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RESEARCH ARTICLE

Uncertainty and the social organization of economic activity

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Abstract

The last two chapters of Frank H. Knight's *Risk, Uncertainty and Profit* are seldom cited and frequently ignored. But in those chapters, Knight moves from entrepreneurial judgment and organizational strategies to meet the dilemmas uncertainty presents in a firm to the wider question of how uncertainty affects the social organization of economic activity. Ignoring the concluding chapters of Knight's book means we miss an important part of his early career thoughts on the tradeoffs between free enterprise and the social organization of economic activity. The purpose of the paper is to lay out the perspective on social economic organization that he took in the final two chapters of his first major work against the context of his other contemporary writings.

Key words: Frank H. Knight; Risk; Uncertainty and Profit; social economic organization; uncertainty

> 'Economics deals with the *social organization* of economic activity' (Knight, 1933: 4, emphasis in the original).

James Buchanan (1968: 426) once remarked that Knight was the economist as philosopher, rather than the economist as scientist. The observation is not far wrong. Knight approached economic theory as a necessary but not sufficient prelude to a close investigation of the social, economic, and political institutions and processes necessary for a liberal society. The benefit of Knight's type of economic analysis was his insistence on the relevance of basic price theory in all forms of social organization, without the requirement that it be a realistic, or predictive, science (Knight, 1944). Even Knight's first major contribution to economic theory – the revised version of his doctoral dissertation on business profit published as *Risk, Uncertainty and Profit* (Knight, 1921) – is designed in that context. The final two chapters of the book, which were not included in the original dissertation, began his investigations of the relation of price theory to a broader theory of 'the social organization of economic activity'. My purpose here is to examine the last chapters of *Risk, Uncertainty and Profit* to show their connection both to the themes of the book and to the study of institutionalism, social organization, and ethics that became a major part of his subsequent work.

After an introductory look at theories of risk and profit, the second part of Knight's book focused on perfect competition theory, repeatedly reminding the reader that the analysis was framed by the assumption of perfect knowledge. In the third part, that crucial assumption was relaxed, and Knight turned to the world of imperfect knowledge. There he argued that it was crucial to an economics of imperfect competition to understand the difference between dynamism and uncertainty. A dynamic system can change, but in predictable ways. Therefore, perfect competition theory can handle both static and dynamic situations as long as changes occur in predictable ways that people incorporate into their plans. Uncertainty is defined as the existence of unpredictable change, which is always a threat to disrupt people's plans. For Knight, then, uncertainty is the most important source of market failure, because it renders the competitive world we see all around us each day necessarily imperfect. Part III of *Risk, Uncertainty and Profit* is entitled 'Imperfect Competition Through Risk and Uncertainty' and encompasses half of the book.

In imperfect competition, entrepreneurial action becomes the disruptor that continually reshapes market economies. The unpredictable features are the judgments entrepreneurs have to make about alternative resource uses. The traditional notion of Knightian uncertainty is seen here – change can be either predictable or unpredictable. Predictable dynamism may well be insurable, and hence reducible to a known, fixed cost (LeRoy and Singell, 1987). What remains, then is unpredictable change, which Knight identifies with uncertainty and, hence, the space in which entrepreneurial judgment is required. In chapters 9 and 10, Knight introduces the entrepreneurial dilemma created by the need to hire managers to act on the business owner/entrepreneur's behalf. The manager is salaried, and therefore lacks the same situational context as the owner/entrepreneur. The owner/entrepreneur's income depends upon the judgments of *both* the entrepreneur and the salaried manager (Foss and Klein, 2012). Will the salaried manager act in the interest of her principal, or in her own interest? While entrepreneurial insight is the source of profit, the necessity it creates to depend upon salaried managers may become the source of stagnation and entropy in the firm. Entrepreneurial action is replaced with guidelines and rules that must be followed and judgment is replaced with calculation (spreadsheets, we would say today). Salaried managers act to protect (or even advance) their own positions and interests, often at the cost of the firm's profitability. Uncertainty, and the difficulty of connecting managerial decision-making with entrepreneurial judgment, becomes non-trivial causes of firm-level actions that result in market failure, which is often accompanied by loss and closure of businesses, and occasionally by some firms' extraordinary profits (Emmett, 1999).

That summary takes us to our topic here, which is Knight's argument in the final two chapters about the broader consequences for social economic organization that emerge from the uncertainties that generate market failure. Nothing in these two chapters appeared in 'The Theory of Business Profit'.[1] However, the themes developed in them link *Risk, Uncertainty and Profit* to other work that Knight had begun by the time the book was published. The paper, therefore, situates the final two chapters of Knight's book in the context of his other work on social economic organization between 1918 and the mid-1920s. Part I examines Knight's writings during the period from 1918 to 1921 when he was finalizing the text of *Risk, Uncertainty and Profit*. We find, in Part II, that those writings resonate with the themes in the book's final two chapters. Finally, Part III examines the connection between the final two chapters and the public release in the mid-1930s of material he wrote in the early 1920s.

