



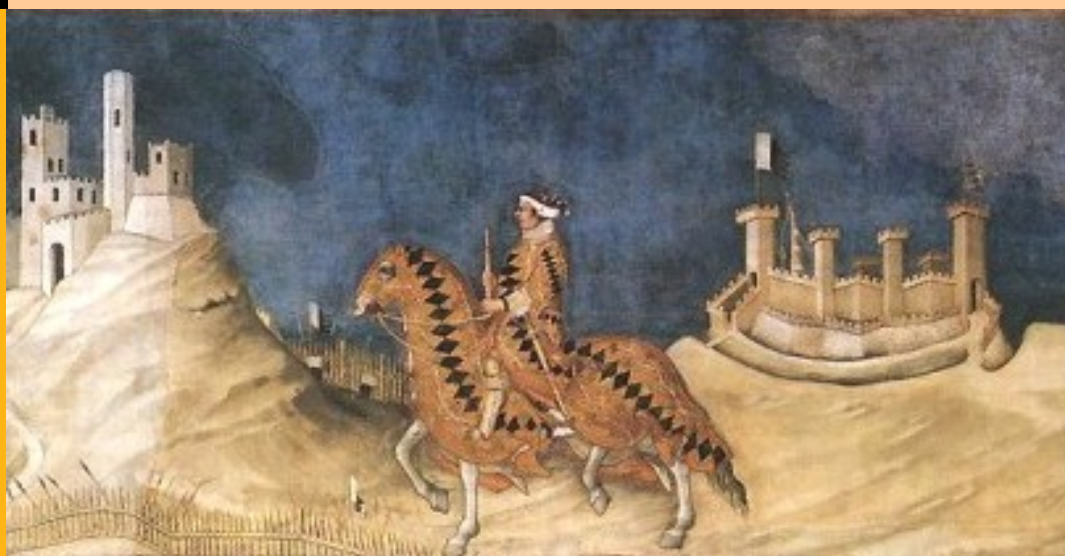
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A Certain Amount of 'Recantation'.  
On the Origins of Frank H. Knight's Antipositivism

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“A Certain Amount of ‘Recantation.’”

On the Origins of Frank H. Knight’s Antipositivism

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### Abstract

The aim of this paper is to investigate in some detail the origins of Knight’s antipositivism and to assess the main influences that brought him to a change in methodological perspective after 1921. As importantly, what follows is also an attempt to increase our general understanding of the methodological debates taking place during the early decades of the last century and to shed new light on the inherently pluralistic character of US interwar economics. This paper is organized as follows: the first section outlines Knight’s methodological views as presented in his early works; the second section discusses Knight’s “recantation” and his attack on behavioristic social science; the third section analyze Knight’s discussion of the nature and limitations of scientific economics; the fourth section offers a brief digression on Knight’s relationship with American institutionalism; the fifth section deals with the later developments of Knight’s antipositivism; the final section presents some conclusions.

### JEL Codes

History of Economic Thought: Individuals (B31)

Economic Methodology (B41)

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Keywords: Knight, Frank; Economic methodology; Economics and physics; American institutionalism.

I am not being insolent in saying that I went through the type of metaphysical thinking of the stage you are now in, between the ages of 18 and 30; this says nothing as to whether I have advanced forwards or backwards since that time, but I hope the reasons which have led me to a different viewpoint are not altogether dishonest or the marks of complete mental incompetence (Frank H. Knight to Morris A. Copeland: November 9, 1926. In Asso and Fiorito 2003, 97-98).

### 1. The issue

Frank Knight’s firm opposition to the strictly positivistic conception of economics – and social science in general – has been a frequent topic of discussion and debate in the literature (Asso and Fiorito 2008; Emmett 1990; Gonce 1971; Hammond 1991; Hirsh and Hirsh 1975; Hands 2008; McKinney 1977). With differences in style and emphasis, these accounts have assessed and documented Knight’s crusade against the scientific quest for social knowledge based on quantification and measurement, on empirical verification of hypotheses, and freed from normative considerations. Knight first developed his criticism of positivism in a series of essays published during the early 1920s. While he did certainly elaborate on it over the years, interpreters tend to agree that the main coordinates of his methodological perspective remained substantially stable and coherent for the rest of his life. There appears to be, instead, serious enough questions about the consistency between Knight’s views in his earlier works – especially in his 1916 Ph.D. dissertation then published in 1921 as *Risk, Uncertainty, and Profit* (RUP) – and his later antipositivism. Significantly, it is Knight himself who explicitly acknowledges some degree of discontinuity in the early phase of his methodological ruminations. Writing in 1925 to his future Chicago colleague Jacob Viner, he described the evolution of his thoughts on the scientific status of economics as follows:

When I was writing my thesis I regarded myself as an advocate of the objective method, and said in terms that economics has to be based on “behavioristic” psychology, a term then less discussed than now. What definitely forced me out of this position, and led to a certain amount of

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“recantation” on the subject of utility etc. (which you have noted) was the very analogy with physics which I had taken as fundamental in my own thinking (and which I still believe to be fundamental to a “pure theory” while I tend to give the notion of pure theory itself a smaller place and to emphasize its limitations more and more). Specifically, I saw, almost in a flash, just about the time my thesis was published, that the notions of force and energy in mechanics are subject to all the limitations and objections of utility theory in economics, and the more I went into the subject of mechanics the more I seemed to see that it cannot get along without force and energy, in spite of their inescapable “metaphysical” character. The issue raised opens up nothing less than the fundamental problems of methodology and concepts in science at large. So this is where I find myself. The problem of utility, or of motivation however stated, is that of cause and effect, it is the general problem of the logic of science. So what I have been working at, under irresistible compulsion, is simply the endeavor to work out a tenable set of fundamental assumptions which will illuminate the science of economics by placing it in its proper relation to other fields of thought.<sup>2</sup>

The passage reproduced above contains a number of important points that will be discussed below. What concerns us at this stage is Knight’s explicit reference to “a certain amount of ‘recantation’” he was led to shortly after the appearance in print of his thesis – i.e. a shift from a methodological position to some extent akin to the scientific ideal so typical of the period, to a markedly antipositivistic, even “metaphysical,” stance. Albeit noticed by some authors (see for instance Emmett 1999 and 2009a; Hands 2008; Schmidt and Weber 2012), this aspect in the evolution of Knight’s thought deserves further discussion. The aim of this paper is to investigate in some detail the origins of Knight’s antipositivism and to assess the main influences that brought him to a change in methodological perspective after 1921. As importantly, what follows is also an attempt to increase our general understanding of the methodological debates taking place during the early decades of the last century and to shed new light on the inherently pluralistic character of US interwar economics. This paper is organized as follows: the first section outlines Knight’s methodological views as presented in his early works, mostly in RUP; the second section discusses Knight’s “recantation” and his attack on behaviorism and behavioristic social science; the third section analyzes Knight’s discussion of the nature and limitations of scientific economics; the fourth section offers a brief digression on Knight’s relationship with American institutionalism; the fifth section deals with the later developments of Knight’s antipositivism; the final section presents some conclusions.

## 2. Risk, Uncertainty, and Profit and before

In order to appraise the nature and the extent of Knight’s (self-admitted) “recantation” we need first to analyze his epistemological commitments prior to 1921. In other words, it is necessary to understand what Knight meant when, in his letter to Viner, he described himself as a former “advocate of the objective method” and a supporter of “behavioristic psychology” in economics. The late 1910s and early 1920s were in fact years of intense debates as to the scientific foundations of social knowledge, and terms like objective or behavioristic often assumed different meanings to different people (Mark 1994).

