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**Frank Knight and the Problem
of the Twentieth Century**

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Frank Knight and the Problem of the Twentieth Century

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ABSTRACT

Much has been written, especially in economics and management, about Frank Knight's account of uncertainty and entrepreneurship. This paper attempts to put that theory in the larger context of the intellectual currents, and to a significant extent the economic history, in which Knight found himself. In response to rapid economic growth and the emergence of the large industrial enterprise in the U. S. in the late nineteenth and early twentieth centuries, many came to believe that the classical liberalism of the nineteenth century would need to be amended – if not jettisoned entirely. Frank Knight was among these. He was, along some dimensions, a Progressive and an Institutionalist. What set him apart from Progressives like John Dewey, however, was his theory of economic knowledge. Whereas Dewey and others insisted on the panacea of science as the solution to the “social question,” Knight understood that in a world of uncertainty, the cognitive faculty of *judgment* was essential and unavoidable, thus providing a new intellectual underpinning for many of the institutions of nineteenth-century liberalism. Yet Knight did not follow the implications of his theory of knowledge all the way to their conclusions. This is because – perhaps among other reasons – he began with a well-developed model of perfect competition, which, unlike such contemporaries as Joseph Schumpeter and F. A. Hayek, he was never willing to relinquish as a normative ideal. Perhaps surprisingly, Frank Knight was a Progressive and an Institutionalist because he believed in the neoclassical model of the economy.

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As the twentieth century dawned, there emerged a growing consensus among intellectuals that the nineteenth-century doctrines of *laissez-faire* had to go. These doctrines had not been wrong in their day. But, as John Maynard Keynes insisted in 1926, “they have ceased to be applicable to modern conditions” (Keynes 1931, p. 330). Widely and dogmatically held in the nineteenth century (the consensus maintained), the doctrines of *laissez-faire* had forbidden all government interference with private contracting, holding that contracts are and ought to be governed by the “iron law” of supply and demand – a law as unbreakable, and perhaps as God-given, as any law of nature. Because of the dominance of the *laissez-faire* doctrine, all believed, the nineteenth century had been an era of unbridled free-market capitalism in both Britain and the U. S. This may well have been justifiable, and maybe even desirable, in a world of small farmers and local proprietors. But the doctrines of *laissez-faire* had become ill adapted to the new problems of the twentieth century.

In reality, the nineteenth-century U. S. was replete with economic regulations, especially at the local and state levels (Hughes 1977), and courts routinely interfered with private contracting (Hurst 1956). Moreover, far from being a dominant and unassailable doctrine, *laissez-faire* – meaning a rule of law that protected economic rights as well as civil rights – was the intellectual center-point of a tiny if moderately influential group of liberal reformers, who operated as a centrist force between a Democratic Party that was populist (and in the South racist and reactionary) and a Republican Party that was committed to a powerful developmental state (Benedict 1985; Sproat 1968). These were genuine reformers. They were not blindly anti-government, and they saw an important role for the state in providing public goods, including public education and aid to the poor and infirm, and even in regulating natural monopolies (Fine 1958, p. 58). To the consternation

of manufacturing interests, they staunchly – and futilely – supported free trade. Although they may have emphasized, perhaps to great excess, the automatic mechanisms of the market, the liberal reformers were really just expressing in nineteenth-century tropes the insights of the Scottish Enlightenment: that, under the right institutional arrangements, the self-directed actions of individuals can lead to socially beneficial outcomes, notably economic growth and prosperity.

On the one hand, *laissez-faire* was grounded in British classical economics. Even though a fully satisfactory account would not be worked out until Alfred Marshall, the liberal reformers routinely invoked the principle of supply and demand already visible in Mill and others. On the other hand, however, the views of the liberal reformers were also firmly grounded in a moral vision, as they sought “to convince businessmen that respect for traditional moral values produced material rewards as well as spiritual satisfaction” (Sproat 1968, p. 9). In many if not most cases, this went beyond a pragmatic appreciation of what Deirdre McCloskey (2006) has celebrated as the bourgeois virtues. Arthur Latham Perry of Williams College introduced his best-selling economics textbook with the assertion that “God has constructed the World and Men on everlasting lines of Order”¹ (Perry 1891, p. ix). A fusion of science and morality held together the political economy of *laissez-faire* reform in the U. S. after the Civil War.

As the new century neared, the views of the liberal reformers came under attack from two directions. Already extended significantly during the Civil War, railroads

¹ At my *alma mater*, “isolated in the mountains of Western Massachusetts, Mark Hopkins and Arthur Latham Perry taught and preached its tenets so effectively that at least two dozen Williams men later became prominent spokesmen for liberal reform” (Sproat 1968, pp. 7-8).

blossomed after the end of the conflict, usually with the aid of land grants and substantial subsidies from a corrupt developmental state (White 2011). Driven by the telegraph, the increased availability of coal, and the lower transportation costs that railroads made possible, industrialization took off, bringing with it urbanization, immigration, and, most crucially, large enterprises (like many of the railroads themselves) that were run by professional managers not by owner-managers (Chandler 1977). At the same time, the new Darwinian science was coming to cast a shadow on the religious foundations of social thought, especially as new professions like law, secular academia, and journalism began to supplant the ministry in both numbers and prestige.² How could the principles of classical economics survive in what was increasingly a world of managers and wage workers not individual proprietors? And how could the bourgeois virtues be justified in a world of secular science?

With remarkable speed, the new consensus formed, drawing many of its adherents from the same strata that had produced the liberal reformers. Although there were certainly multiple threads within what came to be called Progressivism, all agreed that the idea of unplanned social order must be overthrown. “The only form of social organization that is now possible,” wrote John Dewey, arguably the central figure of American Progressive thought, “is one in which the new forces of productivity are coöperatively controlled and used in the interest of the effective liberty and the cultural development of the individuals that constitute society. Such a social order cannot be established by an unplanned and external convergence of the actions of separate individuals, each of whom is bent on

² Once the career of choice for a third a America’s college graduates, the clergy may well have been “the most conspicuous losers among the professional and aristocratic class in nineteenth-century America” (Ekirch 1974, p. 57)

personal private advantage” (Dewey 1935, p. 54). The spontaneous order of the early liberals led merely to “drift.” The new world of the twentieth century “demands the substitution of the intelligence that is exemplified by scientific procedure” (Dewey 1935, p. 72). Although the term “Institutionalist” would not be used until 1918 (Hodgson 2001, p. 61), the Progressive movement generated its own branch of economics to oppose the economists of the classical liberal school.

