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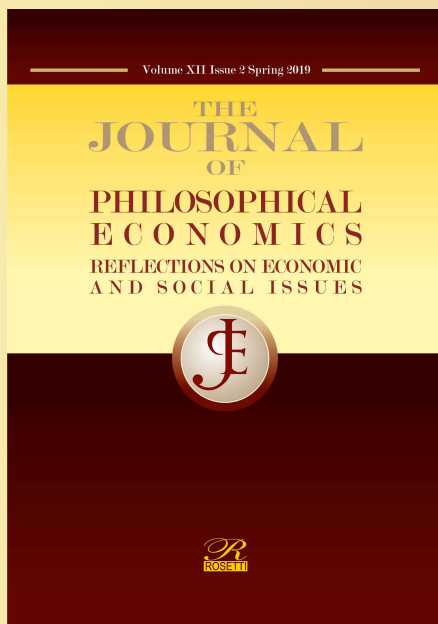
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*Friedman's instrumentalism in F53.
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Abstract: In this paper, Weber's methodology of ideal types is applied as a framework to argue for the instrumentalist interpretation of Friedman's methodology of positive economics. Weber's ideal-typical methodology is characterized as a mix of descriptive inaccuracy and causal adequacy. Based on some recent structuralist results in the philosophy of science it is highlighted how intimately causal understanding and the properties of entities are related. The main contrast between Weber and Friedman consists in the emphases they placed on the causal properties of agents. It is argued that Friedman's instrumentalism results from his neglect of entity properties for no causal understanding can be placed upon neglected characteristics. By identifying some channels through which methodological Weberianism could spread, the possibility of a real albeit indirect connection between Weber and Friedman is suggested, with Frank H. Knight as the most probable diffuser.

Keywords: unrealistic assumptions, realism, structuralism, Max Weber, Frank Knight, Milton Friedman

Introduction

The main purpose of this paper is to contribute to the interpretation of Milton Friedman's famous *The methodology of positive economics* (abbreviated as F53 hereafter) by comparing the text to Max Weber's methodology of ideal types. [1] Some conceptual and epistemological parallelisms and discrepancies between Friedman's and Weber's (and Frank Knight's) texts are identified in order to argue that even though Friedman uses in his F53 the very Weberian term ideal type, he turns away from Weberian methodology in some important aspects. [2] In particular, whilst Friedman lays strong emphasis on the poor descriptive performance of economic models, which is in accordance with Weber's ideas, he

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explicitly breaks the connection between theoretical assumptions and the real properties of entities in the socio-economic universe—in contrast with Weber's original recommendations. [3] This is the aspect of models Friedman accentuates as the negligibility of the realism of assumptions. By using some recent arguments made in the methodology of economics and philosophy of physics, it is highlighted, firstly, that causal understanding and the properties of entities are intimately related and, secondly, that poor descriptive performance does not entail the abandonment of entity characteristics essential in terms of causal understanding. The way Friedman deprived ideal types of their correspondence with the actual properties of economic agents is introduced as a strong point in favour of his instrumentalism. Thus, this paper joins the ongoing *realism-instrumentalism* debate over F53 on the instrumentalist side.

Friedman's F53 has been interpreted in multiple ways since its birth, [4] however, it is the realist-instrumentalist framework that has remained the main stage for the dispute. Based on Popper (1962, pp. 62-3 and 107-8) and contrasting Samuelson's descriptivism with Friedman's methodology, it is Wong (1973, p. 314) who first regarded Friedman's case as instrumentalism: the view in which there is no universe of realities assumed to exist behind the phenomena and in which the only use of theories is the prediction of impending events (Boland 2010, p. 377). For Wong, any purpose of causal understanding was alien to instrumentalism. Soon thereafter, Boland (1979) rendered the instrumentalist label widely accepted and opened an avenue for criticizing Friedman for his minimalist notion of science. In this vein, Caldwell (1980) and Hausman (1992) expressed disagreement with advocating prediction as the real and only objective of economics and by including causal understanding as a tenable goal of science argued against instrumentalism. In another paper, Caldwell (1992) drew a distinction between a *noncognitive* and a *predictivist* version of instrumentalism and portrayed Friedman as uninterested in the truth of theories (i.e. the realism of assumptions). As a part of the realist turn in the philosophy of economics (Caldwell 1990, p. 68), starting in the middle of the 1980s Uskali Mäki (1986; 2009a; 2009b) challenged this instrumentalist interpretation by a realist approach in which he made efforts to reconcile F53 with a realist philosophy. His attempt evoked heated reactions for there is an unavoidable element of creativity embedded in *rewriting* a text (Reiss 2010). Analysing F53 in the broader context of Friedman's *oeuvre*, Hoover (2009), identifying the aim of F53 as 'latching onto' the mind-independent structures (Worrall 1989), also subscribed to a causal realist account. In the same realist context, Hammond (1996) studied the debates between Friedman and his opponents over the causal order of the connection