In the opening chapter of RUP Knight provides a quite straightforward description of his own methodological views: “[t]he method of economics is simply that of any field of inquiry where analysis is in any degree applicable [...] It is the scientific method” (1921a, 8). Knight identified the “scientific method” with the classical procedure of “successive approximations,” in which statements on concrete reality are derived from a set of universal generalizations by the introduction of more and more factual conditions. “The study” – he wrote – “will begin with a theoretical branch dealing with only the most general aspects of the subject matter, and proceed downward through a succession of principles

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<sup>2</sup> Frank H. Knight to Jacob Viner: September 9, 1925. Jacob Viner Papers, Seely G. Mudd Manuscript Library, Princeton University. Knight’s letter was prompted by the publication in the *Journal of Political Economy* of Viner’s article on “The Utility Concept in Value Theory and Its Critics” (1925). There, Viner quoted Knight’s remarks about the serious injury wrought in economic theory by “the pernicious concept of utility dragged into economics by Jevons and the Austrians,” which “adds nothing to that of value and should be abandoned” (Knight 1917, 67: quoted in Viner 1925, 372). In the accompanying footnote (1925, 372 n13), Viner commented: “Knight has subsequently recanted somewhat, however.”

applicable to more and more restricted classes of phenomena" (1921a, 8).<sup>3</sup> Knight believed this method to be universal to all sciences, but proved himself on this point nonetheless more of a follower of earlier economists than a renovator inspired by the natural disciplines (1921a, 9-10). Compared to the physicist, the economist must be more explicit in recognizing the limits of the method of "analysis and abstraction" since "the allowances and corrections necessary in the case of theoretical economics are vastly greater than in the case of mechanics, and the importance of not losing sight of them is correspondingly accentuated" (1921a, 12). As importantly, controlled experiments, the typical feature of physical mechanics, are in fact largely beyond the scope of the social sciences. "Here," Knight warned, "we must commonly search for manifestations of the various factors in our complex, under varying associations, or rely upon intuitive knowledge of general principles and follow through the workings of individual chains of sequence by logical processes" (1921a, 3-4).

Knight also denied for the social sciences the possibility of setting a rigid dichotomy between inductive and deductive reasoning: "we can study facts intelligently and fruitfully only in the light of hypotheses," while, in turn, "hypotheses have value more or less, in proportion to the amount of antecedent concrete knowledge of fact on which they are based" (1921a, 7 n1). Observed facts could be used to identify regularities from which deductions could be made and synthesis derived. Knight however is cautious enough not to identify empiricism with its the extreme forms of either phenomenalism or physicalism (i.e. the reduction of science to statements about directly observable facts). Much of our understanding of human phenomena, he explained, is grounded on "commons sense" and intuition: "Observation and intuition are, indeed, hardly distinguishable operations in much of the field of human behavior. Our knowledge of ourselves is based on introspective observation, but is so direct that it may be called intuitive" (1921a, 7-8 n1).<sup>4</sup> If theoretical arguments in the social sciences cannot be constructed solely from "external" observations, then the basic assumptions in economics are "properly intuitive" – although, Knight ambiguously conceded, "always subject to correction by induction in the ordinary sense of observation and statistical treatment of data" (Knight 1921a, 8 n1).

As we have seen so far, Knight found the way to distance himself from the more positivist inclined social scientists of his time. He did certainly believe in the possibility of a scientific economics "different from physics in degree," and able to secure a "moderate degree of exactness only at the cost of much greater unreality" (1921a, 3). At the same time, however, he showed some form of awareness of the necessity of demarcating the realm of the social sciences from that of their natural counterparts by the use of certain methodological criteria. Knight's early support of behaviorism reflects the same caution. At first sight, Knight may appear an enthusiastic devotee of behaviorism. Several passages from his early works do convey this impression. For instance, in RUP (1921a, 64), he commented with approval that "[e]conomists generally have been coming to recognize that the psychology of the subject is properly behavioristic; that an economist need not be a hedonist (Jevons and Edgeworth notwithstanding), and that he does not need even to consider the issues between rival psychologies of choice." Sill in 1921, reviewing Gustav Cassel's *Theoretische Sozialökonomie* (1918), he called for the development of "a pure mechanics of exchange relations, written in behavioristic terms, setting forth the cause-and-effect relations of a system of pure free enterprise" (1921b, 146).

Knight's behavioristic stance found direct expression in his condemnation of the "pernicious concept of utility" (1917, 67) and in his attempt to free economics from all psychological elements. Economics speaks only about behavior, and "it is a matter of no concern whether we want the things or the conscious states we expect to derive from them, or what, so long as the relation between the acts themselves and the material changes toward which they are directed is clear" (1921a, 60 n1).<sup>5</sup> The ordinalist turn, inaugurated by Vilfredo Pareto and brought forward by theorists like Frank Fetter

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<sup>3</sup> In a following passage he explained further: "The aim of science is to predict the future for the purpose of making our conduct intelligent. [...] Intelligence predicts, as shown above, through analysis, by isolating the different forces or tendencies in a situation and studying the character and effects of each separately. Static method and reasoning are therefore coextensive. We have no way of discussing a force or change except to describe its effects or results under given conditions" (1921a, 16).

<sup>4</sup> Knight's notion of intuition closely resembles what Max Weber called *Verstehen*, i.e., the introspective understanding of human motivation. On Weber's influence on Knight see Emmett (2006).

<sup>5</sup> In his unsympathetic review of *Risk, Uncertainty, and Profit*, George P. Watkins (1922, 688) characterized Knight's position as a "refusal to consider what is behind the facts of choice."

and Philip Wicksteed, represented a step towards the right direction. Psychic variables, Knight wrote, are “ordinal’ rather than ‘quantitative’; they are variable, but not measurable, can be ranked, but not added” (1921a, 70 n2).<sup>6</sup> As importantly, for Knight utility was an inherently normative category that had to be expunged from the realm of positive social science. “Utility” – he argued (1921c, 145) – “is misleading as an explanation of economic behavior” and it is “irrelevant to some of the purposes for which it has been used.” Knight had made clear his position as early as in 1917 in a paper published in the *Journal of Political Economy*:

When two obvious facts about “utility” are kept consistently in view, it will be seen that it is an ethical category and can have no place in a descriptive, quantitative science. The first fact is that utility is a function of scarcity, and the other is that it is purely relative. Most writers see both, “off and on” as it were, but occasional failures to see them are very disastrous. That only relative utility can be dealt with scientifically at all is generally recognized. But if this be granted it becomes clear that the facts comprehended in the demand curve, in terms of price or willingness to pay money, are all that are left which can be measured or discussed. The only conspicuous effect of the introduction of utility as a concept distinguishable from demand at a price is that few economists know much of the time whether they are speaking in terms of exchange values or of some wholly unformulated ideal of absolute well-being. It is necessary to clear thinking in this field to recognize that when we go beyond alternatives as they are and preferences as they are, we have passed from the realm of fact to that of what ought to be; we have crossed the line which divides economics from ethics, and can then proceed only in the light of a tenable concept of absolute value; there is no intermediate position (1917, 67-68; see also Knight 1921d, 308 n2).

“It is a good sign” – this was Knight’s (1917, 68) conclusion – “that the mathematical economists, of the Lausanne school especially, are giving up the utility notion and separating economic science from utopia architecture. The others will follow.”<sup>7</sup>

Knight’s emphasis on the mere facts of behavior and his quest for an objective social science should not be interpreted, however, as an uncritical support for the positivistic tenets of behaviorism. Knight was as critical of behaviorism (properly defined) as he was of utilitarian hedonism. In this connection it is worth recalling that for its leading proponent, John B. Watson, behaviorism was a reaction to unscientific (i.e., based on introspection) psychology. Behaviorists embraced logical positivism and rejected the very notion of consciousness, or at best regarded it as epiphenomenal. Mental categories – such as goals, desires or any “inner” experience that is not publicly observable – had no scientific value likewise. Teleological, i.e. intentional, interpretations of human conduct were to be removed from scientific discourse and replaced by a deterministic correlation between the agent’s objective situation (the stimulus or conditioning) and the empirical observation of the corresponding behavior (Lewin 1996; Hands 2008).

Knight expressed his dissatisfaction with such a mechanistic interpretation of human behavior in a few scattered passages of RUP. There, he argued that the agent is not a passive reactor to “objectively” given stimuli as postulated by the “over-ardent devotees of the new science of ‘behavior’” (1921a, 203). In human affairs perception involves inference rather than mere sensory recording and this means that the same physical stimulus can look very different under different conditions: “We perceive the world before we react to it, and we react not to what we perceive, but always to what we infer” (1921, 201). Furthermore, the complexity that Knight argued lies at the heart of (verbal and non-verbal) communicative interaction between individuals requires a conscious interpretative effort that cannot be reduced to a mechanical stimulus-response sequence. In Knight’s own words:

The postulates of intelligent behavior would be very incomplete without formal insistence on the role played by the fact of consciousness in “objects” outside ourselves, human beings and animals. The behaviorist notwithstanding, the inferences as to the behavior to be anticipated which we draw

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<sup>6</sup> As an illustration he referred to the field of aesthetics: “We can tell that one poem or picture is better than another, but no one would seriously propose measuring the superiority” (1921a, 70 n2).