In the process, we will consider material prepared for a textbook while Knight was a professor at the University of Iowa during the 1920s that ended up in *The Economic Organization* (Knight, 1933), as well as several essays from the early 1920s. Linking *Risk, Uncertainty and Profit* to Knight's other work in the late 1910s and early 1920s enables us to better understand the dual role that he played in American economics in the 1920s and 1930s. On the one hand, he effectively advanced price theory in the midst of a profession that was increasingly devoted to Institutionalism and the quest for social control through science. And on the other hand, he constructed a perspective on the study of social economic organization that both defended and questioned the fundamental premises of classical political economy. To put it differently, in Knight's framework, a free society could not be defended simply by promoting economic liberty; something more was required. He spent the rest of his career thinking about what that 'more' was (Knight, 1947, 1960 and numerous other essays).

[1]Chapter 6 of the dissertation, mentioned earlier, is matched by Chapter 7 in *Risk, Uncertainty and Profit*, which heads the final section on 'Imperfect Competition Through Risk and Uncertainty'. The dissertation has 10 chapters; the book has 12, with chapters 11 and 12 being the additions focused on uncertainty and social economic organization, discussed here in Part II.

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1. Part I: social economic organization

One year after the news of his dissertation's second-place finish in the Hart, Schaffner, and Marx essay prize competition, which came with an offer of publication from Houghton Mifflin, Knight spent the summer of 1918 teaching Advanced Economic Theory to graduate students at the University of Chicago under the supervision of John Maurice Clark. The course was repeated in the next two summers. In the course, Knight began to outline a textbook that would differ from the prevailing options, in particular Richard T. Ely's *Outlines of Economics*, which included his doctoral supervisor Allyn Abbott Young on its authorial team.[2] *Outlines* defined economics as 'the science which treats of those social phenomena that are due to the wealth-getting and wealth-using activities of man' (Ely *et al.*, 1918, emphasis in original).

The first half of the Chicago course was built on Alfred Marshall's *Principles of Economics* which offered the simple definition of economics as the study of humans 'in the ordinary business of life' (Marshall, 1920: 6). But, for Knight, the 'business of life' sounded a lot like a focus on making and spending money, making Marshall's orientation too close to Ely's. 'Economics', Knight wrote in his course notes, 'is concerned with neither' making money or spending money 'as such'. Instead, it is 'the *Organization* of the living-making activities' within 'the *modern industrial system*' that is the subject matter of economics (Knight, 1918: 1, emphasis in original). The framing of Knight's career project is here already set. Understanding 'living-making activities' requires knowledge of price theory. But applying that knowledge requires our appreciation for the social and economic organizational context – which for Knight will be industrial society. Economics can take us a good way beyond price theory in that study. But, as we will see, for Knight, an essential element in understanding the organization context will be understanding the dominant ethical and political perspectives that emerge within industrial society. A complete examination of social economic organization, then, will extend from the fundamentals of price theory, to studies of economic organization, the social and political orders, and an ethical evaluation of the organizational system as a whole.

If we look at Knight's definition of economic organization in the light of this broader research agenda, we see that his perspective reflected a closer affinity to Charles Horton Cooley's understanding of economics and society than that of either Ely or Marshall. 'Competition', Cooley remarked in a 1918 *Journal of Political Economy* essay, '[is] the very heart of the economic process'. But economics lacks a

> view of competition that really comprehends the economic function and its relation to other social processes. Political economy … has not shown [competition] in its real nature as part of the process of progressive organization, in which competition and combination are complementary phases of social adaptation…. Political Economy has scarcely the rudiments of a doctrine of economic organization in a large social sense; this seems to me its central deficiency…. A doctrine of organization, long overdue, should not be impossible of achievement (Cooley, 1918: 370–71; see also Cooley, 1909).

Knight took up Cooley's challenge in the outline for a potential book that probably also served as the outline of the course he taught at Chicago and then Iowa.[3] Entitled 'The Economic Organization of Society' (Knight, 1918), the outline provided for five sections:

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[2]In correspondence during the early 1920s, Young encouraged Knight to write a textbook that could replace Ely's. Young's contract with the Ely team and publisher (Macmillan) did not allow him to create an alternative himself. See the Knight-Young correspondence in the Frank Knight Papers, Box 6, Folder 14, University of Chicago Library Special Collections Research Center. J. M. Clark, who supervised Knight's teaching at the University of Chicago, also participated in advising Knight on the manuscript revisions for *Risk, Uncertainty and Profit*.