between money supplied and nominal income (the *post hoc ergo propter hoc* fallacy). However, Friedman himself approved of the instrumentalist interpretation (Boland 2010, p. 377; Caldwell 1980, p. 367), thus it has remained the standard reading. Hopefully, the Weberian thread suggested can be an inspiring aspect of Friedman's instrumentalism—in particular, in considering whether F53 can be a tenable ground for a causal realist strategy.

Drawing attention to the Weberian roots of Friedman's positivist methodology is not novel in itself, even if it has remained an under-scrutinized problem. To the best of my knowledge, thus far Eric Schliesser (2011) has made the only systematic effort to suggest an intellectual connection between Friedman and Weber. Schliesser traces Friedman's *implicit* Weberianism back to Parsons [5] to whom there exists an explicit reference in Friedman's personal notes on Viner's Econ 303. Moreover, through Friedman, Schliesser extends these Weberian effects even to Stigler. The implicit character of this connection is difficult to debate (nothing in the existing literature supports the idea that Friedman directly read Weber), however, in the present paper multiple possible transmission channels are suggested. Even though the details of this encounter are unknown, Frank H. Knight appears to have been the most probable diffuser—doubly so as Schliesser did not point out that Friedman factually read Parsons, let alone Weber. With no further evidence, we need to make do with the suggestion that Weber was in the Chicago air in Knight and Friedman's time, so to speak. Hopefully, this indeterminacy over the exact way of dissemination to Friedman does not curb the relevance of Weber's tenets in interpreting Friedman.

At the outset it is useful to delineate the main thread of argumentation, especially the place of Weber's and Knight's methodologies in it. Friedman's use of the term 'ideal type' in F53 raises the possibility of a Weberian line in Friedman's methodology. This would be an interesting problem in itself, however, in the lack of Friedman's explicit references to Weber, we only have speculations regarding this connection. For various reasons detailed below it is highly unlikely that Friedman directly read Weber—though it is equally unlikely that as a member of Knight's circles he could get away with no Weberian influences. Knight's Weberian methodology is introduced below for it was Knight through whom Weber became a constituent of the Chicago intellectual environment. Beyond this purely speculative historian thread Weber's and Knight's methodologies serve as an interpretive framework. Using some conclusions of the recent debates in structuralist philosophy of science, these methodologies are introduced here as a combination of descriptive inaccuracy and causal adequacy. Through a comparison, Friedman's methodological

stance is interpreted as a case of causal inadequacy hence instrumentalism. This methodological comparison is independent of any historical speculation, it is thus applicable regardless one gives credit to the historical account.

Accordingly, the plan of the paper is as follows. First, the methodology of Weberian ideal types is reviewed in the broader context of Knight's complex social scientific approach. Next, the existing literature is browsed to reconstruct the channels of influence between Weber and Friedman. Then a close reading of F53 is provided in order to find some Weberian reminiscences to underline both the similarities and the differences between Weber's and Friedman's methodologies. After all this, further arguments regarding how causal relations are linked to the properties of relata are suggested. By distinguishing descriptive accuracy and causal adequacy, F53's stance is identified as a mix of descriptive inaccuracy and causal inadequacy. This causal inadequacy results from Friedman's neglect of the properties of agents and his adherence to as-if-type assumptions. The paper is *closed with some concluding remarks*.