<sup>7</sup> Accordingly, Knight also called for the “complete separation” of the theory of distribution from “certain sweeping moral and social dogmas, which have been deduced from it.” Quite unsurprisingly, Knight reference was to John Bates Clark, whom he held “partly responsible for this confusion, through a few unguarded paragraphs in “The Distribution of Wealth”” (Knight 1921a, 109).

from the configuration of the lines about the mouth, the gleam or “twinkle” of an eye or a shrill or “soft” vocal sound, are not made from these physical features as such or alone, but through “sympathetic introspection” into what is going on in the “mind” of the “object” contemplated, and would be impossible without this mysterious capacity of interpretation. It is always possible for the scientist to argue the contrary, as it is for him to demonstrate that we are not really conscious ourselves, but common sense properly revolts against the one conclusion as against the other” (1921a, 208).<sup>8</sup>

As this passage bears witness to, the seeds of Knight’ antipositivism were already present prior to his self-acknowledged recantation.<sup>9</sup> Ultimately, RUP reveals a tension within Knight’s thought (Emmett 1999; 2009a). On the one hand, Knight saw economics as “the only one of the social sciences which has aspired to the distinction of an exact science” (1921a, 3), and his insistence on the method of “analysis and abstraction” as well as his rejection of cardinal utility theory can be seen as the homage he paid to the altar of science. On the other hand, the introduction of uncertainty shifts the whole analysis of human behavior from the “deterministic” rationality of static price analysis to a higher form of conscious critical judgment which science cannot penetrate.<sup>10</sup> And, Knight wrote, “when we consider the mystery of the role of consciousness in behavior and the repugnance which is felt by common sense to the epiphenomenal theory, we feel justified in further contending for at least the possibility that ‘mind’ may in some inscrutable way originate action” (1921a, 221).

### 3. Institutionalism, behaviorism, and social control

In the correspondence with Viner, Knight attributed his methodological “recantation” to his sudden understanding of the theoretical developments in mid and late-nineteenth century physics, a topic he will discuss extensively in his subsequent contributions. While it cannot be denied that the physical metaphor did play an important role in this regard, it is our contention that it is only a part of the whole story. Knight was in fact a vigorous critic and polemicist and, as pointed out by Hammond (1991, 359), his views on matters of doctrine were to a large extent “defined by the opposition.” This seems to be especially the case in matters of methodology and epistemology, where Knight stood in almost solitary opposition to the logical positivist atmosphere that pervaded early twentieth century social science. A complete assessment of Knight’s methodological position thus needs also to take into consideration the “negative” influence exercised by those whom he perceived as the adversaries to oppose. In this connection, it has been observed that Knight’s major methodological writings between 1922 and the early 1930s were to a large extent a reaction to institutionalism (Asso and Fiorito 2004a; Fiorito 2009). Knight himself leaves little doubt about this. In 1923 he wrote to Wesley C. Mitchell that his forthcoming contribution to Rexford G. Tugwell’s *Trend of Economics* – emblematically entitled “The limitations of the scientific method in economics” (Knight 1924) – was intended to be “a presentation of the claims of the old-fashioned theory as against institutional economics.”<sup>11</sup> More specifically, Knight’s target was the scientific wing of the movement – that represented by people such as Morris A. Copeland, Lawrence K. Frank, Mitchell and Tugwell. Describing to Viner the main lines of his philosophical agenda he explained: “we have to do exactly what [Adolph J.] Snow and [Lawrence K.] Frank try to get away from doing, namely talk in terms of such things as ideals or purposes, and urges toward their realization.”<sup>12</sup>

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<sup>8</sup> The expression “sympathetic introspection” belongs to the then leading American sociologist Charles Horton Cooley (1909).

<sup>9</sup> In this connection, Daniel Hammond (1991, 361) finds explicit antipositivistic themes in a term paper on “Causality and Substance,” Knight wrote in the 1913-14 academic year for Edward Albee’s *Philosophy 30* at Cornell.

<sup>10</sup> It is not a coincidence that the more explicit anti-behavioristic passages in *Risk, Uncertainty, and Profit* are to be found in the sections devoted to “Meaning of risk and uncertainty.”

<sup>11</sup> Frank Knight to Wesley C. Mitchell: May 18, 1923. In Fiorito (2000, 290).

<sup>12</sup> Frank H. Knight to Jacob Viner: September 9, 1925. Jacob Viner Papers, Seely G. Mudd Manuscript Library, Princeton University. Northwestern psychologist Adolph J. Snow wrote extensively during the 1920s on applied business psychology.

Knight's reference to Lawrence Kelso Frank is what concerns us here. Together with Copeland, Frank was the most outspoken advocate of behaviorism among institutionalists and his scientific rhetoric epitomizes the logical positivist attitude of the period.<sup>13</sup> According to Frank, the world simply consists of observable empirical regularities and, in the social field, "it is the habits of men – the stable, almost fixed, response they give to stimuli – which make a social science possible, just as it is fixed unchanging responses – say of metals to acids – which make chemical science possible" (Frank 1923, 640-41). If social scientists want their propositions to qualify as science, then, they have to "give up the conception of autonomy and the problem of motivation without embarrassment" and begin to "approach the problem of human behavior as a sequence of antecedent stimulus, prior experience, or habits and consequent response" (1924a, 25). The adoption of such a strictly behavioristic perspective would eventually provide social scientist with the tools to intervene in the world and extend "control" over it. Frank viewed social control in aggressively quantitative terms and approached the idea with an overt insistence on behaviorist psychology as a technique for behavioral engineering:

Social science will probably produce a method of developing and removing habits in a group, which suggests the possibility that we may some day work out a method of promoting a truly social life by discovering a technique for inculcating the habits needed in social living and, since these habits must change from time to time (as other techniques develop), we shall also need a technique of habit breaking (1924a, 33).

In order to become a tool for social control, economic theory needs to be rephrased in clear empirical terms; no "metaphysical" ambiguity can be tolerated. "Thus," Frank wrote, "while we say that economics is the study of price behavior, we may also say that it will promote social welfare, because the study of price behavior is essential to changing those habits which are obstacles to social welfare on the economic side" (1924a, 33). The institutionalists' advocacy of behaviorism and social control – so emblematically represented by Frank – did not escape Knight's attention and to a decisive extent it served as a trigger for the development of the antipositivistic themes he had tentatively advanced in his dissertation. Knight was in fact the most influential critic of institutionalism during the interwar years and it is not coincidental that he attacked institutionalist views at precisely those points where they overlapped most substantively with scientism and logical positivism.

Knight's criticism of behaviorism – and of behavioristic social science – was organized in three steps. First, he decided to rescue the notion of human consciousness and intentionality from the assaults of those who refused to go beyond the ken of empirical science. He did so by denying the possibility of demarcating observation from inference – and here is where the physical metaphor enters the scene. As Knight explained to Viner, he had gradually come to realize that "there is a sort of 'hierarchy of the sciences' with respect to the applicability of the positivistic-descriptive-behavioristic suppositions," but all require to some extent a foundation in metaphysics. Also the fundamental concepts of mechanical physics – such as the notions of force and potential energy – are not constructed under the rigid and objective constraints imposed by the nature of sensible perception:

Even mechanics is not and cannot be "mechanistic" – the simple fact that above noted, that in treatises on mechanics and all intelligent discussions of its problems, there are the notions of force and energy (especially potential energy) which are metaphysical, super-phenomenal, transcendental – whatever you want to call it. This basic proposition I find stated and given all possible emphasis by the men who have really thought themselves into the meaning of physical science – Pearson, Poincaré, Mach, Avenarius, Ostwald. Mach is especially clear and delightful to read, and Poincaré in the same class. Both literally "rail" at the idea of a science of physics on a purely mechanistic basis.<sup>14</sup>

Force, as Knight understood it, is a quantity with a metaphysical foundation in the internal state of our mind; it is "quite clearly a mode of consciousness" ([1924] 1935, 111). The metaphysical reality of such quantity must be understood independently of phenomenal space and time, because it

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<sup>13</sup> See Asso and Fiorito (2004b) for an extended discussion of Frank's institutionalism.

