relevant facts, taken as 'objective'. Admitting that no mind can grasp them all does not diminish the facts' relevance. The actor/market relationship is nomothetic so long as no actor's choices affect the market. Goal pursuit can be analyzed without reference to other actors.

But, second, competition implies a completely different knowledge-universe, one of actors, not markets, in which the actors' relationships are reciprocal, idiographic, rather than between the actor and Mother Nature. Ignorance of 'objective facts' is not the issue. Under KU individuals are heterogeneous, they differ in interest and capability. The relevant knowledge is idiographic or 'subjective'. The socio-economy is in motion as the actors push to better themselves. There is no equilibrium, no single coherent body of 'true' knowledge. There is never-ending '**indeterminacy**' between the actors and their knowledge. This is the core axiom of game-theory (Shubik, 1954). Instead of uncertainty being at a general level, between a stylized (scientist) actor and a higher truth - such as the market - there is a

relationship between BR individuals. Indeterminacy will not yield to the scientific method for it only becomes ignorance under conditions of certainty. Third, from Adam's fall and the Book of Job onwards to Simon, we know the human condition is of BR. Plus we know many things but always in limited ways and 'differently' since everything we take as knowledge stands on specific assumptions (axioms) that can never be fully justified. As Descartes or Popper reminded us, no axioms are universal, no knowledge is irrefutable. We experience our knowledge as bounded, fragmented into '**incommensurate**' chunks Kuhn called paradigms.

Fourth, as Wittgenstein argued, knowledge claims must be expressed in language. So long as we define 'tacit knowledge' as that which is un-codified, we cannot speak it to others. There is no 'truth criterion' for tacit knowledge (Polanyi, 1962). Knowledge is public shareable language. There is no knowledge outside language, no private language. Mathematics is a powerful 'formal' language but not the only one we use. It cannot capture our uncertainties or responses - or the Coasian firm. Our formal languages are complemented by the un-formal 'natural' languages we use to negotiate living. Their openness helps us capture, somewhat, the emotions and anxieties we experience as we inhabit uncertain circumstances. In real-world KU circumstances, what we treat as 'objective facts' cannot be separated from the feelings and judgments we label religious, political, aesthetic, moral, social, cultural, and so on. Ultimately the institutional approach stands on taking our chosen natural languages seriously, trying to capture the specifics of our experience (Crémer, 1990; Crémer, Garicano, & Prat, 2007). Neoclassical approaches disregard them, presuming objective facts, perhaps falsifiable, putting distance between our analysis and our experiences. The blooming, buzzing confusion of realism is abandoned in favor of formalization - so risking our chosen language's **irrelevance**.

With these four stylizations of KU - ignorance, indeterminacy, incommensurability, and irrelevance - we can turn to the analysis of how we respond to KU imaginatively - as practice, as opposed to analytically. We respond differently depending how we categorize the uncertainty confronted. We enact different practices. Ignorance is addressed by 'researching' where we presume answers findable, sometimes formalized into using the

'scientific method'. Fetishizing science implies everything worth knowing can be obtained with such methods. But we also experience the other types of KU, when 'researching the market' is not an effective strategy. Again, uncertainties are aspects of us and how we know (both nomothetically and idiographically) not aspects (essences) of the things known. Managers must deal with indeterminacy and incommensurability as well as ignorance. Game theorists show that few indeterminacies can be framed conclusively, so establishing 'a strategy,' as they define the term. Most game-like circumstances have no determinable strategy. One response is bargaining, and this requires the parties to adapt as they move towards agreement, overcoming the incommensurabilities of views and objectives. When Coase defined economic relationships as reciprocal he focused on the indeterminacies and incommensurabilities of real-world economic activity, not with the actors' ignorance of market prices or the computational impediments to rigorous choosing.