Weber's social scientific methodology and its influence on Frank H. Knight

Frank H. Knight played a significant role in Weber's American reception. Thanks to his contribution the University of Chicago grew into one of the American centres of Weberianism (Scaff 2011, p. 199). As aptly documented by Emmett (1999, p. vii-viii) and Scaff (2014, p. 274), the source of Knight's interest in Weber was autobiographical. Knight grew up in a strict Protestant family [6] and became fascinated by the idea of a relationship between religious belief and worldly action, including economic activity. Even though the time when Knight first encountered Weber's works is shrouded in mystery, [7] by the time he returned to Chicago in 1928 from his tenured position at the University of Iowa, he had nurtured an in-depth knowledge of Weber's social scientific methodology and comparative historical sociology in addition to the works of the German historical school. In 1927 he came out with his translation of *General economic history* (Weber, 1927) as the first English edition of a book by Weber.

Knight's attraction to Weber remained intense even up to the 1940s. During these years he applied Weber's tenets as a fundament upon which he built his complex social scientific approach (Emmett 2006, pp. 107-108). Even though his explicit references to Weber were rather scarce, especially from the 1930s, [8] Weber for

Knight remained the most influential intellectual authority throughout his career (Noppeney 1997). Knight was greatly reliant upon Weber in understanding the formation of capitalism, in rethinking economic methodology and in the economic interpretation of history (Emmett 1999, pp. xiii-xv).

Knight's most interesting methodological tenets concern the relationship between neoclassical economics and the broadly interpreted social science. He gave utterance to his methodological views in a series of publications one of the recurrent thoughts of which is that physics-based neoclassical orthodoxy has only highly limited relevance. However, on its carefully circumscribed territory it meets the standards of modern science. For Knight, economics deals with ideal concepts which are as universal for instrumentally rational economic behaviour as ordinary geometry—simply put, neoclassical economics covers the rational core of human actions under abstract-idealized conditions. However, it is not to be applied for describing actual behaviour or events in time and space (Knight 1935, pp. 277-279; Weber 1968/1978, p. 24; Noppeney 1997, p. 334). Arguing for the irrelevance of neoclassical economics outside its domain, in these texts Knight identifies the genuine scope of the theory. And it is the ideal types that play a central role in circumscribing this territory.

An ideal type in economics *per definitionem* summarizes the forms of human behaviour that would occur as strictly instrumentally rational actions under hypothetical conditions. By means of ideal types we attempt to understand some chosen slices of the causal structure underlying socio-economic reality. Ideal types for social science, interpreted in a broad sense to include both economics and sociology (Weber 1968/1978, p. 18-19), ought to serve as bases for comparison in the complex endeavour of causal understanding. In order to understand economic life, Knight was determined to establish a framework sensitive to the fact that social reality always differs from the abstract ideal types of neoclassical orthodoxy. Via comparisons, all human actions emerging in real socio-economic environment are interpretable as deviations from the well-defined ideal types [9] (Weber [1917] 1949, pp. 43-45; 1968/1978, pp. 6-30). Knight took the stance of methodological pluralism, in which the interpretation of economic actions exhorts us to utilize all the social scientific disciplines. In this context neoclassical economics is only one of the suggested approaches (Knight 1972, p. 10). Knight's ultimate purpose was to establish a complex interpretative social science in which theoretical economics is complemented by other approaches including both the humanities and the entire field of social disciplines. He expected the involvement of these approaches to enhance both the complexity of causal understanding and the predictive success beyond the possibilities of neoclassical theory (Knight [1940] 1999).

Even though Knight conceived the domain of neoclassical economics to be very limited, he was ready to accept neoclassical theory as conveying true knowledge of reality (Knight 1935, p. 286; [1935] 1999, pp. 167-168). Economics possesses universal validity without providing comprehensive causal descriptions of social phenomena. Actual behaviour can only approximate the ideal or perfect economic behaviour delineated by neoclassical theory for there exist a plethora of social effects diverting behaviour from the pure case of instrumental rationality (Knight 1935, pp. 279-280). Because of abstraction we can have partial truths only. The circumstances under which formally deduced economic laws can perfectly emerge in reality are unlikely to set in— which would be undesirable in social-political terms (Knight, 1956, p. 270; Clarke, 1991, p. 256). Knight, however, regarded the fundamental laws of neoclassical economics and the assumptions underlying the ideal type of *homo oeconomicus* (Knight 1944, pp. 293-305) as the undeniably existing characteristics of reality (Knight [1924] 1999). As something that as behavioural tendencies are hidden behind the complex and chaotic socio-economic reality (Knight 1921, pp. 4-5).