Frank Knight was among these. He was, along some dimensions, a Progressive and an Institutionalist. What set him apart from Progressives like Dewey, however, was his theory of economic knowledge. Whereas Dewey and others insisted on the panacea of science as the solution to the “social question,” Knight understood that in a world of uncertainty, the cognitive faculty of *judgment* was essential and unavoidable, thus providing a new intellectual underpinning for many of the institutions of nineteenth-century liberalism. Yet Knight did not follow the implications of his theory of knowledge all the way to their conclusions. This is because – among other reasons – he began with a well-developed model of perfect competition, which, unlike such contemporaries as Joseph Schumpeter and F. A. Hayek, he was never willing to relinquish as a normative ideal. Perhaps surprisingly, Frank Knight was a Progressive and an Institutionalist because he believed in the neoclassical model of the economy. As Knight’s student James Buchanan put it, “Knight never wholly escaped from the straitjacket that his conception of economics imposed upon his thought” (Buchanan 1987, p. 74).

Knight as an Institutionalist.

One of the central facts of Knight’s biography is his rural upbringing in a religious Protestant environment, an intellectual and cultural inheritance he shared with the majority

of the Progressives – and which he spent much of his intellectual career backing away from if not entirely repudiating (Emmett 2015). Like his fellow religious skeptics of the early twentieth century, he experienced the melting away of what had been the moral counterbalance to the narrow portrayal of the economic agent in “scientific” economics (including his own economics). Living with this unresolved tension between morality and abstract theory made him at once a critic of the Progressives and Institutionalists and, along many dimensions, a fellow traveler with them. “Not only was Knight an institutionalist,” in the view of Geoffrey Hodgson, “he was one of the greatest of all institutional economists after Veblen” (Hodgson 2001, p. 84).

Like the Progressives, Knight was well familiar with German literature, though his principal influence was Max Weber, whom the Progressives largely ignored in favor of figures like Gustav Schmoller (Rodgers 1998, pp. 89-90). Whereas the Progressives were optimistic and even utopian about the post-laissez-faire society they wished to create, Knight remained, in the words of Angus Burgin, “a model of the alienated, eremitic critic”³ (Burgin 2009, p. 535). And whereas many Progressives were swept up in the Social Gospel Movement, Knight took a quite different message from the clash of Darwin and religion. Robert Nelson goes so far as to suggest that, albeit in secular form, “Knight was expressing a classic Christian view of fallen man, beset by original sin” (Nelson 2010, p. 284).

Yet Knight was led to many of the same views as the Institutionalists. Like the Institutionalists, Knight was a strong critic of neoclassical assumptions about the economic

³ This description would probably fit Veblen even more closely, of course. But Veblen was always the most idiosyncratic of the Progressives.

agent – the fabled *homo economicus* – especially in its utilitarian forms (Hodgson 2001, p. 62). Indeed, he generalized this complaint to nineteenth-century liberalism itself.

The most general and essential fact that makes such a position untenable as an exclusive principle of organization is that *liberalism takes the individual as given*, and views the social problem as one of right relations between given individuals. This is its fundamental error. The assumption that this can be done runs counter to clear and unalterable facts of life. The individual cannot be a datum for the purposes of social policy, because he is largely formed in and by the social process, and the nature of the individual must be affected by any social action. Consequently, social policy must be judged by the kind of individuals that are produced by or under it, and not merely the type of relations which subsist among individuals taken as they stand (Knight 1947, p. 69, emphasis original).

This immediately calls to mind Thorstein Veblen’s marvelous and much-quoted mockery of old *homo economicus*. “He is an isolated, definitive human datum, in stable equilibrium except for the buffets of the impinging forces that displace him in one direction or another. Self-poised in elemental space, he spins symmetrically about his own spiritual axis until the parallelogram of forces bears down upon him, whereupon he follows the line of the resultant. When the force of the impact is spent, he comes to rest, a self-contained globule of desire as before. Spiritually, the hedonistic man is not a prime mover” (Veblen 1898, pp. 389-390).

Knight’s view of the individual as socially constructed led him to a clear, if always carefully hedged, strain of anti-consumerism. “One of the most fundamental weaknesses of the market system,” he wrote, “is the use of persuasive influence by sellers upon buyers and a general excessive tendency to produce wants for goods rather than goods for the satisfaction of wants” (Knight 1947, p. 31). Yet, he hastily adds, turning consumption decisions over to the political process would be “to jump out of the frying pan into the

fire.” Persuasion is even more “sinister” in the political sphere, especially because mass psychology comes into play.⁴

Knight even sometimes sounds like Veblen, who famously caricatured and lambasted bourgeois consumption in *The Theory of the Leisure Class* (1899). “The content of the wants for goods and services for which people strive as producers and consumers is predominantly social, conventional, cultural, and esthetic,” Knight believed; “the urge or animus is very largely emulation and rivalry – to ‘keep up with the Joneses’ or to get ahead of them” (Knight 1947, p. 316). Yet Knight could see little of value in Veblen’s analysis. The meaning of Veblen’s distinction between productive, technological industrial values and wasteful, emulative pecuniary values, said Knight, “is that industrial values mean those of which the author approves and pecuniary values those of which he disapproves” (Knight 1920, p. 519). Even though free enterprise tries to manipulate people’s preferences, it is no improvement to allow the intellectual elite to tell people what they should want or what they may have.

One of the most interesting aspects of Knight’s version of Progressivism is his belief that a major aspect of persuasion is outright fraud. Economists from Adam Smith to Deirdre McCloskey have insisted that, no less than other parts of human life, economic activity is about rhetoric and persuasion. “The offering of a shilling,” Smith wrote, “which to us appears to have so plain and simple a meaning, is in reality offering an argument to persuade one to do so and so as it is for his interest. Men always endeavour to persuade

⁴ “One of the results of modern technology is to give the governing process much of the character of a continuous campaign, the first principle of which is to create the crowd-mind. Anything that appeals to the crowd-mind must be simple and romantic; its favourite formula is *credo quia impossibile*, its favourite policy, witch-hunting” (Knight 1964 [1921], p. xxviii).

others to be of their opinion even when the matter is of no consequence to them ... And in this manner every one is practicing oratory on others thro the whole of his life”⁵ (Smith 1978, vi.56, p. 352). Knight was well aware of Smith’s views. But, he believed, “Adam Smith seems not to have thought of advertising and salesmanship, which developed long after his death”⁶ (Knight 1947, p. 31). For Knight, persuasion, “as an appeal to emotion, i. e., to *wrong* emotions (emotions conflicting with the love of truth or validity) is a form of coercion, and perhaps the ‘worst’ form because the most insidious and therefore likely to be misconceived and adopted or condoned” (Knight 1947, p. 244, emphasis original). Once again, of course, Knight quickly adds that persuasion is rife in the political arena as well and probably more dangerous there than in the market.