[3]We can also see that Knight took up Cooley's call to provide a broader analysis of competition. In the winter term of 1922, he was at Harvard University giving a two-part lecture series on 'The Ethics of Competition' to be published in the *Quarterly Journal of Economics* (see the Department of Economics Records, Harvard University, Minutes of Informal Meetings – 1920–

Book I: The Scope, Aims and Method of Economic Study
Book II: Consumption, Demand, Exchange, Markets, Price
Book III: Production in relation to Demand Under Given Conditions
Book IV: Free Enterprise and Social Progress
Book V: Criticism of the Competitive System. Economics and Welfare

Of course, Knight did not agree with Cooley about much more than the problem. Among other things, Cooley's work laid the foundation for the institutionalism that Knight came to argue against during the 1920s (Knight, 1922, 1924, 1925a, 1925b). The notes for Knight's text quickly bring him to a central disagreement: 'The meaning of Organization…. Society [is] often compared to an organism [a key idea in Cooley's view], but this has limitations. Purpose still centers in the individual members not in the ensemble…' (Knight, 1918: 1). What then does 'organization' mean? Distinguishing it from association, Knight answers that organization exists for the sake of 'increased efficiency in securing individual ends'. Economic organization uses society's resources '(1) to satisfy the present wants of its present members, and (2) to increase the stock of those resources themselves in order to provide for progress'. The first task divides productive work among society's members and distributes what our 'joint activity' creates, the second aims to create conditions not only to maintain the current economic activity, but to expand and diversify it (Knight, 1918: 2).

What appears next in Knight's notes for his lectures on 'the Economic Organization' is the first version of his list of the four tasks of social economic organization that ended up being immortalized among economists by Paul Samuelson (a Knight student in the early 1930s at Chicago), who used them to introduce students to the tasks any economic system has to complete on behalf of society (Samuelson, 1948).[4] Here they are in Knight's 1918 version:

(1) The formation of the social-value-scale or estimate of the relative importance of things, for the control of production.
(2) The organization of production, in the narrow sense. This includes the apportionment of tasks among the people, and in civilized society, the apportionment of equipment – land and other natural agents, tools, etc., besides.
(3) The distribution of the produce (including its apportionment among the wants of individuals as well as among individuals, if and so far as society as a group exercises control in this field). The apportionment among individuals is inevitably a social task, since any organized production and since individuals' products cannot be identified, is joint production.
(4) The provision for progress. This properly includes even provision against retrogression. The chief economic aspects are the maintenance and increase of artificial equipment, population, technological knowledge and skill, and natural resources (Knight, 1918: 2).

Before turning from the discussion of social economic organization to Marshallian economic theory, Knight takes the time to outline three further arguments about economic organization for his students to consider. The first are the 'implications of organization' that his analysis focuses on. On the 'advantage or credit' side of modern industrial organization is the 'increased efficiency of industrial activity'. The 'debit side', however, is a little longer. Our dependence 'on the work of other individuals often far away and unknown' makes us vulnerable both individually and as a society. As well, in modern industrial organization, people are assigned to tasks of 'dull routine … which is spiritually deadening and dangerous' (Knight, 1918: 2). These arguments, which go back at least as far as the time of

1925, Harvard University Archives). The titles of the two lectures were 'Ethics and the Economic Interpretation' and 'Ethical Critique of Competition'. Their published versions are Knight (1922, 1923).

[4]Samuelson was an undergraduate student at the University of Chicago in 1932–1935, and was introduced in Social Sciences II to Knight's *The Economic Organization*. He was allowed to take graduate courses in economics as an undergraduate, and met Knight there as well. See Backhouse (2017).

Adam Smith, would resonate with Knight's audience because the 'social question' of the time was the conjoined features of plenty and despair in the literature about industrial society (e.g. the novels of Sinclair Lewis).

The second aspect of economic organization he wants his students to consider is the possible forms that organization can take. He mentions but immediately discounts 'mechanistic' and 'organic' organization, which he believes are 'hardly conceivable socially' because they treat society as being directed as if it were by a single mind (Knight, 1918: 2). Authoritarian organization is conceivable, and was emerging again as he wrote, but neither its 'status' nor 'militaristic' forms offered a model Knight was willing to consider. That left him to consider the three forms of voluntary governance: anarchism, laissez-faire, and democracy (majority rule). While it seems unlikely that he was familiar with Knut Wicksell's (1896) argument about unanimity rules, Knight describes anarchism as the 'pure' type of voluntary governance, and adds that it 'assumes [the] possibility of unanimity by rule of public opinion' (Knight, 1918: 2). Laissez-faire individualism is described as an organizational compromise, which combines 'free contract' in the economic realm, backed by the right of private property, with an authoritarian state that enforces voluntary contracts and protects property, as well as 'the family [as] the unit'. Democracy, defined as majority rule, is also described as a compromise, because it may be limited to only some aspects of voluntary governance. But in its pure form, it 'would be (democratic) state socialism' (Knight, 1918: 3).