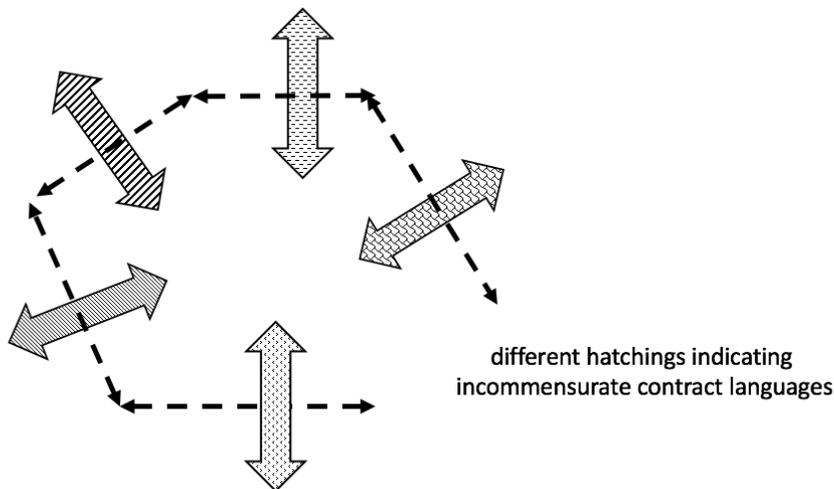
### *The Firm*

The Hohfeld/Commons notion of transaction is defined by the parties A, B, A', B' - and maybe C too - as independent, incommensurate, and incommensurate, interacting with each other, not optimizing within a coherent market. The interactions 'construct' them as economic actors; their nature is not presumed *ex ante*. The negotiation resolves the parties' uncertainties into multiple contracts - a process of micro-institutionalization that shifts how they are defined as identities and values. Coase followed Knight's dismissal of absolutes; the individuals involved are adaptable, they learn, change, and forget (Knight, 2013:15). Contracts cannot be written in formal language, such as mathematical formulae, only in ways shaped by the natural language of the relevant law, expressing the parties' heterogeneous interests and the uncertainties addressed; more idiographic than nomothetic. No KU, no contracts, just spot exchanges. If there are no divergences between the parties, there is neither need nor possibility of contract. Different kinds of uncertainty are resolved in different ways. Contract deals with inter-party indeterminacies and incommensurabilities, converging on the shared natural language constructed specifically for the situation. The overarching idea is Knightian, that 'the firm' is a socially and legally

legitimated apparatus of multiple contracts - written to grasp and resolve some specific uncertainties discovered in the socio-economy, in pursuit of increasing the various parties' differing values. Indeterminacy and incommensurability call forth imaginative practice that shifts collaborating individuals' economic values. Resolving ignorance and irrelevance merely support this as the nub of the human process of value-creation.

Coase's 1960 illustrations were of Hohfeldian 'entrepreneurial acts', the reciprocal creation of economic value by actor A and actor B in a social context that also comprises A', B' and C. The intuition can be generalized into the 'nexus of contracts' model which recognizes that real firms entail more than one contract - and more than one discovered uncertainty (Aoki, Gustafsson, & Williamson, 1990). There can be no less than three, another manifestation of the medieval Rule of Three. The investors' intentions differ from those of employees, suppliers, customers, regulators, the courts, and so on. The 'model of man' invoked was Adam Smith's 'propensity to truck, barter, and exchange' - economically imaginative beings. The neoliberal inclination to see only exchange, presuming all values can be expressed as prices, denies Adam Smith's subtleties. Every exchange presupposes the parties value differently what is being exchanged; indeed, different 'things' are being exchanged. As Vernon Smith showed, the values that matter to the negotiation reflect the individuality and reciprocity of the parties engaged, nothing to do with markets (Smith, 1998). Farber shows the process of bartering not only leads to individuals 're-valuing' the exchange and themselves, the process cascades out into a changed sense of community (L. Farber, 2006).

It is useful to think of 'a firm' as a specific 'opportunity space' realized and occupied by the complex of languages implied by a nexus of contracts negotiated (See Figure 3) (Aoki et al., 1990; Gustafsson, 1990; Spender, 2014a, 2014b). As these connect towards 'closure' the actors' confidence rises to the point they 'plunge in' and act, shifting from thought to action. The parties' various personal aims and uncertainties get traded-off as they move into this collaborative action.