In the end, perhaps the most striking example of Knight’s Progressivism is his conception of the idea of freedom. The liberals of the nineteenth century (and the eighteenth) had seen liberty in negative terms: freedom implied rights against others and, importantly, against the state. In the famous formulation of Sir Isaiah Berlin, under the negative conception you “lack political liberty or freedom only if you are prevented from attaining a goal by human beings. Mere incapacity to attain a goal is not a lack of political freedom” (Berlin 2002 [1958], p. 169). By contrast, the Progressives held to a “positive” conception. “The ‘positive’ sense of the word ‘liberty’ derives from the wish on the part of the individual to be his own master. I wish my life and decision to depend on myself,

⁵ “Smith believed that the propensity to truck and barter was based on the faculty of reason – so much for Max U and the reason half of the enlightenment project. But he added, and believed, ‘and the faculty of speech,’ which is the other, freedom half, ignored after his death” (McCloskey 2006, p. 191).

⁶ Actually, of course, there was already plenty of advertising and salesmanship in Smith’s day, and he most certainly knew about it.

not on external forces of whatever kind” (Berlin 2002 [1958], p. 158). For example, someone who does not have the material resources to attain a goal is not “free” in this sense, even if no one is literally coercing that individual. In the formulation of the Progressives, the implication of positive liberty is that the essence of liberty is *power*. “Liberty is inseparable from power,” declared John R. Commons (1924, p. 29). For John Dewey, liberty took the form of what we would nowadays call self-actualization, albeit in a collectivist context. “Liberty is that secure release and fulfillment of personal potentialities which take place only in rich and manifold association with others: the power to be an individualized self making a distinctive contribution and enjoying in its own way the fruits of association”⁷ (Dewey 1927, p. 150).

Again, Frank Knight agreed. “Freedom refers or should refer to the range of choices open to a person, and in its broad sense it is nearly synonymous with ‘power’” (Knight 1964 [1921], p. 351). The “practical question is one of power rather than of formal freedom” (Knight 1947, p. 4). Unlike Dewey, however, Knight sees the issue in hard-nosed economic terms: your “freedom” depends on what you own. Many have argued that the eclectic and open-minded Chicago School of Knight was supplanted after the war by a more economic “neoliberal” Chicago School (Burgin 2012). Interestingly, however, George Stigler, a leader of that post-war school, also argued that genuine freedom is about power – about what options are open to you (Stigler 1978). The more options you have available, the more power you have, and the “freer” you are. And, for Stigler, what actually generates those options is not redistribution but economic growth. Indeed, although Stigler

⁷ In this as in many other things, Dewey was influenced by the British Romantic philosopher T. H. Green, who argued for “freedom in the positive sense: in other words, the liberation of the powers of all men equally for contributions to a common good” (Green 1986, p. 200).

does not pause to think about this, one could argue that, paradoxically, to the extent that economic growth depends on the maintenance of institutions of negative liberty, negative liberty might in the end be the true source of positive liberty.

Knight's theory of economic knowledge.

It is widely repeated in textbooks that older economists from Smith through Marshall had assumed “perfect” competition: a simplified conception in which fully informed atomistic sellers traded in spot contracts for undifferentiated products. In the 1920s and 1930s, say the textbooks, economists like Joan Robinson and Edward Chamberlin arrived to correct this obvious error by inventing “imperfect competition,” which better reflects the world that came into existence with the emergence of the large corporation. As a matter of doctrinal history, the textbooks have it backwards. The older economists actually held conceptions that were more common-sensical and verisimilar than the notion of perfect competition, conceptions far closer to what *Fortune* in 1952 called “the businessman’s pragmatic description of competition.”⁸ Although it had its roots in the nineteenth-century theories of French economists, “perfect” competition was actually invented by the very same people who invented imperfect competition (Loasby 1976, pp. 173-192; Moss 1984).

The interwar years were what G. L. S. Shackle (1967) called the Years of High Theory in economics, and the imperfect-competition movement was the microeconomic side of that theory. Although unlike Robinson and Chamberlin Knight was not a mathematical formalist – indeed, he largely despised mathematical formalism – Knight was in his own way part of the movement to make neoclassical economics more rigorous.

⁸ “The New Competition,” *Fortune*, June 1952, p. 186.

More than a decade before Chamberlin and Robinson, Knight had worked out his own version of the theory of perfect competition – and with it his own theory of imperfect competition.⁹ Part II of *Risk, Uncertainty, and Profit* lays out the theory of perfect competition in pretty much the form it has come to be accepted. Part III moves on to “imperfect” competition. But whereas the imperfect competition of Chamberlin and Robinson was based on non-horizontal demand curves in equilibrium – because of persuasion and advertising! – the imperfect competition of Knight arose from the inherent uncertainty of life. “It is a world of change in which we live, and a world of uncertainty” (Knight 1964 [1921], p. 199).

As principles of economics textbooks now tell freshmen, one of the assumptions of perfect competition is “perfect information.” Knight believed that perfect competition requires the “practical omniscience on the part of every member of the competitive system” (Knight 1964 [1921], p. 197). But what exactly does that mean?¹⁰ When we teach perfect competition to the freshmen, we often use trade in undifferentiated products like wheat as an example. But was the trade in wheat in the American Midwest in the mid-nineteenth century “imperfect” because traders didn’t know that the grain elevator was about to be invented? Some economists, like Schumpeter and Hayek, responded to the problem of omniscience by axing perfect competition (or at least severely minimizing its significance), preferring to visualize and assess the economy as an evolutionary system of learning and

⁹ *Risk, Uncertainty, and Profit* began as Knight’s thesis, defended in 1916 (Knight 1964 [1921], p. xi). Chamberlin’s theory of imperfect competition was first laid out in his thesis of 1927 (Chamberlin 1961). Both were supervised by Allyn A. Young.

¹⁰ When I tell students about the “perfect information” assumption, I like to recall one of the many great lines from the campy 1960s *Batman* TV series. At one point, Robin breathlessly congratulates Batman for some display of cleverness. “Golly, Batman,” Robin gushes, “isn’t there anything you don’t know?” “Yes, Robin,” the Caped Crusader replies in a tone of modesty. “Several things in fact.”

discovery. In such an economy – which is, of course, the one we actually live in – economic “omniscience” has no meaning. In a fit of high-modernist absurdism, Kenneth Arrow and Gérard Debreu (1954) would take the opposite course, going all-in on omniscience and assuming that all economic agents know all possible future states of the world and the (objective) probabilities associated with each of those states.