Knight drew attention to a complex causal analysis in which the nature of the processes under scrutiny is a concern. From the *content* and *form* of economic actions he considered economic laws to be able to describe the static form only. Instrumentally rational individual behaviour accessible to mathematical description (Knight 1972, p. 7) emerges in a framework the elements of which (views, beliefs, attitudes and institutions) are subjected to continuous development. The very nature of the process itself renders the physical-mechanical analogy unable to describe this comprehensive evolution. Thus, the possibility of extending Newtonian physical-mechanical analogies (e.g. market *equilibrium* or market *forces*) to social sciences and economics is qualified. For him, the extensive use of the *ceteris paribus* clause was justified only when the effects of the “other things” assumed to be equal were really negligible (Knight [1935] 1999, pp. 150-168). In his view, there exists only a limited possibility to resolve the tension between statics and dynamics (Knight [1922] 1935, p. 20). Even though we can identify the static laws and the key variables of the economic sphere of life, analysing the evolution of the dynamic framework is well beyond the territory of neoclassical economics. To this end, neoclassical theory needs historical analysis in understanding real social processes (Noppeney 1997, pp. 322-323; Knight 1972, p. 6) for this is the only means to scrutinize the differences between theoretical outcomes and reality (Knight 1944, pp. 308-310).

Reconstructing Friedman's exposure to Weberianism

Knight's intellectual power and his influence on Friedman are highly difficult to characterize. Consequently, it is also difficult if not impossible to reconstruct the channels through which Friedman might have been exposed to Weberian effects. A possible channel was Knight's formal and informal environment—Friedman is reported to have been a member of this eminent intellectual circle (Emmett 2015a). Highlighting the significance of Knight's circle is possible only at the price of dubious speculations. However, it is Knight's personal impact that Reder (1982, p. 6) underlines as the main channel of his influence.

From the middle of the 1930s Stigler (1985, p. 2) reports even a Weber seminar he himself attended. According to Edward Shils' commentaries, the seminar took place in 1936, built on the close reading of the original German edition of Weber's *Economy and society*, a highly important text in methodological terms (Scaff 2011, p. 209). Friedman also attended the seminar, however, Shils (1981, p. 184) reports him to have lost his interest in Weber and consequently he began to show up only sporadically. What is more, many years later Friedman himself declared that he had never read anything in original German and that his erudition in philosophy was only superficial at best (Hammond 1988, pp. 7-8). This fact and Knight's scarce references to Weber render any direct intellectual connection between Weber and Friedman doubtful and implausible. Schliesser (2011) also refrains from reporting any direct connection.

In this context, Hoyningen-Huene draws attention to Knight's compilation published in 1935 (*The Ethics of Competition*), co-edited by Friedman. From this fact and the text of the editorial introduction, Hoyningen-Huene (2017, p. 12) infers that Friedman was likely to know Knight's *Economic theory and nationalism* thoroughly and hence to be indirectly exposed to some Weberian effects. Some analysis is required here to consider what Weberian effects Friedman might have had through this channel.

This paper of Knight is commonly regarded as his most famous methodological work (Emmett 2006, p. 113). Here, for Knight, applying ideal types in economics is an explicit requirement. By meeting this requisite, theory gets far from reality, though acquires universal validity where mechanical analogy is justified to apply. However, for real economic actors and economic actions differ from their theoretical counterparts, caveats about the limited applicability of the theory still hold. Even though Knight provides no explicit references to Weber, it is Weber

([1917] 1949, pp. 43-44) Knight echoes when describing neoclassical theory as a framework built from ideal types. In Weber's phrasing,

Pure economic theory, in its analysis of past and present society, utilizes ideal-type concepts exclusively. Economic theory makes certain assumptions which scarcely ever correspond completely with reality but which approximate it in various degrees and asks how would men act under these assumed conditions, if their actions were entirely rational? It assumes the dominance of pure economic interests and precludes the operation of political or other non-economic considerations.

Despite all the restrictions, Knight (1935, pp. 277-284) still believed neoclassical theory to be instrumental in understanding real societies.