Knight describes the 'existing order' as a compromise between laissez-faire individualism and democratic rule. But he argues that the existing system has a tendency 'to go over to the political form of organization'. The legal system may erode freedom of contract. Through regulation or direct provision, the state becomes more involved in business and industry. And taxation and state provision of benefits replace market functions of production and distribution. He then outlines the 'tendency toward state socialism'. It starts with the social judgment that 'the individual [is] not a competent judge of his own *good*'. Next come several systemic issues with business that push society toward some form of socialism: the corrosive effect of business on good taste; the potential for free contracts to 'affect third parties, both for good and ill' – Knight expresses here his own concern about market externalities 'rapidly increasing'; the tension between the territoriality of political control *versus* market expansiveness; increasing inequality which he describes as becoming 'more and more repugnant to the moral sense of mankind'; the need to offset a focus on individual wants with greater emphasis 'on associational values'; and increasing industrial conflict and emergence of monopolies. These issues are listed in the early part of the outline, with the promise for them to be considered further in the last section of the text (Knight, 1918: 3, emphasis in the original).

Against this background of social organization theory, Knight sets the course he would teach the students and the book he was writing. 'Economic science deals mainly with the free contract phase of organization', he tells his audience. But the focus of economics is not a 'pure exchange economy', but the world of free enterprise, involving highly organized production, with individuals selling productive services to a business in exchange for monetary payment and performing 'detailed operations on a single commodity'. At the center of such a study is 'the phenomena of price' which means that prices 'constitute the social value scale'. Production and distribution are coordinated by the price system. Understanding the free market system, then, requires analysis, which involves abstraction. Students come to the study of economics with two 'phases' of practical interest: (i) as 'a unit in the system [who] needs to behave intelligently in relation to it in his own business'; and (ii) as 'a member of society [who] requires such knowledge to guide his political conduct'. He closes his notes for the first section of the study of 'the economic organization of society' with the note that 'criticism of the system from a social point of view [is] still the dominant note in the study'. We tend to 'take things for granted', but 'the leading purpose of all education' is the creation of 'a critical attitude toward institutions' (Knight, 1918: 4–5).[5]

[5]The remainder of the 1918 manuscript is about the economics of production and distribution, and the operation of the price system. In other words, the outline of 'The Economic Organization of Society' is quite similar to the outline of *The Economic Organization* that was made available to undergraduate and graduate students at Chicago in the early 1930s,

Two years later, Knight wrote an essay that was never published, entitled ‘Social Organization: A Survey of Its Problems and Forms from the Standpoint of the Present Crisis’ (Knight, 1920). The essay fills out his promise in the first ‘book’ of his 1918 textbook outline that familiarity with economic theory was the first step to social criticism. Knight initiates the discussion by distinguishing the ‘moderate individualism’ he will examine in the essay from ‘moderate societism’, which he identifies with the English neo-Hegelians, including John S. Mackenzie, who is cited in the methodological discussion in both Knight’s original dissertation and *Risk, Uncertainty and Profit* (Knight, 1916: 3, 1921: 5), and Bernard Bosanquet, who was a favorite of his philosophy professor James Creighton at Cornell. Moderate societism, Knight tells his reader, emphasizes ‘the social nature of the individual’. But it does not define the individual merely as a unit in an organic whole; individuals are not mere social products, but they also do not have existence separate from society. Individuals and society are aspects of the same phenomenon. Moderate individualism takes the individual as a free rational actor with resources, but with a variety of relationships with larger social units, including family, business and governance systems. Knight suggests that ‘there is more difference in form than in substance between these two “moderate” positions’, but moderate individualism is probably more intelligible to the average person (Knight, 1920: 1–3).

‘Social Organization’ then continues with its main theme – the social evaluation of two forms of economic organization, free enterprise and a form of social control through political and bureaucratic decisions that steer the actions of individuals and firms. Despite its closeness in date to Knight’s submission of *Risk, Uncertainty and Profit*,[6] the term ‘uncertainty’ appears only three times in the manuscript: once in the context of the length of the modern ‘production period’ which increases the chance that costs may change and productive activity be interrupted, another in discussing the variability of wants in the modern age, and the third time in his discussion of the ‘gambling aspects of business activity’ that emerge from managers’ concerns about the impact of decisions on both ‘capital values’ as well as ‘product values’ (Knight, 1920: 26–28). With or without uncertainty, the focus of the essay is on the tradeoff between freedom and organization. Organization curtails freedom in the interest of greater productivity, which assists with the solution of four great problems that every form of social organization must solve. The four problems, of course, are the same ones identified in the 1918 course notes, and appear in virtually the same form (Knight, 1920: 11).

We have seen in Part I that Knight’s work in the period between his dissertation and its publication as *Risk, Uncertainty and Profit* was focused on social economic organization. We have examined the annotated outline of an economics textbook and an unpublished paper that drew upon it. But it should be pointed out that during this period he also contributed to a session at the American Economics Association meeting in 1920 on ‘Traditional Economic Theory’ (Fisher *et al.*, 1921), and reviewed six books for the *Journal of Political Economy*, the *Quarterly Journal of Economics*, and the *American Journal of Sociology*. Five of those reviews dealt with the issues related to the social organization of economic activity. Thus, the final two chapters of *Risk, Uncertainty and Profit* were written, and the main text revised, in a period when Knight was focused on social economic organization.