We might say that Knight took an intermediate course, understanding on the one hand that economic agents cannot know in general even what states of the world are possible (Langlois and Cosgel 1993) yet insisting on retaining the framework of perfect competition. This is part of what makes him so interesting and complex. Before examining Knight’s theory of knowledge in detail, it is worth reiterating: because he has a model of perfect competition, Knight must assign all the failures of omniscience to the cognition of the agent, who is “uncertain.” By contrast, in evolutionary theories like those of Schumpeter and Hayek (and Nelson and Winter (1982)), the starting point is *ignorance* not omniscience, and the job of the agent is to learn and adapt, mostly by trial and error, not to predict the future. Lack of omniscience in evolutionary theories is a feature not a bug. Knight’s approach to non-omniscience often seems tantalizingly similar to that of evolutionary theory, but in the end it does not converge to it.¹¹

For Knight, the agent’s problem is indeed to predict the future, by drawing “inferences” from the past. And for Knight, prediction requires consciousness and reason. “The function of consciousness is to infer, and all consciousness is largely inferential, rational” (Knight 1964 [1921], p. 203). Since we now live in the age of so-called (not to

¹¹ This is a point that Brian Loasby (1976) always emphasized.

say wildly misnamed) artificial intelligence, this assertion may give us pause. An AI engine is in fact a prediction machine that canvasses incomprehensibly large stores of data to make assertions about the future. “Prediction is the process of filling in missing information. Prediction takes the information you have, often called ‘data,’ and uses it to generate information you don’t have” (Agrawal, Gans and Goldfarb 2018, p. 13). Prediction is almost certainly what Knight means by “inference.” Yet – so far at least – AI engines predict without being conscious. “Inference,” of course, is a technical term in classical statistics, which uses formal techniques to “fill in the gaps” in the data. Significantly, AI engines do not use formal statistical techniques. They take advantage of the massive bounty of Moore’s Law to find similarities in the data by brute force.¹²

At a basic level, Knight sees human beings as prediction machines. “Prophecy seems to be a good deal like memory itself, on which it is based”¹³ (Knight 1964 [1921], p. 209). And forecasting the future relies on the existence of similarities, not only between the past and the future but more fundamentally among the objects of consciousness themselves. “It must be possible not merely to assume that the same thing will always behave in the same way, but that the same kind of thing will do the same, and that there is in fact a finite, practically manageable number of kinds of things. Hence the fundamental

¹² “At its core, machine learning is an atheoretical brute force technique — what psychologists call ‘dustbowl empiricism’ — requiring only large training databases, substantial processing power, and, of course, sophisticated software” (Autor 2014, p. 35).

¹³ “We live in a world full of contradiction and paradox, a fact of which perhaps the most fundamental illustration is this: that the existence of a problem of knowledge depends on the future being different from the past, while the possibility of the solution of the problem depends on the future being like the past” (Knight 1964 [1921], p. 313).

role which classification has always played in thought and the theory of thought”¹⁴ (Knight 1964 [1921], p. 205). Classical statistics works by using categories: it puts data into bins and then applies its formal rules to the data. By contrast, in machine learning the categories (similarities) are themselves endogenous and not pre-specified.

Knight sees the problem of classification or categorization as key to understanding the non-omniscience of the economic agent. If the future is known, futurity by itself poses no challenges to perfect competition. Indeed, says Knight, if all the *categories* of future possibility are known, under some circumstances even uncertainty – or, more correctly, *risk*, as he will call it – poses no challenges to perfect competition. If on average a predictable fraction of bottles explodes in the process of making champagne (Knight 1964 [1921], p. 213), then those losses can simply be “priced in.” This is of course how the insurance business works.

But perfect competition is not possible under situations of *uncertainty*, now often called Knightian or radical uncertainty. I have long argued that Knight meant by uncertainty both (A) situations in which the categories of possibility (the states of the world) are known but their probability cannot be determined actuarially and (B) situations in which the categories of possibility themselves are unknown or at least not interpersonally agreed upon (Langlois and Cosgel 1993). It is thus unnecessary for present purposes to jump down the philosophy-of-probability rabbit hole.¹⁵ Anything that is not actuarial risk

¹⁴ In this Knight was influenced by the associational psychology of William James (Dold and Rizzo 2021). Interestingly, in the early century Hayek (2012 [1952]) was also developing a theory of mind based on the idea of classification.

¹⁵ But see Langlois (1982, 1984), where I argue for a distinction between *structural* uncertainty, which is a lack of knowledge of the possible states of the world, and *parametric* uncertainty, which is (potentially non-actuarial) uncertainty about which known state will occur.

is uncertainty, and that's all we need to know to understand Knight's theory of knowledge. Notice that at its extreme edge – lack of knowledge about the categorical structure of the world itself – Knightian uncertainty begins to look a lot like ignorance.

How is prediction or “inference” possible in a world of uncertainty? Knight's answer is that, when the unknown cannot be dealt with through explicit rules (as it can in the actuarial case), it must be dealt with using prediction processes that are built into human cognition: judgment, common sense, or intuition. Humans do use past information to predict the future. But they do not predict using a system of explicit rules. “There is doubtless some analysis of a crude type involved, but in the main it seems that we ‘infer’ largely from our experience of the past as a whole, somewhat in the same way that we deal with intrinsically simple (unanalyzable) problems like estimating distances, weights, or other physical magnitudes, when measuring instruments are not at hand” (Knight 1964 [1921], p. 211). Knight calls this “unconscious induction” (Knight 1964 [1921], p. 229), an idea that is closely related to Michael Polanyi's famous notion of tacit knowledge¹⁶ (Polanyi 1958).

Knight here anticipates ideas that would later come to the fore in debates over artificial intelligence. Although he was among the strongest proponents of the view that computers could become – and indeed would soon become (by the 1970s!) – capable of intelligence, Herbert Simon (1960) also suggested a cognitive division of labor not unlike Knight's. Machines, said Simon, have a cognitive comparative advantage in following explicit rules. This is a phenomenon economic historians had long observed. As the

¹⁶ Malcolm Gladwell (2005) has popularized a version of this idea as “the power of thinking without thinking.”