**Figure 3. Multiple Contract/Execute Transactions Framing an Opportunity Space**

The firm as a negotiated language is an economic metaphor that codifies the parties' agreement. It is relevant when it enables discussion of the breaches and remedies that arise in practice, linking to wider-reaching legal doctrines. Recalling the computer analogy (Fig. 2), the firm is characterized as a dynamic interaction between the parties' constructed languages and the contexts of their practices - interplaying the parties' imaginations and the constraints on their practices. Not all we can imagine and capture in language is actionable - think perpetual motion machines. Unavoidably the language constructed is prey to 'irrelevance', of failing to explain, shape, or anticipate the parties' practice. Arriving at and executing a contract changes how the parties view the values committed. The value changes are personal to the parties, not related to any market. Markets are evidence of individuals' re-valuing in the interests of executing exchanges. Thinking that market values are 'more correct' shifts attention away from the parties and onto economy-wide issues. But the firm is not an economy-wide phenomenon; it proceeds one transaction at a time. In its bi-modal flip-flops, the judgment fueling valuation and negotiation is transformed into the practices that comprise the production function.

Coase assumed actors 'estimated' costs based on information gathered from the parties and the situation, not on 'price taking'. He focused on 'opportunity cost' (Coase, 1981a). Just as his use of 'cost' led to miscommunication with the Chicago economists in 1958, so it

has led to confusion about his 1937 paper's message. Most see cost as the price paid to acquire an asset. Instead, Coase focused on the value of the asset already owned and what was to be realized by trading it. His 1960 paper explored arrangements to maximize this, covering the costs of discovery and contracting, informed by the costs of discovering the 'next best' deal. But his TCs are idiographic, situated, nothing to do with the 'price system'. They are bound into the specific situation rather than into markets. They are the 'costs' of overcoming the situation's uncertainties; especially those of identifying the parties A, B, A', B' and C, and of doing a deal. These costs cannot be treated as matters of ignorance, absent price information; they can only be estimated relative to the firm's current operations. As business people say "What does it mean to us?" The London Tradition on opportunity costs separated Coase's analysis from Williamson's. Williamson sought market-based prices for the factors of production, including labor and, most crucially, management. Thus, Coase also suggested a paradox - that TCs were the least avoidable costs but also the least determinable. If determinable why are they not factor costs? (Barzel, 1985). If not determinable how can they be fitted into rigorous theory? Likewise, contracts are invariably incomplete, their consequences under-determined and therefore inherently political (e.g. Calabresi, 1982; Medema, 1996; Merrill & Smith, 2011).

### *Concluding Comments*

The Coase and Williamson discourses were far apart, immiscible. Williamson's model was essentially static, only analyzable as in equilibrium or headed there. The Coasian model was open-ended and dynamic, inevitably escaping attempts to express it formally because it is built from creative responses to the actors' selected KUs. Entrepreneurship begins by discovering and selecting the specific KUs to be engaged (Alvarez & Barney, 2007). Right now, the TC literature is stuck between one discourse that presumes TCs are both general and determinable, so indistinguishable from factor costs, and another that presumes TCs are particular, un-determinable, and so not theorize-able. What is to be done?

First, to presume 'TCs explain why firms exist' is to fall into a tautological trap of one's own making. Williamson treated TCs firms, and markets axiomatically - firms exist and engage markets, which exist, and incur a special class of costs that can be reduced by managers who are not subject to the same shortcomings as their 'opportunistic' employees. But there is no such 'special class' of determinable costs; nor are real employees predictably opportunistic. Coase's intuitions were less totalizing and more realistic, driven by axiomatizing individuals' heterogeneous propensity to truck, barter, and exchange.

Second, he noted Penrose's intuitions complemented his own (Pitelis & Teece, 2009:8). This helps clarify how, perhaps under the combined influence of Knight, Kuhn, and Hayek, Coase distanced himself from the mainstream that saw values as prices. He moved towards values based on the parties 'personal knowledge'. Penrose 'personalized' the firm - which creates new knowledge and new value from the management team's imaginative interaction (Spender, 1999). The Coasian firm is likewise no more than a 'term of art' that points towards a fuzzily bounded bundle of inter-party contracts of varying incompleteness. The firm as a theorize-able entity dissolves (J. N. Gordon, 1989).