<sup>14</sup> Frank H. Knight to Jacob Viner: September 9, 1925. Jacob Viner Papers, Seely G. Mudd Manuscript Library, Princeton University.

concerns the “reading of our muscular sensation of effort into physical changes,” rather than their phenomenal manifestation ([1924] 1935, 115). Ultimately, Knight argued that it is not possible to dispense with consciousness and intentionality in examining human behavior, as one cannot dispense with the “metaphysical” notion of force in physics. “We interpret the behavior of the most material thing by to some degree putting ourselves in its place” and this is “more true [...] when we come to consider the behavior of living things” ([1924] 1935, 120). We project our consciousness on other people’s behavior and it is through communication and social intercourse that we recognize other people’s (and our own) consciousness as real. In Knight’s view, communication among individuals is essentially “communication between consciousnesses.” “There is no clear logical reason why we do not regard the behavior of objects generally as communicative” – he wrote – “any more than there is a clear logical reason why we do so interpret certain behavior facts in human beings” (1925b, 381-382). The very logic of language thus becomes purposive and eludes any behaviorist attempt to reduce it to a stimulus-response pattern (Asso and Fiorito 2003).

Knight’s second step was to stress the inherently normative dimension of human behavior. Let us quote again from Knight’s correspondence with Viner:

The particular thing that I now think most need doing in regard to economic fundamentals is to emphasize their metaphysical side. We have to admit desire as a real factor in addition to behavior (in that regard I have much more than recanted!) but also, and more important, we have to go beyond desire and recognize that we can’t really talk sense about economics in any practical regard without admitting critical judgments (of beauty and ugliness, moral goodness and badness) as things over and above the facts of desire. That is, we not only desire but judge. The rationalizing bias of our mind constantly strives to reduce judgment to desire, just as it tends to eliminate desire and leave nothing but behavior (reaction to stimulus) and “laws” of behavior conceived as factual uniformities of coexistence and sequence. But the conclusive proof that this is impossible is the failure of mechanics to restrict itself to the basis of factual “laws,” its irresistible yielding to necessity in the matter of force, energy and potential energy. There is no such a thing as a physics purified of metaphysics, and I now think I see how this can be “demonstrated” in a fairly simple and effective way; and of course still less is there a psychology without metaphysics.<sup>15</sup>

Here we note a clear discontinuity in Knight’s thought – and significantly this is where Knight admits more than a recantation. We have seen that in his earliest writings Knight had rejected utility as an ethical category and had invited economists to formulate their theories in “frankly behavioristic terms, non-committal as to value relations” (1921b, 148). Now, instead, Knight is arguing that not only “a ‘motive’ is meaningless unless thought of as a phenomenon of consciousness” (Knight 1922, 24), but is also meaningless unless related to some “higher” standard of value. Values enter the realm of economic behavior in two different ways. First, he insisted on the fact that “what is chosen in an economic transaction is generally wanted as a means to something else” – a point reminiscent of John Dewey’s denial of the means-end dichotomy (Hands 2008) – and this in turn implies “a judgment that is a means to the result in question.” Second, “what is ultimately wanted for its own sake can rarely, if ever, finally be described in terms of physical configuration, but must be defined in relation to a universe of meanings and values” (Knight [1935] 1935, 244-245). According to Knight, thus, economic (i.e. instrumental) rationality is not a neutral and self-contained category – it operates within the limits set by a higher form of “value-oriented” rationality that recalls Weber’s notion of *Wertrational* behavior (Asso and Fiorito 2008). This point will be taken up below.

Knight’s final step was to reject the behavioristic conception of social control that was openly endorsed by Frank, Copeland and many institutionalists of the time. Knight’s main contention is that the controller cannot be separated from those who he intends to control, because they are both present in the world in the same manner. There can be no distinction between the controlling agent and the individuals being manipulated because:

Control in society is a mutual relation. Failure to take account of this obtrusive fact reduces most of the voluminous extant discussion of “social control” to the level of word churning. The wish and

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<sup>15</sup> Frank H. Knight to Jacob Viner: September 9, 1925. Jacob Viner Papers, Seely G. Mudd Manuscript Library, Princeton University.



effort to control are present in all the other social units as well as in the 'scientist' who discusses them with lofty detachment; and he is subject to any "laws of behavior" which apply to them. Besides, there is always to be reckoned with a very special effort not to be controlled. In practice, as was observed above, the effort to "control" people takes the form in large measure of an effort to deceive, to "fool" them; the prime requisite is to keep them from knowing the character of the relation actually aimed at (1925a, 260).

For Knight (1925b, 391), "human control is in practice a phenomenon of art and morals to a greater extent than it is one of mechanical technique." He conceded that social theorists set the point of departure for causal analysis by constructing empirical facts. The process of causal explanation in social science, however, is not identical with the search for universal causal laws in natural science. As Knight put it in a critical review-essay of Sumner Slichter's *Modern Economic Society* (1931), in the social realm "the notion of 'uniformity of sequence' is antithetical to that of 'control' by the behaving material itself." Here we find again a clear reference to the normative dimension of human conduct. Although in social and economic phenomena there is "considerable uniformity of sequence," Knight reiterated that such a uniformity "runs in terms of meanings and values rather than physically described events" (Knight 1932, 440).

#### 4. The nature (and limitations) of economic science

In the previous section we have seen how Knight's methodological shift found expression in his overt attack to the ideal of an objectivist economic science in the service of social control – an idea central to the institutionalist program. Yet, even in his harshest antipositivistic writings, he always insisted on the central importance of what he thought of as "scientific economics," consisting of the theory of competitive markets. In order to solve this (apparent) paradox, a further discussion of Knight's evolving attitude towards the nature of economic science becomes necessary.

In RUP Knight did not provide a clear-cut definition of economics as a science, nor he drew any distinction between "scientific" economics and other equally legitimate approaches to the study of economics phenomena. What we found is a rather loose description of economic (i.e. economizing) action in terms of a direct relationship between means and ends. "Economic analysis," he wrote (1921a, 52), "may be truly said to deal with 'conduct,' in the Spencerian sense of acts adapted to ends, or of the adaptation of acts to ends, in contrast with the broader category of 'behavior' in general." In another significant passage Knight connected this kind of means-end rationality to a specific form of institutional arrangement, defining economics as "the study of a particular form of organization of human want-satisfying activity which has become prevalent in Western nations and spread over the greater part of the field of conduct." Such a particular form of organization,

is called a free enterprise or the competitive system. It is obviously not at all completely or perfectly competitive, but just as indisputably its general principles are those of free competition. Under these circumstances the study, as a first approximation, of a perfectly competitive system, in which the multitudinous degrees and kinds of divergences are eliminated by abstraction, is clearly indicated" (1921a, 9).

Three years later, Knight abandoned any reference to the method of successive approximation and introduced a taxonomic discussion of economics with respect to the application of the "scientific" method – a taxonomy on which he continued to elaborate for the rest of his professional life (Hands 2008). According to Knight ([1924] 1935, 144), within economics, three distinct and equally necessary "methods of treatment" can be distinguished. The first is "economic theory in the recognized sense," which Knight identified with marginalism and rational choice explanations; the second is "applied" economics, i.e. a "statistical and inductive study of the actual data at the particular place and time, and of the manner in which general laws are modified by special and accidental circumstances of all sorts" ([1924] 1935, 143); the third is Knight's own version of "institutional economics." Each of these methods calls for some discussion.

Knight ([1924] 1935, 144) described the first approach as "a study, largely deductive in character, of the more general aspects of economic cause and effect, those tendencies of a price system which are independent of the specific wants, technology, and resources." This is the notion of

“scientific economics” he had in mind when he went so far as to affirm that “there is a science of economics, a true, and even exact science, which reaches laws as universal as those of mathematics and mechanics” (Knight [1924] 1935, 28). Here, as correctly pointed out by some interpreters (Hammond 1991, Hands 2008), it is important to recall Knight’s use of the term “science.” In comparing economics with physical mechanics, in fact, Knight was by no means suggesting that the former could aspire to the positivistic ideal of science allegedly represented by the latter – quite the contrary. In Knight’s view mechanics represents a model for economics in the way that it recognizes and admits “metaphysical” entities such as the notion of force, “which is quite clearly a mode of consciousness and not an existence perceived in the outside world” ([1924] 1935, 111). Similarly, as discussed in the previous section, economics must accept the beliefs and desires involved in economic explanations even if they are not directly observable in the way that would be required by positivistic science.