Smithian division of labor becomes finer and finer with increases in the extent of the market, tasks become simpler and easier to describe in terms of explicit rules.¹⁷ This makes it increasingly easy to hand those tasks off to machines (Ames and Rosenberg 1965). Many people erroneously believe, for example, that Henry Ford's techniques for mass producing the Model T were just a matter of the Smithian division of labor. In fact, unlike his competitors, Ford was subdividing tasks in order to simplify them and make them amenable to mechanization (Hounshell 1984, p. 252). In Simon's account, as more and more tasks become rule-based and thus mechanized, humans will be increasingly crowded out of simple rule-based tasks and into tasks that demand the cognitive skills in which humans do retain comparative advantage (Autor, Levy and Murnane 2003; Langlois 2003). Increasingly, Ford workers no longer undertook the rule-based tasks themselves – as Charlie Chaplin's little tramp character famously did in *Modern Times* – but rather became tenders of machines, a set of tasks requiring quite different cognitive skills. Those are versions of the skills that we can lump under Knight's term *judgment*.

¹⁷ Knight too understood that “in industrial life, purely routine operations are inevitably taken over by machinery” (Knight 1964 [1921], p. 294).

Evolutionary psychologists argue that human cognition evolved to solve the kinds of problems humans faced during many millennia of hunter-gatherer existence (Cosmides and Tooby 1994; Pinker 1997). Like AI engines, humans do not use formal rules of statistical inference, relying instead on the guesses and approximations that are part of this evolved faculty of judgment.¹⁸ In the view of Daniel Kahneman (2011), the human being is a “machine for jumping to conclusions.” But humans are *not* machines: like AI engines, they do very much jump to conclusions, but they do not do this by following explicit algorithms. By contrast, AI engines *are* machines, and they do follow explicit rules. Because of the stupendous decrease in the costs of computing, tasks once requiring human

		Follows explicit algorithms	
		No	Yes
Follows formal rules of statistical inference	No	Knighthian judgment (evolved human cognition)	AI (machine learning)
	Yes		Classical statistics (insurance markets)

Figure 1: Prediction regimes

¹⁸ Knight acknowledges that knowledge “is more a matter of learning than of the exercise of absolute judgment. Learning requires time, and in time the situation dealt with, as well as the learner, undergoes change” (Knight 1964 [1921], p. 243). This is an assertion that applies as much to AI as to humans.

cognition can now be reengineered as systems of explicit algorithms. (If you don't believe me, just ask Alexa or Siri.) Figure 1 summarizes the argument.

Does this mean that all tasks will someday reengineered for machine learning? By the very definition of comparative advantage, there must always remain tasks that require judgment, and humans will be crowded into those tasks. It may well be that there are rules underlying the human faculty of judgment: humans are (biological) machines, after all. And maybe someday humans – or their electronic successors – will figure all that out. But for the foreseeable future, the faculty of Knightian judgment will remain crucial for economic organization. There is evidence that, even with advances in artificial intelligence, humans and machines will remain complementary. In activities like medical diagnosis and even chess, humans and computers working together outperform either humans by themselves or computers by themselves (Agrawal, Gans and Goldfarb 2018, p. 65; Brynjolfsson and McAfee 2014, pp. 189-190). The complementarity, and the advantage, appear to come from the division of labor within the team: machines can do the parts that require high-speed rule following and humans can do the parts that require judgment.

Knight understood this. He saw methods of scientific planning, including from trade journals and statistical bureaus – many being supplied by Herbert Hoover's commerce department just as Knight's book was coming into print – as *complements* to judgment, not substitutes for it. “Their output increases the value of the intuitive ‘judgments’ on the basis of which [the entrepreneur's] decisions are finally made after all, and greatly extends the scope of the environment in relation to which he can more or less

intelligently react” (Knight 1964 [1921], p. 261). For the same reasons, AI is a complement to human judgment, not a substitute for it.

Ownership and the firm.

In a world without uncertainty, there would be no need for the firm. “With uncertainty entirely absent, every individual being in possession of perfect knowledge of the situation, there would be no occasion for anything of the nature of responsible management or control of productive activity” (Knight 1964 [1921], p. 267). Mere risk poses no difficulties for perfect competition, understood as a world of price-mediated spot contracts between large numbers of anonymous buyers and sellers. Knight calls such a world “production for the market.”

Under conditions of uncertainty, however, competition becomes “imperfect,” and a different mechanism comes into play. Knight calls the world of uncertainty (and thus of firms) the “enterprise economy.”¹⁹ Whereas under risk the insurance principle suffices to deal with the stochastic elements of exchange, in the enterprise economy uncertainty calls for specialization in judgment. As Ricardo insisted, economic agents should specialize in those areas where they have comparative advantage. And if humans have comparative advantage in judgment, then those best able to wield the skill of judgment should specialize in it. Judgment specialists – entrepreneurs – then contract with others who have different comparative advantages. It is this specialization in judgment that gives rise to the

¹⁹ This is Knight’s far-superior word for what is generally called “capitalism,” a term that was “popularized, if not invented, by Marx, to characterize modern free enterprise economy on the grounds that the capitalists as a social class are in power and in a position to exploit the workers in a sense formally but not fundamentally different from that which fitted the hereditary aristocracy of slave owners and feudal lords of earlier economic civilizations” (Knight 1947, p. 129).

enterprise economy and the wage system of industry. “When uncertainty is present and the task of deciding what to do and how to do it takes the ascendancy over that of execution, the internal organization of the productive groups is no longer a matter of indifference or a mechanical detail. Centralization of this deciding and controlling function is imperative, a process of ‘cephalization,’ such as has taken place in the evolution of organic life, is inevitable, and for the same reasons as in the case of biological evolution” (Knight 1964 [1921], pp. 268-269).

Because of uncertainty, writing contracts is hard, since it is difficult or impossible to specify and price all the future contingencies. Thus the entrepreneur must often have to employ a special type of contract, which we can call an *employment contract*, though the idea goes beyond just personnel contracting. As Herbert Simon (1951) explained it, under such a contract the entrepreneur pays a wage for the right to choose which action $x \in \Omega$ the worker will perform, where Ω is the job description or set of allowable actions for which the worker contracts. The worker thus agrees ahead of time to the abstract contours of what he or she may be asked to do, but also agrees that within those limits the wage-payer can dictate a decision in any circumstances not spelled out explicitly in the original contract. Rather than being directly coordinated by Adam Smith’s Invisible Hand, resources within a firm are thus allocated by what Alfred Chandler (1977) famously called the Visible Hand of management. “If a workman moves from department Y to department X ,” averred Ronald Coase, “he does not go because of a change in relative prices, but because he is ordered to do so” (Coase 1937, p. 387).