Third, many miss the idiographic aspects of Coase's TCs because they presume, perhaps unwittingly, 'the firm' can be distinguished from such 'costs', that firms exist and have TCs. But Coasian TCs point to the contracting processes that are the firm, that execute its idiographic flip-flop between idea and practice. Firms exist only as contracts made and executed. No contract/execute, no firm. If the resulting TCs are zero, neither positive nor negative, the contracts are revealed as irrelevant to the firm's identity and process; no KUs are engaged, no new value created to be held or distributed (Alchian & Demsetz, 1972). Pursuing nomothetic theory, Williamson viewed TCs determinable, arising from resolvable ignorance, even when discussing principal-agent issues. Coase dealt with indeterminacy and incommensurability. Williamson's managing was economizing, Coase's was strategizing, creatively bundling and administering contracts to net-positive result, not merely economizing.

Fourth, Coase's work was a masked but nonetheless full-throated attack on mainstream 'market-based' analysis. His Nobel Lecture appeal to 'study the world of positive transaction costs' (Coase, 1991e; 1992:717) was a direct slap at Friedman's earlier use of the term 'positive'. Many have explain the popularity of Friedman's 1953 *Essay* as defending an eroding mainstream position; there is much politics involved (Backhouse & Fontaine, 2010). But axiomatizing less-than-fully-rational actors brings their politics to the center of the analysis - as well as their psychology (Mirowski & Nik-Khah, 2017). More than behavioral economics results. Economics is revealed as the 'continuation of politics by other means'.

Fifth, Coase implied a theory of entrepreneurship - micro-institutionalization under the entrepreneurial 'gaze'. Positive TCs fragment 'the firm' into multiple incommensurate contracts that the entrepreneur must (a) synthesize into a functionally adequate vision, and (b) execute into somewhat ordered practice. Positive TCs bring the 'theory of the firm' and the 'theory of entrepreneurship' together. Coase's call to 'running the business' implied entrepreneurship was not simple 'price-taking' and rational decision-making, rather the puzzling practice of constructing new knowledge (Pitelis, 2002:34).

Sixth, Coase's method stood against the mainstream economist's, recapturing Keynes's richer pluralist methodology (Keynes, 1904). Williamson's mainstream approach set out from TCE's axioms and sought nomothetic and testable implications. Coase started from idiographic observation and experience and advanced inductively to shareable knowledge.

Seventh, Williamson misread Coase's *mea culpa* on the employment contract (Coase, 1991b:64). Including other contracts did not re-establish the priority of market prices in the analysis. It simply pointed to actors other than employees that entrepreneurs had to draw into the contracting process. OT folk might call this 'stakeholder theory'. The proposal to identify everyone influenced by a firm's decision, and to take their views into account, is a ludicrous mask of the political reality; the only actors taking part are those with the power to seize a place at the strategizers' table. No-one speaks for the powerless, such as those affected by externalities like pollution and loss of natural resources,

especially those unrepresented by other agents, such as those charged to serve the public interest. This points towards a fifth 'killer question' implied in Coase's 1937 paper - "Why would you, a free citizen, contract with this entrepreneur since it means giving up rights and subordinating yourself - 'within certain limits'?" Given the rapidly changing nature of work, the gig economy, the erosion of employment benefits, etc. the question is becoming central to any 'useful economics' that claims to illuminate today's society. Finally, seventh, Coasian managers engage KU in the pursuit of new value and profit - a foreword looking entrepreneurial practice on which our democratic capitalism depends (McCloskey, 2010). Williamson's managers are suspicious scrooges, living off past entrepreneurs' imaginations.

Coase gave voice to deep intuitions about private sector firms as practices central to our capitalist democracy, way beyond what can be represented on the economist's blackboard. They can be clarified by comparison with Williamson's more mainstream analysis. The evolution of Coase's political thinking, from naive socialism to committed libertarianism, underscored his attack on Pigou and on mainstream economics' attempt to create an a-political economics. Rather than join Stigler and many recent Riksbank Prize winners, excising the private firms' political and moral implications, Coase aligned with Knight in taking them seriously (Emmett, 2009). Which meant he was pushing against the mainstream's presumption that property-rights were a-political and fully determinable - precisely what Hohfeld denied. Coase's views are increasingly important as 'knowledge' and 'intangible assets' become more central to the private sector firm and its profits.

The deepest puzzle, though, is Coase's personal and intellectual relationship with Knight (Emmett, 2010). Given both men's influence, further research is badly needed if their ideas are to have more impact on the baleful state of management theorizing.

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