2. Part II: the final two chapters of *Risk, Uncertainty and Profit*

‘The Theory of Business Profit’ ended with three chapters which examined ‘The Relations of Rent and Profit’. Chapter 8 focused on wages; chapter 9 on rent; and chapter 10 on interest theory. The themes of each of these three chapters emerges out of the fundamental challenge Knight saw uncertainty presenting enterprises in a dynamic economy (identified in chapter 7): the necessity of direction for enterprises in an uncertain world, rather than the classical conception of a threefold provision of productive agents, who received wages (workers), profits (landholders and factors), and interest/rents

discussed in Part III. However, the chapters in *The Economic Organization* (Knight 1933) were only part of the textbook chapters he had written and used at the University of Iowa in the mid-1920s.

[6]Knight’s attempts to finalize revisions of the dissertation probably overlapped with his writing of ‘Social Organization’ because *Risk, Uncertainty and Profit* probably appeared in the first half of 1921.

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(land and financial asset holders). The increase in control and direction means that firms exchange known costs in order to reduce their uncertainty regarding future costs. The result may be less uncertainty for the firm, but perhaps not for the society as a whole. And, of course, the firm may well have judged poorly and increased their costs, and hence their probability of failure. In such a world, the capacity to judge wisely becomes more highly valued, and the market value of entrepreneurs as well as managers known for wise judgment will increase, leading to centralization of entrepreneurial talent within the market and, once again, higher costs to firms. For economists, the final conclusion of Knight's dissertation was to stay away from 'hypothetical "ultimate" results' like the iron law of wages, or the long-run stationary state – both staples of classical political economy. Instead, they should restrict themselves to 'consideration of "normals"', which, after all, are 'moving equilibria', and stop pretending that they can see much farther forward than businesses can (Knight, 1916: 354–355).

The organization of *Risk, Uncertainty and Profit* reflected both a consolidation of the price theoretic core of 'The Theory of Business Profit', and an expansion of Knight's consideration of imperfect competition. The theory of perfect competition was consolidated into the four chapters of Part Two, with production and distribution theory clearly identified and a new chapter on 'Minor Prerequisites of Perfect Competition', which anticipates the longer, and more famous, list in the essay 'The Ethics of Competition' (Knight, 1923: 590–611). That left Knight four chapters to reorganize and rewrite material from the dissertation to focus on the economics of imperfect competition, and its consequences for a theory of profit. As already suggested, the final chapter of that section, on the salaried manager, was re-organized and new material added that not only examined the difficulties uncertainty posed an entrepreneur or owner/operator, but also pointed out that the context in which the entrepreneur considered uncertainty would differ from that of their salaried manager, upon whom much of the responsibility for the firm's operational decisions would rest. The success of the modern firm in an uncertain world depended upon the decisions, made under uncertainty, of *both* the entrepreneur and the manager (Emmett, 2011). A fitting conclusion to Knight's argument about uncertainty, entrepreneurs, and firm organization.

2.1 Why, then, the need for chapters 11 and 12?

One can well imagine Houghton Mifflin asking that question after looking at the manuscript Knight submitted with the strikingly new title that placed 'uncertainty' right in the middle of the book's themes. Certainly, with the reorganization of material within the first 10 chapters, and the addition of the final two, this was not the dissertation that had placed second in the general category of the essay competition.[7] Perhaps Knight and his supervisors John Maurice Clark and Allyn Abbott Young should not have been surprised when the publisher then complained about the extent to which a dissertation entitled 'A Theory of Business Profit' had been reorganized, rewritten, extended, and retitled. There was continuity between the two, of course, but the new manuscript was not the one the publisher expected (if they expected any manuscript at all after 4 years). The new title certainly fit the new version of the argument better; but they may have wondered about the two additional chapters, neither of which match up well with anything from the dissertation.

Chapter 11, entitled 'Uncertainty and Social Progress', at least captures a number of issues that might have been expansions of ideas in the essay submitted to the essay competition. In many ways, the chapter pulls together implications of the basic tension between change and uncertainty for the consideration of economic progress. The chapter opens with some issues that relate to 'the general character of the connection between progress and uncertainty' (Knight, 1921: 313). Among these 'general' considerations are epistemological and methodological issues: can we recognize the difference between what is constant and what is changing in economic progress? When can we apply

[7]Twelve years later, when Lionel Robbins approached Houghton Mifflin about republishing Knight's book because there were no longer many copies available for sale, they said they were not interested, giving Robbins permission to begin the LSE Reprint edition of *Risk, Uncertainty and Profit*, which sold far more copies of Knight's book than Houghton Mifflin ever did (Emmett, forthcoming).