Coase had of course made an argument about the nature of the firm quite similar to that of Knight.²⁰ Consider what we might call the parable of the secretary (as office workers were once called). The secretary is paid a wage for a job description of the sort Herbert Simon imagined: he must type, file, and answer the phone, but he is not responsible for making the coffee. The secretary is relatively indifferent about which of these tasks he has to undertake at any moment. But his boss is not. She sees the choice of task as crucial. One minute she may direct the secretary to stop filing and instead type an important memo; the next minute she might tell him to stop typing and instead make some important phone calls. If the future were not uncertain, of course, the boss and the secretary could write a detailed long-term contract in which all actions at all times were suitably priced. But in the real world, uncertainty means that contracts will be necessarily incomplete. And this calls for a contracting structure in which one of the parties has the authority to make decisions, within specified bounds, once the uncertainty is resolved and the possibilities realized. In Coase as in Knight, an employment contract arises because of task uncertainty.

The employment contract is really a special type of what organizational economists call a *relational contract* – a contract that permits “an unprogrammed (adaptive, sequential) decision-process” (Williamson 1975, p. 87). Perhaps we can understand the firm itself as a relational contract of this sort, an institutional framework that permits the kind of adaptive response necessary in a world of change and uncertainty. “The firm exists because it is impossible to specify all actions, even contingent actions, in advance,” wrote Brian Loasby.

²⁰ On the differences between the Coasean and Knightian theories of the firm, see Langlois (2007).

“Incomplete specification is its essential basis: for complete specification can be handled by the market” (Loasby 1976, p. 134).

Since, unlike the secretary, the entrepreneur is not indifferent about responses to the realizations of future states of the world, the entrepreneur far more than the secretary is exercising judgment in entering into the relational contract.²¹ For Knight, this is crucial. A “firm” is more than just the relational contract itself; and the firm emerges because the faculty of judgment is *noncontractible*.

One way to think about this is in terms of the problem of moral hazard. Indeed, Barzel (1987b) credits Knight with inventing the moral-hazard theory of the firm. Because of uncertainty and the very nature of judgment, it will always be costly for an outside party to monitor and evaluate the performance of the entrepreneur. “The classification or grouping can only to a limited extent be carried out by any agency outside the person himself who makes the decisions, because of the peculiarly obstinate connection of a *moral hazard* with this sort of risks. The decisive factors in the case are so largely on the inside of the person making the decisions that the ‘instances’ are not amenable to objective description and external control” (Knight 1964 [1921], p. 251, emphasis original). It is relatively (even if not perfectly) easy for a third party to tell if the secretary is doing a good job. But it is much harder for the third party to police the behavior of the boss. The solution? Use a fixed claim, maybe via an employment contract, to compensate the

²¹ Because the secretary doesn’t know which task will be demanded at any moment, is the secretary not also dealing with uncertainty? No, says Knight. “It is the function of the operative in industry to deal with uncertainty as a matter of routine! The exact movements he shall have to perform cannot be foretold, but his ability to perform them can be, and so the uncertainty is eliminated as an element in the calculations” (Knight 1964 [1921], p. 295).

secretary, but then make the boss the *residual claimant*. This creates an incentive for the boss – the entrepreneur – to monitor herself under the watchful eye of the market (Barzel 1987a).

Yet ownership is more than just residual claimancy. Knight emphasizes that the entrepreneur also retains the right – or perhaps the obligation – of *control*: to make decisions in circumstances not spelled out in contracts. “The essence of enterprise is the specialization of the function of responsible direction of economic life, the neglected feature of which is the inseparability of these two elements, responsibility and control” (Knight 1964 [1921], p. 271). Ownership is both residual claimancy (what Knight often calls the “guaranteeing” function of entrepreneurship) and residual control. The two functions “are not even theoretically separable” (Knight 1964 [1921], p. 278). Not incidentally, this is a fundamental tenet of the formal incomplete-contracts theory of the firm associated with Oliver Hart (1989) and his coauthors, making Knight a clear precursor of that approach as well.

The inseparability of residual claimancy and residual control is what makes entrepreneurial judgment non-contractible. You cannot rent your right of residual control the way you can rent your effort as an employee or rent your apartment as a landlord: if you transfer your right of residual control, you are transferring ownership.

Perhaps the best way to unpack this idea is with the user-friendly approach of Henry Hansmann (1996). Like Knight and Hart, Hansmann defines ownership as both residual claimancy and residual control. In a world of uncertainty, organizations are more than a nexus of contract in the sense that there must be an owner, someone to make decisions

about unforeseen circumstances.²² The problem of organization is to assign ownership to the right group of “patrons” – such as workers, customers, input suppliers, or capital suppliers. Only the owning patrons will have residual claims and residual control; all the others will have duties and compensation fixed by contract. Which group of patrons owns the organization will depend on the mix of contacting costs and ownership costs. In this account, all organizations are ultimately cooperatives. For example, when capital needs are low and workers are the most difficult patrons to monitor (typically because they have high human capital and must constantly exercise judgment in weighty decisions), it might be efficient to form a workers’ cooperative, that is, to make workers the owners, something we observe in consultancies, law firms, and physicians’ offices.²³ Most often, however, the most serious monitoring problems arise in the supply of capital – the business of trusting other people with your money – and thus most commercial enterprises are owned by the capital suppliers: they are capitalists’ co-ops.

Knight implies that it is possible for the entrepreneur to belong to none of these patron groups. In a sense, perhaps, entrepreneurs are their own stage of production and thus their own patron group. But this is a highly unlikely scenario. “It is impossible for entrepreneurship to be completely specialized or exist in a pure form, except in the rare

²² Not-for-profit organizations are unowned in the sense that they have no formal residual claimants. This sometimes means that non-profits forego the self-monitoring benefits of residual claimancy, and that may be optimal given other costs involved. But in many cases, there really are residual claimants, notably donors, who have a negative residual claim (and who exercise residual control by serving on boards of directors). Governments also have owners – citizens – who have negative residual claims because they pay taxes. Citizens also exercise residual control through voting, even if the costs are notoriously high.

²³ Or detectives and stenographers, Knight adds (1964 [1921], p. 255). Contrary to what one often hears, worker-owned firms are not rare. What are rare are firms owned by relatively unskilled labor. Unskilled laborers typically undertake the most routine tasks and are the easiest patrons to monitor. Hence it is seldom optimal to make them owners.

and improbable case of a man who owns nothing in a particular business and contributes nothing to it but responsibility” (Knight 1964 [1921], p. 299). Like Hansmann (1996, p. 18), Knight concludes that owners will also typically be factor suppliers, since wealthy or productive factors have the wherewithal to guarantee the contractual returns of the other patrons. Most often, that will mean capital suppliers. “Since it is capital which is especially at risk in operations based on opinions and estimates, the form of organization centers around the provisions relating to capital” (Knight 1964 [1921], p. 252).