This parallel notwithstanding, Knight (1925b, 383), warned about what he defined as the “fundamental difficulty in economic psychology.” In mechanics causes are known and measured only through their effects, so that there can be “no ambiguity in the information about them.” In the field of human conduct, instead, motives are not inferred solely from the observation of behavior; but also through the process of social interaction and intercommunication. As a result of this experience, individuals become immediately aware that behavior does not correspond to intent as accurately as effects in mechanics are assumed to correspond to their causes; “the relation between motive and action is vitally affected by error absent from mechanical process” ([1935] 1935, 241-242; 1925b, 382-383). How do these considerations affect the possibility of a scientific economics? Knight explained:

For the purposes of an economics which will be scientific in the sense of laboratory science, the course to be pursued is well marked out. It will be, like mechanics, behavioristic in theory but not so in terminology or in fact. It will employ freely the concept of desire as an explanation of behavior, as mechanics employs the concept of force as an explanation – *because it is irresistibly convenient to do so*. And it will carefully make it plain, as does its sister science in the corresponding case, that the concept is “really” but a short-hand manner of expressing the fact that there is uniformity of sequence or ‘law’ in human responses to situations (Knight 1925b, 383-384: emphasis added).

“Scientific” economics cannot get along without the notion of consciousness, but also needs to postulate a strict uniformity of sequence between motives and actions – and all this because it is “irresistibly convenient to do so.” Knight’s appeal to convenience calls to mind Poincaré’s well-known epistemic conventionalism. Poincaré had a rather complicated theory of what constitutes a convention that cannot be discussed in detail here. In general terms, Poincaré suggested that although some hypotheses are best understood as directly testable descriptions of an objectively real world, other hypotheses should be considered as conventions. Some hypothesis are adopted, that is, not because they are derived from experimental evidence or imposed by our a priori mental forms, but rather because we find them convenient. Conventions are convenient in the sense that they help to organize our sense impressions, but they cannot be verified empirically. Accordingly, their utility is only practical: “they save intellectual effort, because they provide convenient images of the theories they are associated with” (De Paz 2014, 59). Knight clearly came close this conventionalist position when he reiterated that

It might be indeed be just as useful as if consciousness did not ‘really exist’ as if it did, and it is the usefulness, not the existence which practically concerns us ([1924] 1935, 120-121).

It is easy, as it is common, to disparage “metaphysical” entities like the Kantian Ding-an-sich and Spencer’s Unknowable. But the simple, indispensable notion of force is of exactly the same character; and the candid thinker has to recognize on every plane of experience that our thinking cannot be carried on without such conceptions (1925b, 379).

The notion of desire serves to simplify the statement, in accordance with our mental prejudices, in the one case, as the notion of attractive force does in the other (1925b, 381).

Consciousness is not an observed fact, but, like force in mechanics, a “convenient” assumption (convenience being obviously a purposive, emotional category), and cannot be admitted as a scientific datum (1925b, 394).<sup>16</sup>

For Knight – in a way not dissimilar from Poincaré – sensory perception is not a sufficient source of knowledge; it makes us aware of the existence of certain “mental prejudices” to which we must necessarily accommodate our experience by the introduction of conventional hypothesis. As significantly, Knight also followed Poincaré in arguing that choices between different conventions are made in the light of (cognitive) values, notably, simplicity – a category which Knight deemed inherently purposive and anti-behavioristic. In his correspondence with Copeland, he drew directly from Poincaré’s famous discussion of the kinematical equivalence between Ptolemaic and Copernican astronomy:

More concretely, it is of course a commonplace to you that all the observed facts in astronomy can be fitted into the hypotheses of the Ptolemaic variety (if one chooses!) and just as well as into hypotheses of the Copernican variety, except that the one set of hypotheses seems to be more complicated, the other more simple. Now why do we prefer simple hypotheses to complex? I think that this question and this answer are rather difficult to fit into the drive, action-pattern type of explanation; and I am sure that the further question of what we mean by simplicity and complexity would be harder still to fit in. (You know Poincaré, of course).<sup>17</sup>

Knight never used the word convention until the late 1930s when he explicitly stated that “no one can question the large role of convention in what men believe in science and matters of fact, at any time and place, and even in what they are able to see with their eyes” (1939, 267 n11).<sup>18</sup>

Knight’s adhesion to a conventionalist view of science did not prevent him to reserve empirical studies a distinct place in his tripartite classification of economics. He even claimed that “in the sphere of economic activity [...] no one will gainsay the value of statistics and the statistical study of cause and effect” ([1924] 1935, 131). After this initial concession, however, Knight immediately stated that this branch of economics has only a narrow applicability. In addition to the practical difficulties due to the gathering, classification, and measurement of social data, he pointed out two sorts of methodological limitations. First, only the “elemental” needs in human life – such as health care and the basic provision of food – possess the stability necessary to make them amenable to statistical analysis. But, Knight observed ([1924] 1935, 131), “the progress of mankind is away from the elemental, away from the natural, in regard to which we may be supposed more or less stable and similar, to the artificial, where we are capricious and divergent.” The second limitation is that it is only with reference to “individuals in distinctly individual relations” that differences cancel out in the aggregate and over time. Whenever, instead, individuals constitute an interrelated social group, where individual reactions are collectively influenced by the other group members, their behavior become volatile and path-dependent. “Groups and societies, like individuals, carry their past with them into the future and grow in historical uniqueness,” furthermore “they also react to meanings rather than situations, and are quite as sensitive and erratic as the individual” ([1924] 1935, 131).

We thus come to the last method of economic analysis. According to Knight:

The third division of economics is the philosophy of history in the economic field, or what some of his votaries have chosen to call “historical” and other “institutional” economics, studying the “cumulative changes of institutions.” In so far as it aspires to practical utility it will endeavor to

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<sup>16</sup> Knight was certainly aware of Poincaré’s contribution in this regard. In 1924 he observed that “force is, as Poincaré has said, a convenient conceptual device for simplifying certain equations” ([1924] 1935, 115).

<sup>17</sup> Frank H. Knight to Morris A. Copeland: November 9, 1926. In Asso and Fiorito (2003, 97).

<sup>18</sup> It should be noted that Knight did not reduce all hypothesis to the status of conventions. Like Poincaré, he took synthetic a priori statements to be necessary, maintaining that we can neither conceive of a negation of a synthetic a priori truth, nor incorporate such a negation consistently into a coherent system of statements: “The ‘necessary’ character of axioms is undoubtedly due, not to their being crated or given to experience by mind, but rather on the contrary to the fact that the mind has not the creative power to imagine a world fundamentally different from that in which we actually live” ([1924] 1935, 136).

predict long-period changes in the factors which applied economics accepts as data and attempts to observe and use as bases of inference. As far as can be seen now, this third division, even more than the second, is a field for the exercise of informed judgment rather than for reasoning according to the canons of science. The movements of history are to be 'sensed' rather than plotted and projected into the future. (Knight 1924, 144)

We find here another important methodological difference with respect to the position Knight held in his dissertation – where, as we have seen, he advocated the method of successive approximations. The distance between institutionalism and equilibrium price theory is not to be measured in degrees of abstraction. By drawing a parallel between institutionalism and historical research, Knight marked now a clear epistemic discontinuity between the analytical apparatus of scientific economic and the study of the changing institutional framework of societies (Emmett 1997, 235-236). While people like Frank, Copeland or Tugwell saw institutionalism as an application of the method of the natural sciences to economics, Knight conceived it as a sort of philosophy of history in the economic field which is subject to very same limitations of the historical method:

the usefulness of history is not in giving us rules which can be made the basis of inference and prediction; it is not in this respect a science, but rather an art. The study of history works in a quite different way, through training the judgment, giving insight into human life. The useful knowledge of history is chiefly unconscious knowledge and its application will also be unconscious. As we have remarked of the interpretation and prediction of the human situation in general, the basis of the inference is not consciously known. *Often, indeed, the premises can be discovered and put into words afterwards, but that again is more history, but not science* (Knight, 1924, 127: emphasis added).

No phenomenon that forms part of the historical-institutional world can meaningfully constitute the object of a “nomological” causal explanation. Each is exclusively the object of an “ex post” understanding of a unique configurations of events where human behavior is seen “as the expression of conscious attitudes toward values whose content is largely an institutional product’ (Knight, 1923a, 155).

##### 5. A digression: Knight and the institutionalists once again

One of the main contentions of this essay is that Knight developed his antipositivism as a reaction to the institutionalist campaign foe behaviorism, quantification, and social control in economics. While this interpretation is certainly pertinent as far as the so-called scientific wing of the movement is concerned, it appears more problematic if applied to institutionalism tout court. American economics during the interwar years has been correctly described as “pluralistic” and this pluralism was not just reflected in the coexistence of several (competing and cooperating) approaches within the disciplines, but also in an irreducible heterogeneity within each school of thought or movement (Morgan and Rutherford eds. 1998). In this connection, institutionalism made no exception. Not all the institutionalists in fact shared the behavioristic enthusiasm of Frank and Copeland, and some did not hesitate to express their diffidence towards the positivist tide that was then pervading social science. In some cases we do even find some interesting parallels between these antipositivistic concerns and those advanced by Knight.