Being highly brief and complex, not only is the text difficult to analyse, but its careful reconstruction also requires us to be cognizant of both Knight's *oeuvre* and Weber's related ideas. Even though it results from Knight's reasoning that making the theory bear close resemblance to reality (i.e. realistic in descriptive terms) is a methodological fault (Emmett 2006, p. 114; 2015a, p. 5), we ought to bear in mind the fact that Knight identified real behavioural patterns in economic laws (Knight [1924] 1999, p. 29). This is the reason why Knight is implausible to have abandoned elements of reality as building blocks for theorizing. For Knight, through its ideal types neoclassical economics describes not real behaviour but patterns deduced under ideal-utopian conditions, as highlighted by Weber as well. Weber regarded rational optimizing behaviour as a highly significant component of modern occidental culture (Bruun 2007, p. 230), thus rationality as an assumption is intended to seize an important and real aspect of behaviour. This emphasis on the real properties of entities is indispensable in order that economics, first, could focus on the forms of actions and, second, could preserve its practical relevance (Knight 1935, p. 278). For Weber it is possible to preserve real properties via abstraction: this is the case when other properties are omitted to highlight a central aspect of behaviour. As it is argued below, this is the point where Friedman took an alternative path by replacing (the abstract form of) real properties with as-if assumptions.

The similarities: ideal types and descriptive inaccuracy

Friedman's famous F53 (Friedman [1953] 2009) is an epigrammatic and widely debated summary of his methodological doctrines. In the text Friedman uses the very Weberian [10] term ideal type for seven times. Of these instances, there are six clear cases, whilst in one case he mentions ideal and real entities, which bears

resemblance to the rather informal fashion Knight (1935, pp. 277-278) discusses ideal concepts and ideal behaviour. In addition to the Weberian terminology the circumstance that Friedman characterizes the relationship between economic models and reality in a Weberian fashion is also worth attention. For Friedman economic models built upon ideal types 'are designed to abstract essential features (i.e. "only the forces that the hypothesis asserts to be important") of complex reality (p. 9) some elements and mechanisms of which are omitted from models□ elements and mechanisms that can disturb the functioning of the ideal-typical core. Ideal-typical models are by no means designed for description. In contrast, hypotheses underlying significant theories 'will be found to have "assumptions" that are widely inaccurate descriptive representations of reality, and, in general, the more significant the theory, the more unrealistic the assumptions (in this sense).' 'A theory or its "assumptions" cannot possibly be thoroughly "realistic" in the immediate descriptive sense so often assigned, to this term.' 'Any attempt to move very far in achieving this [highly descriptivel kind of "realism" is certain to render a theory utterly useless.' Friedman rephrases Weber ([1904] 1949, p. 80) when explaining: 'A hypothesis is important if it "explains" much by little, that is, if it abstracts the common and crucial elements from the mass of complex and detailed circumstances surrounding the phenomena to be explained.... To be important, therefore, a hypothesis must be descriptively false in its assumptions.' Consequently, descriptive accuracy is unnecessary for "a simpler theory" to work "well enough." (pp. 14-32).

Along these lines, Friedman provides an analysis of the modelling strategy of Marshallian neoclassical economics (pp. 35-37). Neoclassical economics assumes perfect competition without regarding that as a manifest characteristic of reality. If we give credit to the suggestion that models are not designed to describe reality, abstract economic theory becomes uncriticizable on such grounds. Equilibrium or complete rationality are only 'engines' in the Weberian sense (Clarke 1991, p. 252), constructed to analyse the world. By designing ideal types to highlight some relevant facets of reality we render it possible to analyse a chosen mechanism as an element of the complex causal structure. Here lies the most striking puzzle of this model-building strategy for we are to bring facets of reality to the fore so that our model could be adequate about the problem under scrutiny (p. 42) (Weber [1904] 1949, p. 78). Applying this strategy, we can answer the question whether a postulated causal mechanism contributes to the emergence of some social phenomena— this is exactly the reason why we carry out empirical tests. Socio-economic actuality is

full of entities differing in a multitude of aspects, though we establish ideal types to accentuate certain characteristics and mechanisms that real entities share.