Hansmann’s most brilliant insight is that it may be efficient to give formal (*de jure*) residual control to a patron group even if it is costly for that group to exercise its control. This is indeed typically the case in capitalists’ co-ops – ordinary shareholder-owned corporations. Because of the separation of ownership and control, one of the central “problems” of the twentieth century, shareholders seem powerless, and managers seem to be the patrons who hold *de facto* control. Maybe it is the managers who are the real owners? Hansmann’s point is that, precisely because managers have a good deal of day-to-day control, managerial expropriation would be *worse* if they were also *de jure* owners.²⁴ By contrast, when shareholders are owners, there are mechanisms, including the market for corporate control, that can discipline managers, even if those mechanisms may be costly and imperfect (Jensen and Meckling 1976).

It will come as a surprise to present-day economists that, when Knight was writing in the early twentieth century, the corporate agency problem popularly associated with Adolf Berle and Gardiner Means was not understood as a problem with *managers*. The

²⁴ As Geoffrey Hodgson (2015) has argued, organizational economists often miss the full picture if they restrict themselves only to *de facto* or “economic” rights and ignore formal rights.

issue was not (mostly) managerial control but rather control by large blockholders like the House of Morgan. “Control lies in the individual or group who have the actual power to select the board of directors,” wrote Berle and Means (1930, p. 69). Like a long tradition of Progressive writers before them, Berle and Means were mostly worried about the expropriation of minority stockholders by large blockholders.²⁵ Only in the post-World War II period would thinkers begin to identify control with management in the sense of salaried professionals, thus creating the optic through which the Berle and Means argument is now viewed (Lipartito and Morii 2010, pp. 1028-1037). Far from being concerned about managerial misbehavior, Berle and Means fully agreed with the Progressive understanding of management as dispassionate and omniscient scientific planning. “No better principle in carrying out business has yet been worked out,” they wrote, “than to find able men and give them the completest latitude possible in handling the enterprise” (Berle and Means 1930, p. 60)

Frank Knight agreed that control ultimately lay with owners not managers. In the abstract case, one party specializes in judgment and cooperates with others through contract. Yet to “imagine that one man could adequately manage a business enterprise of indefinite size and complexity is to imagine a situation in which effective uncertainty is entirely absent” (Knight 1964 [1921], p. 287). This implies that, as the extent and scope of enterprise grows, the judgment specialist will have to delegate authority to hired managers, who must then exercise judgment on the owner’s behalf. Thus arises the

²⁵ Although diffuse investors may have had weak power of voice, they retained the power of exit, and there is evidence that minority stockholders received a considerable discount on their shares to compensate for the threat of internal self-dealing (Kroszner and Rajan 1994). The threat of expropriation was “priced in.”

separation of ownership and control. But does this not contradict Knight's claim that responsibility and control cannot be separated? Like Berle and Means, Knight believes that "what we call 'control' consists mainly of selecting someone else to do the 'controlling'" (Knight 1964 [1921], p. 292). Although it is true that hired managers exercise judgment, the ultimate act of judgment – and thus ultimate ownership – lies with the person (or persons) who choose the managers.²⁶ "In the field of organization, the knowledge on which what we call responsible control depends is not knowledge of situations and problems and of means for effecting changes, but is knowledge of other men's knowledge of these things."

This, then, is Knight's response to the problem of the separation of ownership and control. "The apparent separation between control and risk taken turns out, as predicted, to be illusory. The paradox of the hired manager, which has caused endless confusion in the analysis of profit, arises from the failure to recognize the fundamental fact that in organized activity the crucial decision is the selection of men to make decisions, that any other sort of decision-making or exercise of judgment is automatically reduced to a routine function. All of which follows from the very nature of large-scale control, based on the replacement of knowledge of things by knowledge of men" (Knight 1964 [1921], p. 297).

²⁶ Anticipating the modern reading of Berle and Means, Knight also points out that contracts with managers are typically to some extent incentive contracts. "It is rare that a hired entrepreneur receives a contractual income as his only interest in the business. He is usually a part owner, or at least his salary is so adjusted as to make it clear that his continuance in the position is contingent upon its prosperity under his direction" (Knight 1964 [1921], p. 290).

Planning and democracy.

To say that large-scale control is based on replacing “knowledge of things” with “knowledge of men” is a striking reversal of the famous line of Friedrich Engels, who foresaw socialism “replacing the government of persons by the administration of things.”²⁷ As we saw, the early-century Progressive movement had fully embraced Engels’s dictum. They understood scientific knowledge to be a substitute for human judgment, not a complement to it. In setting forth a theory of knowledge in which human cognition is ineradicable and inescapable, Knight stood the Progressive view on its head. If planning for the future requires judgment, then what is called for is a decentralized system of institutions that creates incentives to specialize in judgment and to use it wisely (Dold and Rizzo 2021). It requires classically liberal institutions.

For the Progressives, liberal institutions, especially negative individual rights, merely posed unnecessary barriers to the plans of the scientific experts who ought to be making social decisions.²⁸ In the post-Vietnam era, many scholars rushed to absolve the Progressives, notably Dewey, from the taint of technocracy this view so clearly implies. In the opinion of one authoritative source, Dewey “vests little faith in experts” (Festenstein 2023). Yet in the grubby lower realm of economic decision-making, Dewey makes clear, the forces of technology are all that matter, and human judgment and entrepreneurship count for little – and often count in the negative. “Scientific insight taking effect in machine technology has been the great productive force. For the most part, economic

²⁷ Which was a paraphrase of Saint-Simon (Berlin 2002 [1958], p. 166).

²⁸ The sweeping away of individual rights was a central theme of Herbert Croly’s *The Promise of American Life* (1909), one of the foundational documents of Progressive thought. On this see Nichols (1987).

individualism interpreted as energy and enterprise devoted to private profit, has been an adjunct, often a parasitical one, to the movement of technical and scientific forces” (Dewey 1930, pp. 86-87). The voice of Veblen – an important influence on Dewey (Menand 2001, p. 305) – is loud and clear.