In this regard, the most significant case is perhaps provided by John R. Commons' ambivalent attitude about behaviorism. In his celebrated *Legal Foundations of Capitalism* – the work that marked his enrollment among the institutionalists' ranks – Commons seems to accept some of the features of positivistic social science. He defined science as “superficial,” in the sense that “[i]t deals only with behavior, which is the surface of things” (1924, 81). The aim of science, he further explained, is to provide “a simple mathematical statement of all complementary factors in a moving mechanism” without any of the “volitional or metaphysical notions of cause and effect, purpose and instrument [...]” (1924, 375). Such an explicit objectivistic jargon, however, was to a large extent a mere façade. Commons in fact discarded the “mathematical agnosticism” of the “behavioristic schools of psychology and sociology” (1924, 375-376), stressing the importance of volition and deliberation in the analysis of human behavior. “A coördination of the fields of law, ethics and economics,” he stated unequivocally (1924, 127), “cannot be accomplished without including the concept of human purpose.” Commons

takes the defining characteristic of mental activity to be the ability to react to problematic or uncertain situations as signifying a range of possibilities that, if acted upon, would yield identifiable results. Individuals do develop habits in response to similar stimuli in similar situations, but they do not just react to environmental pressure in the way described by Watson and his followers (Fiorito 2010). According to Commons, events are not mere stimuli; they have meaning; that is, they indicate possibilities for future realization:

Habits are the sub-conscious setting of body, nerves and brain on the basis of past experience and ready to set off in accustomed directions when touched by stimulus from outside. "Habit is energy organized in certain channels" [Dewey 1922, 76]. When habits emerge on the threshold of consciousness they seem to be the intuitive or instinctive sense of fitness or unfitness leading the actor to choose without thinking. When checked and balanced by that hesitating process which we call "thinking," it is because a mental habit of acting on words and symbols intervenes between the impulse from without and the physical response to the impulse. If a "meaning" is identified with these words and symbols we call that meaning an "idea" (Commons 1924, 349).

Through "symbols" and "ideas" individuals are able to anticipate future consequences and to respond to them as stimuli to present behavior. In Commons' words, "[i]t is the wished and dreaded activities of persons, the expectation of hope and fear respecting the relations of man to man, which are objectified and given present reality in the persons who are expected to act." When these expectations become to some extent predictable they take the form of a "law", i.e., a "guide of human conduct, which is none other than an anticipation of how individuals or classes will act upon the occurrence of certain facts" (1924, 90). All this suggests that for Commons – as for Knight – knowing is more than, or perhaps just different than, the ability to learn certain stimulus-response sequences as postulated by the behaviorists.<sup>19</sup> Individuals are capable of dealing with events intelligently, of "making sense" of things. The human will "is always directing itself to investigating, explaining and controlling the limiting factors that obstruct its purposes at the moment and under the circumstances" (1924, 378). But this cannot be done without a conscious anticipation of future states, since "man craves security for his expectations, and could not act at all as a rational being without the feeling of security" (1924, 364).<sup>20</sup>

The similarities with Commons do not exhaust our discussion – there are also some interesting parallels between Knight and Veblen. This is somewhat ironical since Knight was by no means an admirer of Veblen and in more than an occasion he did not hesitate to express his criticism in a harsh and even caustic fashion (Tilman 1992). The convergence between Veblen and Knight can be attributed to the common Kantian influence pervading their methodological foundations (Hodgson 2004, 334). Both men developed approaches to knowledge in which access to the object necessarily runs through the subject. For Knight – we have seen – empirical statements cannot describe events and objects exhaustively. The infinite complexity of reality is unknowable in the absence of epistemic norms that designate definite principles of selection. Veblen showed a similar intimacy between thought and perception. As Geoffrey Hodgson notes, Veblen accepted the valid argument of David Hume and Immanuel Kant that events, not causes, can be observed. Accordingly, "the imputation of causal connections must always involve preconceptions by the analyst and such imputations cannot be derived by experience or data alone" (Hodgson 2004, 147). Here, Veblen sides with Knight in locating causal relations within the a priori framework of "metaphysical" presuppositions. As he put it:

In later modern times the formulations of causal sequence grow more impersonal and more objective, more matter-of-fact; but the imputation of activity to the observed objects never ceases,

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<sup>19</sup> Consider, for instance, what Frank wrote: "[w]e learn [...] from the concurrent presentation of two or more stimuli, of which one evokes an overt response and the others do not; but after they have been presented concurrently for a number of times, the formerly indifferent stimuli alone will evoke the response which previously was appropriate only to the other" (1924b, 11).

<sup>20</sup> Interestingly, the inherently anti-behaviorist spirit of the expectational dimension of human conduct was well captured by Lionel Robbins when – referring with approval to Knight – observed: "It is obvious that what people expect to happen in the future is not susceptible of observation by purely behaviourist methods. Yet, as Professor Knight and others have shown, it is absolutely essential to take such anticipations into account if we are to understand at all the mechanics of economic change" (Robbins 1935, 88-89).

and even in the latest and maturest formulations of scientific research the dramatic tone is not wholly lost. The causes at work are conceived in a highly impersonal way, but hitherto no science (except ostensibly mathematics) has been content to do its theoretical work in terms of inert magnitude alone. Activity continues to be imputed to the phenomena with which science deals; and activity is, of course, not a fact of observation, but is imputed to the phenomena by the observer. This is, also of course, denied by those who insist on a purely mathematical formulation of scientific theories, but the denial is maintained only at the cost of consistency. Those eminent authorities who speak for a colorless mathematical formulation invariably and necessarily fall back on the (essentially metaphysical) preconception of causation as soon as they go into the actual work of scientific inquiry (Veblen 1906, 596-597).

Veblen and Knight disagreed on the nature of such metaphysical preconceptions, but the relevant point here is that both clearly distanced themselves from the strictly positivistic vulgate advanced by the scientific wing of institutionalism.<sup>21</sup> Knight, who was familiar with Veblen's work and had reviewed his collected methodological essays *The Place of Science in Modern Civilization* (Veblen 1919) for the *Journal of Political Economy* (Knight 1920), did never acknowledge the presence of these antipositivistic themes in Veblen's thought.

## 6. Later developments

Knight, it has been argued (Hammond 1991, 361), was not always a champion of consistency on matters of philosophy and methodology. This is true if we consider that he always framed his arguments with respect to his polemical target – and in many cases this implied variations in emphasis and rhetorical style. These adjustments notwithstanding, another central contention of this essay is that the main antipositivistic themes Knight developed in the mid 1920s – after his “recantation” – remained substantially unchanged for the rest of his life. This is to some extent ironical. In the early 1930s the institutionalist campaign for a “scientific” economics had already begun to lose part of its original momentum, but the ripples of positivism sent across social thought were extending wider and wider. Unsurprisingly, an acute observer like Knight was ready to identify new adversaries to battle with. As far as economics is concerned, the most influential of these new adversaries – here lays the irony – came from the neoclassical camp and were attacked by Knight using exactly the same arguments he had used against the institutionalists. We will illustrate this point by briefly reviewing three distinct moments of Knight's later antipositivistic crusade.

The first episode is Knight's review of Robbins' celebrated *An Essay on the Nature and Significance of Economic Science*. Robbins was a critic of behaviorism and in his defense of introspection and intentionality he came close to Knight's position (Robbins 1932, 34; 86). Yet, in his review, Knight glossed over any point of contact with Robbins and came directly to the point of disagreement, namely, the “categorical distinction between judgments of ‘is’ and ‘ought’ which Robbins stresses so often” and which, in Knight's view, “simply cannot be maintained” (1934, 361).<sup>22</sup> We have seen that Knight had attacked institutionalists like Frank and Copeland for neglecting the role of value-oriented behavior. Knight made this point crystal clear in his correspondence with Copeland:

I submit that no man, however well-educated or critical, or scientifically biased, can carry on five minutes of ordinary conversation about any topic of human interest connected with human relations, without repeatedly and distinctly recognizing (a) that human actions are largely caused and inevitably interpreted in terms of wishes or desires, in a sense categorically different from mechanical estimation, and (b) furthermore, that they are similarly caused by and inevitably interpreted in terms of [...] value judgment in a sense categorically different from wishes or desires.<sup>23</sup>

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<sup>21</sup> For Knight, empirical facts (including causal imputations) are constructed in view of well-defined theoretical or rhetorical interests, while Veblen conceived metaphysical preconceptions within a evolutionary/adaptive scheme.