Over and above the view reflecting Weberian influence we can find some passages in F53 where Friedman echoes Knight's critique on neoclassical economics. In such a statement, Friedman suggests as an obstacle to objective economics 'the fact that economics deals with the interrelations of human beings, and that the investigator himself is part of the subject matter being investigated in a more intimate sense than in the physical sciences' (p. 4). Here Friedman directly reflects Knight's parable on a drawer drawing a picture on himself in the act of drawing, which would entail a troublesome and infinite regress (Knight 1935, p. 280). It is also Knight whom Friedman resounds in his short discussion on the shortcomings of dynamic monetary macroeconomics. Here Friedman refers to the problems of analysing 'the process of adaptation of the economy as a whole to changes in conditions' (p. 42). It is exactly the line along which Knight ([1935] 1999, p. 154), while drawing attention to the limits of the mechanical analogy, circumscribed the territory of neoclassical economics.

The differences: Friedman's as-if assumptions and causal understanding

Even though for both Knight and Weber neoclassical orthodoxy was only one approach in the broader context of social sciences, paying attention to the possible contributions of other disciplines was not a concern for Friedman. Placing his unique emphasis on the empirical performance of economics, he was uninterested in the social sciences in terms of either providing more in-depth causal understanding or enhancing the predictive performance of the theory.

Moreover, Weber advocated a theorizing practice in which models conceptually heighten certain aspects of reality. Abstract ideal types are to be constructed with regard to realities (Ringer 1997, pp. 111-119). Weber's causal concept was analogous to causal responsibility in a court of law. As a causalist, Weber's primary interest was to provide firm causal analyses to find out why and how social phenomena are caused (Bruun and Whimster 2012, p. xxvi). In this framework, entity characteristics and the selected causal mechanisms are abstract-idealized forms of prior descriptive accounts. Economists depict such mechanisms and relationships in abstract-idealized forms that are either visible or evident parts of the social facts [11] (Weber [1904] 1949, p. 90). Here 'visible' refers to mechanisms

and relationships that are experienceable or detectable, whilst 'evident' to ones undeniably working (Knight [1940] 1999, pp. 378-381). In other words, only characteristics and mechanisms that work in reality can be elements in extremely simplified forms in the model-constructing process— whilst being an evident part of reality does not necessarily entail visibility. In modern parlance, models as analogue systems must bear resemblance to reality in the relevant aspects. This is how Weber ([1906] 1949, p. 173) clarifies the relationship of economic models to reality. But what exactly does it mean?

Weber's conclusive argument is worth quoting at length.

Substantively, [abstract economic theory] in itself is like a *utopia* which has been arrived at by the *analytical accentuation* of certain elements of reality. Its relationship to the empirical data consists solely in the fact that [in cases] where market-conditioned relationships of the type referred to by the abstract construct are discovered or suspected to exist in reality to some extent, we can make the *characteristic* features of this relationship pragmatically *clear* and *understandable* by reference to an *ideal type* (emphasis in original) (Weber [1904] 1949, p. 90).

Here Weber provides the selective criterion for drawing up the set of assumptions: theoretical assumptions are to be created by selecting and preserving some really existing properties of entities— this is the technique commonly referred to as *abstraction* (Chakravartty 2007, pp. 190-191). Weber's further examples support this impression. Either city economy or handicraft is considered (Weber chose these concepts for demonstration), the purpose of ideal types is always to accentuate certain 'existing' and 'retraceable' features of reality— and focusing on such features is the standard for creating ideal types. As Weber ([1904] 1949, p. 91) formulates: 'Each utopia has really taken certain traits, meaningful in their essential features, from the empirical reality of our culture.'

Thus, the purpose of abstract ideal types is to uncover some slices of the hidden causal structure. In the Weberian framework it is completed by selecting via abstraction those properties of entities that are crucial in the working of some causal mechanisms. For Weber, analysing the differences between empirical reality and models is also a constituent part of a causal analysis. This task, however, becomes nonsense when our concepts fail to stem from reality. In such a case, we postulated some mechanisms the actual operation of which is implausible to assume— and this is the point where problems arise. Registering the discrepancies of empirical reality from such mechanisms can never deepen our causal understanding as reality and models having nothing in common are necessarily disparate.