Yet unlike Herbert Croly and the young Walter Lippmann, Dewey’s colleagues at the fledgling *New Republic* in the 1910s, Dewey did believe that larger social issues should be decided democratically rather than by the *dictats* of experts.²⁹ But by this he did not have in mind any system of rules for voting. “The method of democracy – inasfar as it is that of organized intelligence – is to bring ... conflicts out into the open where their special claims can be discussed and judged in the light of more inclusive interests” (Dewey 1935, p. 79). That democracy is ultimately discussion is not a new idea. In the nineteenth century, Walter Bagehot, trying to make sense of politics in a post-Darwinian world, wrote of “democracy by discussion,” though he took as a model small governments like classical Athens that were really clubs of elites³⁰ (Bagehot 1873, p. 152). How could democracy work in a world of extended popular governments, even when those governments were parliamentary in form?³¹

John Dewey never worried about such matters. “He appeared to have given little thought to the problems and possibilities of participatory government. For a philosopher

²⁹ As he grew older (and, one might say, wiser), Lippmann evolved away from his early views, eventually becoming a staunch critic of central planning (Lippmann 1937) – and in many eyes a founder of “neoliberalism.”

³⁰ Knight (1947, p. 381) attributes the phrase “government by discussion” to Lord James Bryce, whose major work appeared in 1888, well after Bagehot said it. Both were no doubt influenced by Mill. On this see Emmett (2020).

³¹ A parliament – *parlement* in the original French – is of course a place where people speak.

who put democratic ideals at the center of his thinking, Dewey had surprisingly little to say about democratic citizenship” (Westbrook 1991, p. 317). For Dewey, democracy was never about political rules like voting – it was not a Public Choice problem. Democracy was “socially organized intelligence,” akin to the “procedure of organized cooperative inquiry which has won the triumphs of science in the field of nature” (Dewey 1935,p. 71). Although it is clearest in his early works, Dewey never strayed far from the influence of the Romantic holist philosopher T. H. Green, and accordingly he saw the conversation of democracy as bringing forth the realization of a common social will. “If democracy be a form of society,” he wrote in 1888, “it not only does have, but must have, a common will; for it is this unity of will which makes it an organism. A State represents men so far as they have become organically related to one another, or are possessed of unity of purpose and interest” (Dewey 1888, p. 7). This indeed was Dewey’s solution to the problem of the eclipse of Christianity by Darwinian science: democracy (as he understood it) would take the place of religion (Ryan 2012, p. 461), incorporating science in the process.

Richard Posner recast Dewey’s understanding of democracy, and the epistemic stance that underlay it, in what we can think of as a Knightian way. “Socially organized intelligence,” Posner argued, is really a form of “distributed intelligence.”

Dewey’s epistemic approach is “democratic” in the loose sense of emphasizing the community (the many) over the handful of exceptional individuals (the few). Knowledge is not produced mechanically by repeated application of algorithmic procedures by expert investigators all trained the same way. It is produced by the tug of communal demands, the struggle between doubt and habit, the striving of individuals of diverse backgrounds, aptitude, training, and experience, and the application of methods of inquiry, such as imagination and intuition, that owe little to expert training. No elite has a monopoly of truth (Posner 2003, p. 103).

But Dewey failed to understand the implications of (what Posner thinks is) his own theory of knowledge. Dewey did not like the decentralization of power in practice, especially if that decentralization took the form of the liberal repertoire individual rights and immunities³² (Ryan 2012, p. 457). Yet, as Posner recognizes, the “real political spillover from a pragmatic theory of knowledge, such as Dewey’s theory of epistemic democracy, is, as John Stuart Mill implies in *On Liberty*, not a boost for democracy but a boost for liberty” (Posner 2003, p. 110). For Dewey, by contrast, “it was always liberalism that had to meet the demands of democracy, not democracy that had to answer to liberalism” (Westbrook 1991, p. xvi).

Frank Knight never had much good to say about the philosophy of pragmatism, and indeed his account of judgment arguably provides a better model for “epistemic democracy” than does Dewey’s. Yet, in the end, Knight was never able fully to reconcile his theory of knowledge with political liberalism, even though he would come much closer to that pole than Dewey or the Progressives.

As James Buchanan (1987) argued, Knight’s unwillingness to embrace a strongly liberal alternative was impeded by his adherence to the model of perfect competition as the normative criterion of “individualism” – as the model of what a spontaneous order must mean. Perfect competition, if it ever existed, certainly no longer obtained in the modern world of the early twentieth century, Knight believed; and even at its best, the competitive system so conceived could not provide the moral foundations of a good society. Knight wished “to argue in the first place that the conditions of life do not admit of approximation

³²

to individualism of the sort necessarily assumed by the theory, and secondly that there are in the conditions of actual life no ethical implications of the kind so commonly taken for granted as involved in individualism in so far as it is possible of realization” (Knight 1923, pp. 588-589)

Buchanan – Knight’s greatest student – believed that people do not maximize utility functions: in an important sense they *choose* their utility functions. And this is a justification for liberalism. People need freedom to be able to create themselves.³³ Knight agreed that people do not merely seek to achieve given ends. “Under critical scrutiny, the given ends of action generally turn out to be not given, but themselves instrumental to purposes. And the essential character of purposes is not to be given or static, but to be inherently dynamic, progressive, looking toward indefinite growth in directions which are largely to be determined in action itself – action always including thinking” (Knight 1964 [1921], p. 278, emphasis original). In the end, “our most troublesome want is the desire for wants of the ‘right’ kind” (Knight 1923, p. 580).

Unlike Buchanan, however, Knight did not trust the spontaneous process of self-creation to lead to good outcomes. Once again, this is connected in part to his neoclassical view of what spontaneous order is. But it is also connected to his understanding of the individual as socially constructed. Knight saw the unconstrained self-actualizing individual as a dangerous release of energy, one that, in the U. S., had been held in check only by the availability of “an open frontier in which this [release] did not mean immediate social disintegration” (Knight 1947, p. 41). With the frontier closed, however, the problem

³³ “Man want liberty to become the man he wants to be” (Buchanan 1979, p. 112).

of the twentieth century had become one of finding institutions to constrain and direct the individual's self-expression. Sounding more than a bit like Dewey – for whom, of course, education as at the center of everything – Knight held that society “must educate and restrain, must make men intelligent and moral in such a way and degree, and create such a social order, that they can be trusted with the freedom, which means the power, required for the good life”³⁴ (Knight 1947, p. 172).

³⁴ This extended event to free speech. “Probably limits will have to be set even to freedom of expression for those who love to trouble the waters to make better fishing for themselves, and regardless of whether such persons are self-seeking or well meaning but ignorant and romantic” (Knight 1947, p. 203). If Knight was alarmed by “fraudulent” persuasion in the high-tech age of the radio, one wonders what he would have thought of Twitter and “fake news.”

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