<sup>22</sup> Interestingly, Robbins's anti behaviorism became more explicit in the second edition of his *Essay* (1935, 87-88).

<sup>23</sup> Frank H. Knight to Morris A. Copeland, January 25, 1927. In Asso and Fiorito (2003, 103).

Interestingly, we find the same line of attack, albeit phrased in slightly different terms, in Knight's correspondence with Robbins:

I am inclined to think that the fundamental judgment stressed so much in your book, of an absolute contrast between judgments of facts and judgments of value, is actually the basic error in the theory of nineteenth century liberalism. Stating it another way, I am inclined squarely to reverse the maxim *De gustibus non disputandum*, in this regard, and hold that only judgments of value can be discussed, facts as such not at all. That is, when we disagree about a fact it seems to me we disagree about the validity of observation or evidence, and that every disagreement is essentially a difference in evaluation.<sup>24</sup>

Knight criticized Robbins' objectivism – as he had done with Copeland's – on the ground that human facts are “essentially and primarily both purposive and evaluative” (1934, 361). To put it differently, Knight conceived the epistemic world as over-determined by facts (Asso and Fiorito 2008). The problem thus is not merely that facts are constructed, but that the social scientist has to select the facts he or she uses to construct his or her views of the world. Therefore, it is over that selection (evaluation and interpretation) that social scientists argue – and not over facts as mere physical events. Even the notion of a “given” end, Knight objected to Robbins (1934, 360), involves a “value judgment” and its relation to human conduct is “a totally different thing, both from the cause and effect or ‘uniformity of sequence’ of empirical science and from the logical sequences of mathematics.”

The second episode relates to Knight's well-known attack to Terence Hutchison's *The Significance and Basic Postulates of Economic Theory* (1938). The Knight-Hutchison exchange involved many aspects, including Knight's general concern for the future of liberal democracies (Emmett 2009b). What concerns us here, however, is what Knight perceived to be the key methodological issue lying behind the debate, namely “the view that the propositions of economic theory must be ‘testable,’ because only testable propositions have any place in ‘science’” (Knight 1941, 751). Knight's attack on Hutchison's empiricist conception of economics follows – almost verbatim – his earlier attack on the behaviorist institutionalists. The first move was again that of denying the possibility of demarcating observation from inference. Knowledge of the external world derived from immediate sense perception, he argued, cannot be taken on its face:

The bare fact that an individual sees, or thinks that he sees, or reports seeing, a physical object or event [...] by no means establishes that event as real, or a proposition reporting it as true. In many familiar situations it does not do so even to the observer himself; he sees the “straight staff bent in the pool”; and when observing a sleight-of-hand performance everyone knows that what he ‘sees’ is entirely different from the “reality.” Validity has little relation to vividness in the impression or fervor in the report. The “snakes” seen and reported by the sufferer from delirium tremens are probably by no means inferior in such respects to the observations of the scientific zoologist (1940, 7).<sup>25</sup>

For Knight the true objectivity of perceptions resides in whether they can be expressed as claims or assertions in a process of intercommunication between purposeful and conscious minds. The “truth” of these propositions, in turn, is dependent upon a possible consensus as to their validity and relevance. Knight had already made this point in 1925 in connection to the institutionalist emphasis on “quantitative” economics: “the point is that illusion is what we agree is illusion, and reality what we agree is reality, because in each case it is shown to be so by tests which we agree are valid. It is ultimately a matter of agreement, of common-sense” (1925a, 252). The same line of attack is reiterated against Hutchison's empiricism:

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<sup>24</sup> Frank H. Knight to Lionel Robbins, February 17, 1934. Knight Papers, Department of Special Collections, University of Chicago.

<sup>25</sup> Note the exact correspondence, in the very examples adopted, with what Knight had written in 1925: “The ‘snakes’ seen by the sufferer from delirium tremens are doubtless as ‘real’ (at least!) as those of the jungle or the museum, but they are ‘unreal’ because others do not see them. But we all agree in perceiving the bending of the straight stick in the pool, the image behind the mirror when the object is in front of it, the difference in length of the really equal lines in the Müller-Lyer figure, and a long list more” (1925a, 252).

The essential point for our purposes is that knowledge of external reality presupposes “valid” intercommunication of mental content, in the sense of knowledge, opinion, or suggestion, among the members of a knowing group or intellectual community. A conscious, critical social consensus is of the essence of the idea of objectivity or truth (1940, 7).

It is important to note here that while Knight affirms that truth requires social consensus as its foundation, he holds that this consensus is based on non-rational (i.e., strict means-end rationality à la Robbins) grounds, such as emotional ties to other people, or to traditional social institution or a non-rational commitment to cultural and religious values. As Knight warned in his review of Hutchison – but we find the same theme also in his earlier essays (1925a, 252-253) – “a consensus regarding truth is itself by no means a ‘mere’ (undisputed) fact. It rests upon value judgments as to both the competence and the moral reliability of observers and reporters. (It is no matter of a majority vote!) Without a sense of honor (as well as special competence) among scientists [...] there could be no science” (1940, 7-8).

The third, and last, episode refers to Knight’s critique of the Hicks-Slutsky approach to demand theory. Knight’s offensive was carried on simultaneously at a methodological, empirical and theoretical level (Mirowski and Hands 1988) – and, again, only the more philosophical aspects will be considered here. Knight – who had unequivocally endorsed ordinal utility in RUP (1921a, 63; 65n; 69n) – understood that this new treatment of demand was mainly an attempt to free consumer theory from psychological notions not subject to empirical interpretation. The essential feature of the Hicks-Slutsky approach, he stated, is a “replacement of the conception of ‘absolute’ diminishing incremental utility (of a single good) with a diminishing ‘coefficient of substitution’ of one good for another, *assumed to be a purely behavioristic principle*” (1944, 289: emphasis added). Exactly twenty years after his anti-institutionalist contribution to Tugwell’s *Trend of Economics*, Knight was facing behaviorism once again. This time the adversaries came from the neoclassical camp and the whole issue had deeper analytical implications, but his philosophical objections to behaviorism remain substantially unaltered. At the core of Knight’s defense of motive and intentionality in economics we find the same physical metaphor he had used against the claims of the behaviorists’ institutionalists à la Frank. Knight reaffirmed that in spite of the bald claims of the positivists, “the most elementary mechanical phenomena cannot be thought of in purely empirical terms, in the meaning which our minds seem to crave, namely, visual observation” (1944, 306). In the social field, the behaviorists’ arguments against motive run into similar, if not more serious, problems: “[i]f interpretive thinking cannot do without the notion of force as a reality in physical nature, it becomes arbitrary in the nth degree to rule motive out of our conception of the conduct of human beings, where everyone is directly aware of it in his own experience and has the most certain knowledge of its reality in others” (1944, 307).

Knight’s defense of intentionality and introspection in economics should be now familiar and needs no further discussion. Yet, his protracted insistence on the use of the “metaphysical” notion of force by people like Mach or Poincaré, begs the question of the pertinence of his interpretation of the late nineteenth-century developments in physics. This is a quite complex question that goes beyond the limits of this essay (and of the author’s expertise).<sup>26</sup> What we can assert, following Hammond (1991, 359), is that Knight’s antipositivistic campaign was conducted with a “philosophical sophistication that was and is rare for an economist,” and this is confirmed by the strikingly resemblance between Knight and Karl Popper’s arguments for the inescapability of metaphysical notions in physics and its repercussions on the positivistic program in the social disciplines. Popper developed this theme, among other places, in his 1963 attack on Rudolph Carnap’s logical positivism. His attention had been caught by Carnap (1932, 17) contention that “[p]hysics is, altogether, practically free from metaphysics, thanks to the efforts of Mach, Poincaré, and Einstein; in psychology, efforts to make it a science free from metaphysics have hardly begun.” Now “free from metaphysics” means for Carnap, reducible to protocol-statements, i.e., statements describing immediate experience or perception. But, Popper objected, “not even the simplest physical statements about the functioning of a potentiometer [the example is Carnap’s (1932, 140)] are so reducible.” Nor, he added, “do I see any reason why we should not introduce mental states in our explanatory psychological theories if in

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<sup>26</sup> On the debate over metaphysics in late nineteenth century and early twentieth century physics see, among others, DiSalle (2006).