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probabilistic calculations, and when can we not? Are static and dynamic factors really all that different, if they both are present during a time of economic progress? Do wants change in ways that can be anticipated? Does it matter for entrepreneurs if progressive changes are caused by natural events or are the result of human action? What about technological change? Is it predictable? Knight even anticipates principles like Moore's Law (every two years, the price of computers is cut in half, while the number of transistors that fit on a microchip doubles), when he points out that

> The most fundamentally and irretrievably uncertain phases or factors of progress are those which amount essentially to the increase of knowledge as such. This description evidently holds for the improvement of technological processes … Yet even here, as we have seen, change and the uncertainty of change are in some degree separable factors. Though we cannot describe a new invention in advance without making it, nor say what quantity and quality of new natural productive capacity will be developed and where, yet it is possible in a large degree to offset ignorance with knowledge and behave intelligently with regard to the future. These changes are in large part the result of deliberate application of resources to bring them about, and in the large if not in a particular instance, the results of such activity can be so far foreseen that it is even possible to hire [people] and borrow capital at fixed remunerations for the purpose of carrying it on (Knight, 1921: 318).

Change can, of course, be known, if it 'takes place uniformly, or in accordance with any known mathematical function of time'. It is 'fluctuation … which is the true cause of uncertainty, fluctuation in progress' (Knight, 1921: 315). Changes in things in nature, Knight argues, usually take forms that do not pose a problem for human action. Natural fluctuations occur in accordance with processes that can be known, or occur over a time span that does not matter for human action today, this year, or even this millennium. But human actions cause changes that are different from natural change. Deliberate actions, such as business investments or technological improvements, are willed, although some are perhaps incidental discoveries. Other human actions are incidental side-effects 'of actions directed toward other ends'. All these can be handled by the theory Knight laid out earlier in his book (at least, that is his claim). Other aspects of change are less capable of being handled as uniform, hence predictable, change. 'The improvement of wants is partly a deliberate matter, partly incidental' and the same could be said for education (Knight, 1921: 316). The real uncertainty, then, is fluctuation in the midst of progress.

Knight then turns to two issues that he frequently raised in the 1920s. First, the 'economic process produces wants as well as goods to satisfy existing wants, and the amount of social energy devoted to the former and neglected phase of activity is very large and constantly growing'. Secondly, 'the increase in wealth is to a large extent an end in itself' and this becomes more common amongst a population as 'the standards of life are advanced'. Knight believes this leads to the substitution of more work for leisure, and to producing wealth 'with no view to any use beyond the increase of wealth itself' (Knight, 1921: 319; see also, 1923, 1924). These comments, and others like them elsewhere in *Risk, Uncertainty and Profit* and also in the lecture series he gave in 1922 at Harvard University entitled 'The Ethics of Competition' (Knight, 1922, 1923), are an early indication of the resistance Knight would put up to Lionel Robbin's (1932) arguments about utility comparisons in *The Nature and Significance of Economic Science* and, much later, George Stigler and Gary Becker's famous methodological statement 'De Gustibus Non Est Disputandum' (Emmett, 2006; Stigler and Becker, 1977). People are much more than rational calculators, and in the early 1920s, he was unwilling to narrow the analysis without reminding his audience that 'an irrationally rational passion for impassionate calculation', will take all the joy out of life, as his Chicago mentor Clark (1918: 24) once remarked.[8]

[8]Clark's remark has often been changed to a statement that sounds better: 'an irrational passion for dispassionate rationality takes all the joy out of life'. The most accurate citation of that statement is (Clark, as mentioned in class by Frank Knight).

As Knight walks through chapter 11, his focus remains on the way uncertainty affects human action under current, and perhaps future, forms of social organization, with a particular focus on the human creation and use of productive resources. In some cases, his discussion focuses on how an economic institution or activity – money, invention, property ownership, etc. – is a rational response to uncertainty. In others, the concern is how uncertainty plays a role, positively or negatively, in the supply and demand of various goods, and how forms of social organization might affect that. The chapter is a veritable treasure trove of ideas for future research projects. Knight has interesting things to say about everyone, and then leaves them aside as he presses on.

Of particular interest are his comments about significant organizational change for society. What would happen if property were socialized? Decisions would still have to be made, and presumably decision-making would be concentrated in a few individuals. Would their remuneration be independent of their responsibilities? Knight focuses on two issues in addressing this question. The first is that where businesses were managed by independent owners before they were socialized, they would be 'transformed into public enterprises under the management of hired functionaries'. Dryly, he says, 'In this case the nature of the change is clear enough'. But what about corporations, which are run by salaried managers? One might think that there is little difference in that case between private *versus* public enterprise. The similarity between 'large-scale business' and 'political democracy' is, Knight says, 'one of the socialist's strongest arguments against a probable loss of efficiency in the exchange of private for public ownership. But we must emphasize the fact that the similarity is much exaggerated …'. A manager in a socialist government does not sense responsibility to the public, but rather 'to the ultimate entrepreneur, the small group of 'insiders' who are the real owners of the business' (Knight, 1921: 359).

An additional danger to consider in evaluating the possibility of political control of economic life, for Knight, is the claim that bureaucrats, that is 'hired managers', working on behalf of society as a whole, would be more careless with resources than a private owner. No so, says Knight:

> The real trouble with bureaucracies is not that they are rash, but the opposite. When not actually rotten with dishonesty and corruption they universally show a tendency to 'play safe' and become hopelessly conservative. The great dangers to be feared from a political control of economic life under ordinary conditions is not a reckless dissipation of the social resources so much as the arrest of progress and the vegetation of life (Knight, 1921: 361).

Social bureaucrats may tend to play safe in ways that lead to 'the arrest of progress', as Knight suggested, but surely entrepreneurs avoid these 'great dangers' for social progress because of their willingness to 'go for it'? Not so fast, Knight urged his readers. Entrepreneurs make estimates now, but their profits are in the future, and it is the *prospect* of success that moves them to act. Expectations are cheap, apparently, and all may share in enthusiasm for the success of entrepreneurial ventures. At equilibrium, the prices of 'the entrepreneurs' costs of production, represent under perfect competition what entrepreneurs expect their products to be worth when sold'. But those same entrepreneurs will receive incomes based on the 'the facts at a later time as contrasted with the anticipations of an earlier'. Put differently, entrepreneurs will make a profit when they do *not* anticipate higher prices when they decide what to produce; and they will lose money when their price expectations in the earlier period turn out to have been too high. Buy high, sell low is neither a recipe for success in financial markets nor in entrepreneurial ventures (Knight, 1921: 363–365).

In terms of social organization, Knight tells his reader, it appears that society should leave the uncertainty bearing to the individual, because the bureaucrat does not have what we today would call 'skin in the game' (Knight, 1921: 368). But it is also, Knight adds, not clear whether society should allow the individual to bear the risks of industry entirely on her own. Again, individuals overestimate the chance of success and underestimate the chance of loss. Protecting individuals' minimum standard of life 'is only one of many questions of the human interested involved'. Focusing only on that leads one to miss others of potentially greater interest:

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> [Our] chief interest in life is after all to find life interesting, which is a very different thing from merely consuming a maximum amount of wealth. Change, novelty, and surprise must be given large consideration as values per se, and since at best most of us must doubtless spend more time in producing wealth than in consuming it, the dynamic and personal factors must be taken into account on the production side of economic conduct, and weighed against the element of efficiency…. Hence each individual must be given responsibility, freedom of choice, a wider sphere of self-expression than he can have in a system of organization where control is specialized and concentrated to the last degree. Whether this is practicable and how it is to be done is the great problem which confronts the advocates of industrial democracy (Knight, 1921: 369).

Risk, Uncertainty, and Profit, then, concludes not with a celebration of the entrepreneur, but rather with a caution about the difficulties of any 'rational reconstruction' of society. 'The existing order', he tells the reader in the final paragraph, 'affords one way for securing more or less tolerable results…' and 'candid consideration of the difficulties of radical transformation, …, suggests caution and humility in dealing with reconstruction proposals' (Knight, 1921: 375).

3. Part III: from risk, uncertainty and profit to the ethics of competition

Part I ended with Knight's 'Social Organization' essay, written in 1920. We have seen, however, that the themes of that essay emerged from the textbook outline entitled 'The Economic Organization of Society', which was written while Knight was revising *Risk, Uncertainty and Profit*. The material from the outline and essay led to his inclusion of two new chapters at the end of *Risk, Uncertainty and Profit* focused on the relation of uncertainty to the social organization of economic activity. Chapters 11 and 12 had a positive message, that despite living in an uncertain world, successful human action and organization were certainly possible, and could have success. The chapters also issued warnings, especially about human hubris and principal-agent problems that could lead to social or economic organizational failure.

The last two chapters of *Risk, Uncertainty and Profit*, then, link it to the greater body of his work in the 1920s. Three essays written immediately after the book's release reveal the connections. The first two papers were presented at Harvard's economics departmental seminar in 1922 under the general title 'The Ethics of Competition'. The essays were published subsequently by the *Quarterly Journal of Economics* (Knight, 1922, 1923). The first paper begins as an ethical assessment of the 'economic interpretation' of society. While the paper did not mention Charles Beard's (1913) recent book, *An Economic Interpretation of the Constitution*, Knight clearly took aim at explanations of a society's current social economic organization based on given economic interests. His primary concern was twofold: (a) the tendency in such an approach to group individuals into interest groups or classes which could then be treated as static, and (b) the failure of such an approach to pay adequate attention to the individual human quest for moral improvement. For Knight, the two concerns were related. From its inception in classical economics, the economic discipline assumed that individuals situated in the same order of society – laborers, capitalists, and landlords – had the same interests, which could therefore be treated as 'data' (Knight, 1922: 456–457). The argument that wants and interests may change was largely dismissed by economists, Knight thought. Even the historical and institutionalist economists of the 19th and early 20th century, who saw themselves creating a new economics, still tended to imply that 'the growth of wants is unfortunate and the manufacture of new ones is an evil' – witness Veblen's attack on 'advertising and salesmanship' (Knight, 1922: 457). Knight informed his Harvard audience that he intended to argue against the mainstream on this point. Changes in human wants are inevitable – 'The chief thing which the commonsense individual actually wants is more and better wants' (Knight, 1922: 458). But, Knight goes on in the essay to say, economics also should not seek to explain the evolution (or correctness) of human wants and needs. To proceed as a science, it probably needs to adopt the *de gustibus non est disputandum* (there is no accounting for tastes) view. However, economics should also resist the desire to provide an economic explanation for all

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human activity. Economic analysis, he adds at the end, needs to be coupled with ethics – 'the criticism of values' (Knight, 1922: 480).