physics (old or new) we are permitted to explain the properties of a conductor by the hypothesis of an 'electric fluid' or of an 'electronic gas.'" Popper's further explanation, which we cannot forbear to quote in full length, reveals a distinct Knightian flavor:

The point is that all physical theories say much more than we can test. Whether this "more" belongs legitimately to physics, or whether it should be eliminated from the theory as a "metaphysical element" is not always easy to say. Carnap's reference to Mach, Poincaré, and Einstein was unfortunate, since Mach, more especially, looked forward to the final elimination of atomism which he considered (with many other positivists) to be a metaphysical element of physics. (He eliminated too much.) Poincaré tried to interpret physical theories as implicit definitions, a view which can hardly be more acceptable to Carnap; and Einstein has for a long time been a believer in metaphysics, operating freely with the concept of the "physically real"; although, no doubt, he dislikes pretentious metaphysical verbiage as much as any of us. Most of the concepts with which physics works, such as forces, fields, and even electrons and other particles are what Berkeley (for example) called "qualitates occultae." Carnap showed [1932, 115] that assuming conscious states in our psychological explanations was exactly analogous to assuming a force – a *qualitas occulta* -- in order to explain the "strength" of a wooden post; and he believed that "such a view commits the fallacy of hypostatization" [1932, 116] of which, he suggested, no physicist is guilty, although it is often committed by psychologists [1932, 115]. But the fact is that we cannot explain the strength of the post by its structure alone (as Carnap suggested [1932, 114]) but only by its structure together with laws which make ample use of "hidden forces" which Carnap, like Berkeley, condemned as occult (Popper 1963, 196-197).

Like Knight, Popper emphasized the metaphysical element in scientific discourse and in order to sustain his claim, again exactly like Knight, he argued that late nineteenth-century physicists like Ernst Mach and Henry Poincaré could not have purged their discipline of intuitive concepts. The parallel between Popper and Knight, however, ends here. Whereas Knight, rejected any attempt to draw a clear line between empirically falsifiable and metaphysical assertions about the world, Popper maintained the positivistic split between science and pseudo-science. To this, Popper added a new demarcation, one between good and bad metaphysics (Hacohen 2000). For Popper, bad metaphysics, such as existentialism or Hegel's philosophy, is not capable of exerting significant influence on the development of science. Good metaphysics, on the contrary, involved systematic and coherent ideas that, albeit not directly empirically testable, were not at odds with science. According to Popper, good metaphysics, such as the doctrine of materialism, may be pursued rationally, that is critically, and may itself learn from the methods of science.

## 7. Knight's "therapeutic" antipositivism

Writing to Viner in 1925, Knight admitted some form of discontinuity in his methodological position and dated the beginning of his opposition to positivism shortly after the appearance in print of RUP. In his self-reflection, Knight speaks of a "certain amount of recantation" and the expression appears to be particularly appropriate. As documented in this paper, it was in fact a partial, but still significant, recantation – in the sense that Knight's post 1921 writings show a distinct antipositivistic emphasis that is only latent in his previous works. To put it differently, although Knight had never been a "positivist," strictly speaking, after RUP he became less confident on the scientific status of economics and more concerned about its epistemic basis and the nature of the knowledge it could provide. Two main factors seem to have led Knight to this change in philosophical perspective. First, according to Knight's own recollections, it was his "sudden" realization that the arguments in favor of the concept of force in physics could be applied in favor of the "metaphysical" notions of motive and intent in economics. More generally, and this became one of Knight's lifetime themes, he came to realize that the "scientific method," as it was expounded by the positivists of his time, was inapplicable to the natural sciences as well as to economics (Hammond 1991). All this was reflected in Knight's adoption of a Poincaré-type conventionalist interpretation of scientific propositions, and in his anti-behaviorist emphasis on the "evaluative" dimension of human behavior. Significantly, Knight's anti-behaviorism (broadly conceived) also found expression in his repudiation of "ordinal" utility analysis – an approach he had instead openly embraced in his dissertation. A second factor that played a decisive role in Knight's recantation was the negative influence exercised on his thought by the institutionalists,

then at the apex if their success in American economics, and much of his recantation can be seen as a response to the claims of people like Frank or Copeland. Knight saw the institutionalist agenda as an alliance between positivistic scientism and a behavioristic approach to “social control” – an alliance that to his eyes epitomized the paradigmatically wrong way to think about both social science and social policy. Ironically enough, our discussion has documented how Knight’s antipositivism shows interesting similarities with some methodological concerns expressed by Commons and Veblen.

This paper has also shown how the set of antipositivistic themes Knight developed after RUP, especially in the triumvirate of papers published between 1924 and 1925, formed the framework of the philosophical views he held during the last 40-plus years of his life. In this connection, we can affirm that it was only after Knight’s self-professed recantation that his work fully acquired that distinguishing trait that Ross Emmet has insightfully defined as “therapeutic.” Therapeutic, Emmett explains, because just like the “therapeutic philosophers” invoked by Richard Rorty – such as Nietzsche, Dewey, and Wittgenstein – Knight sought to remind his professional colleagues of the inescapable limitations of human knowledge. Knight, Emmett continues, ought be viewed as a thinker who was not primarily interested in systematically contributing to the progress of some well-defined research program. “Edification,” rather than incremental advance was his primary goal: “he wanted to preserve the health of the great conversation we call human society by showing economists their inability to encompass the dynamic complexity of human experience within the confines of a single intellectual system and the necessity of accepting the responsibility placed upon them” (2009b, 33). A first therapeutic element in Knight’s work can be detected in RUP, where he called attention to the wide gap between the idealized postulates of economic theory and the concrete reality of human experience in the face of uncertainty. But it was only after 1921 that Knight began to conceive his contribution to the economic profession as an attempt “to go a little ‘deeper’ in the way of analysis and definition of concepts.”<sup>27</sup> Knight’s “recantation” was simply his realization that a full awareness of the limitations of economics as a science involved not just an understanding of the different degrees of abstractions required in scientific discourse, but also, and more importantly, a deeper analysis of the very epistemic foundations of these abstractions and their relation to the knowledge produced through them. “All this” – Knight wrote to Viner – “comes the more natural in the face of the ‘present situation’ in economics, the near pre-emption of the field by people who take a point of view which seems to me untenable, and in fact shallow, namely the transfer into the human sciences of the concepts and procedures of the sciences of nature.”<sup>28</sup> As a final notation, Knight himself appears to have recognized the therapeutic (and inherently unsystematic) nature of his work and he found it to be the consequence of his own personal inclinations and idiosyncrasies. As he put it in a letter to his former teacher Alvin Johnson:

On the questionable ground that you probably incurred some responsibility in helping launch me in this career, and more particularly because I have to look to you as a sort of spiritual father whether it is any credit to you or not, I want to go just a little farther. I am in dead earnest in saying that I am a rotten hand at any sort of “scholarly” work. It has bothered me a plenty, but I doubt whether I can change myself fundamentally in that regard. And besides (and more important) I have imagined that I see a chance to make a small contribution to American economics along a somewhat different line, an admittedly humble one, but perhaps “my own sir.” I mean simply in finding and trying to straighten out some of the downright mistakes in reasoning which seem to me to “fill” our literature, and such related work as the effort to define concepts more accurately and clearly and expound fundamentals in a more unambiguous and fool-proof form. The only way I can justify myself to myself at all is by imagining a capacity to see relations which escape the more inclusive and practical type of thinker. In this best of possible competitive worlds it may be no ultimate corroboration that so far this “line” has seemed to find a fair market; anyhow I could hardly help interpreting the fact as corroboration. Beyond a certain sensitiveness about producing some kind of justification for faith in me on the part of others I am not “ambitious,” and much prefer to be

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<sup>27</sup> Frank H. Knight to Jacob Viner: September 9, 1925. Jacob Viner Papers, Seely G. Mudd Manuscript Library, Princeton University.

<sup>28</sup> Frank H. Knight to Jacob Viner: September 9, 1925. Jacob Viner Papers, Seely G. Mudd Manuscript Library, Princeton University.

allowed, speaking bluntly, to do my own work in my own way. If this seems to be shirking, I shall not try very hard to prove that it is modesty; I recognize that it is an uncertain mixture of the two.<sup>29</sup>

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<sup>29</sup> Frank H. Knight to Alvin S. Johnson: December 30, 1927. Encyclopaedia of Social Sciences, Inc. Records, 1927-1934. Hampshire College Image, Sound and Text Archives, Johnson Library Center, Hampshire College, Amherst, MA.

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