The second essay turned around and focused the argument on the sufficiency of ethical frameworks to provide a basis upon which an ethical judgment of decisions within a competitive economy might be made. At the heart of the second essay was Knight's interest in the criticism of values as an integral part of any study of social economic organization:

> An organized system must operate in accordance with a social standard. This standard will of course be related in some way to the values of the individuals making up the society, but it cannot be merely identical with them; it presupposes some process of organizing the various individual interests, weighing them against each other and adjudicating conflicts among them (Knight, 1923).

The paper then proceeded to identify the range of assumptions made in the theory of perfect competition (a longer list than found in *Risk, Uncertainty and Profit*, even), in order to impress upon the reader the immensity of the ethical task required if one is going to evaluate a social philosophy built upon economic theory. The case Knight builds in the first section of the essay led his student Don Patinkin to remark that 'these thirteen pages are among the most radical ever written in economics' (Patinkin, 1973: 798). The argument of the rest of the paper suggested that no existing ethical system was capable of being used as a guide to an ethical evaluation of the spontaneous order emerging market processes.

The final paper in the set of three was an argument about the limitations of economic analysis as a scientific tool for the study of the economy that complemented the caution raised in *Risk, Uncertainty and Profit* regarding the limits of what economics could say about a dynamic and uncertain world (Knight, 1924). Knight's essay was a lone contrary voice in a volume devoted to singing the praise of the recent trend among institutionalist economists to put the discipline on what they considered to be a more scientific footing. Echoing the message of *Risk, Uncertainty and Profit*, Knight remarked:

> [I]t is possible for a good judge of human nature to form opinions with a high degree of validity as to what individuals or groups are likely to do under conditions present to observation. Moreover, it is possible to convey information and describe situations intelligibly to a considerable extent, and to make general statements regarding the art of judging human nature which has some degree of helpfulness. But none of this is done by the methods of science. It is all in the field of art, and not of science, of suggestion and interpretation, and not accurate, definite, objective statement, a sphere in which common sense works and logic falls down, and where, in consequence, the way to improve our technique is not to attempt to analyze things into their elements, reduce them to measure and determine functional relationships, but to education and train our intuitive powers (Knight, 1924: 247).

The limitations of economic science remained a theme of Knight's throughout the remainder of his life. It was one part of his overall agenda, to examine critically economic organization, ethical systems, and various social and political forms of organization to inquire as to whether the social organization of economic life could be beneficial to society.

4. Conclusion

Risk, Uncertainty and Profit is often identified as a key text in neoclassical economic theory in the early 20th century, and it is rightly so considered. Even before it became a standard read for economics graduate students at the University of Chicago, students at the London School of Economics were assigned to read it in Lionel Robbins' *Principles of Economic Analysis* course (Robbins, 2018), making *Risk, Uncertainty and Profit* a key background text to the debates of the 1930s and 1940s, including the Knight-Hayek capital controversy (Hayek, 1934, 1936; Knight, 1934, 1935), the monopolistic/

imperfect competition debate (Chamberlin, 1933; Robinson, 1933), and the debate over Keynes' *General Theory* (Knight, 1937).

But the book is so much more than a price theory textbook. Viewed from the perspective of social economic organization, the impact of uncertainty on economic participants, in markets and other institutional contexts, will emerge from their decisions. All depend upon their judgment, in the absence of certainty. Where some degree of predictability is possible, markets (especially in insurance and similar activities that have predictable probabilistic features) arise and firms can convert unknown effects into known costs. Entrepreneurial activity emerges from the dynamism of market activity, which renders knowledge uncertain. Judgment, rather than knowledge, is required not only to decide what good to create and when to enter the market, but also about the people to hire as the firm grows. Various forms of organization will emerge from those judgments, for better or for worse. As well, in each form, the judgments of owners, managers, and workers may conflict, not only because the information each possesses differs, but most importantly because their interests differ.

The impact of uncertainty on firm-level organization spills over onto social economic organization. Modern industrial organization presents not only the principal-agent problem at the business level, but also at the political level. Which interests among their constituency will politicians represent? Will bureaucrats have the same interests and knowledge as elected politicians? Political organization exacerbates both principal-agent and uncertainty problems. What institutions will emerge?

The theory of perfect competition was always Knight's starting point. But one could not end there. Economic analysis could extend beyond perfect competition into imperfect competition, although the questions begin to compound quickly as he builds upward toward a theory of social economic organization. Situating *Risk, Uncertainty and Profit* in the midst of his early, and somewhat optimistic, ruminations on these issues raises more questions than we can answer.

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