Friedman's emphasis on as-if assumptions (Friedman [1953] 2009, pp. 16-23) is a far cry from causally adequate ideal types (Hausman 1992, p. 163). According to the Weberian methodology, the most important requirement for theories is to bring actually working mechanisms to the fore. [12] In the next section some light is shed on why it is so essential in causal analyses we focus on certain *causal* properties of agents and other entities.

Arguing for Friedman's instrumentalism

Even though the majority of Friedman's arguments can be reconciled with the realist claims, with his famous parable on the density of leaves on a tree he approves of an instrumentalist methodology (pp. 19-20). Here Friedman argues that if a theory has good predictive performance, the realism of the underlying assumptions is only of marginal importance. It must be noted, however, that an empirically equivalent hypothesis is also available, according to which leaves, with no rationality assumed, adjust their position in order to maximize the amount of incident sunlight. This tiny detail helps us recognize how Friedman neglects the *real* properties of agents and hence causal understanding. As far as confirmation is considered, for Friedman it is well enough if a hypothesis leads to predictions in line with observed phenomena. In Section III of F53, he accentuates time and again that the real properties are of no importance: we only need to find hypotheses that save the phenomena. [13] This pattern of confirmation explicitly implies no causal understanding (p. 9).

This instrumentalism, however, is in no accordance with Weber's neoclassical ideas (Knight [1924] 1999, p. 31). Even though Friedman occasionally appears to argue for accentuating the existing characteristics and mechanisms of reality ('ideal types are ... designed to isolate the features that are crucial for a particular problem' (p. 36)), he defends the idea of an explicit inconsistency between assumptions and reality (as in his parable on leaves acting *as if* they were rational utility maximisers). In the latter case, however, there exists no ambition to capture some existing features in ideal-typical concepts.

Friedman draws attention to the idea that the assumptions of a good theory would fall far from reality (p. 32). This is true: but it is also true, though in a dissimilar manner, of the realist models in which economic laws emerged only as mere tendencies (Knight [1924] 1999, pp. 31-32; [1940] 1999, pp. 388-394; 1935, pp. 282-284). As Weber ([1904] 1949, p. 80) puts it,

the most general laws, because they are most devoid of content are also the least valuable. The more comprehensive the validity, – or scope – of a term, the more it leads us away from the richness of reality since in order to include the common elements of the largest possible number of phenomena, it must necessarily be as abstract as possible and hence *devoid* of content. In the cultural sciences, the knowledge of the universal or general is never valuable in itself.

In other words, the most universal laws and the assumptions capturing the common cores of various kinds of things stand the farthest from the totality of our reality. We face a similar setting in the case of the assumptions underlying a realist model and their descriptive accuracy. Instrumentalist assumptions are also unrealistic (they are inaccurate in descriptive terms), but in their case there occurs no abstraction as the act of connecting with reality. Under pragmatist considerations choosing the assumptions is driven by the utility which arises from the predictive performance of the models built on them. The unrealisticness of instrumentalism and the unrealisticness of realism are of completely disparate nature. Assumptions applied in realist models possess no descriptive relevance either. However, the methodology by which these assumptions are created is of crucial importance. Through isolation we can establish presumptions that can capture some significant existing elements of reality, even if they cannot reflect their totality— and this is the way causal adequacy is to be established (Whimster 2007, p. 112).

Some recent structuralist tendencies in the philosophy of science aid in clarifying how properties of entities (i.e. objects like economic agents) and causality are related. Chakravartty (2007, pp. 41-42) argues that relations stand between the properties of entities— and at the end of the day it is these relations that constitute structures. In this framework causality is conceived to work along structures where structures are determined by dispositions, conferred by properties (Chakravartty 2004, p. 156). These properties are regarded as causally active or causally efficacious. Thus, structures so conceived are causal structures. Objects in virtue of their causal properties (the properties they possess, instantiate, exemplify, etc.) behave in particular ways in a structure and it is the set of properties that determine the roles objects play in a structure (Chakravartty 2003, p. 394). Properties govern the interactions of the objects: these properties and their relations produce causal activity of objects. Therefore, having knowledge of a structure and having causal understanding of the interactions are the same thing. A representation of a structure provides casual explanations which is far more than citing mere empirical regularities. Knowledge of a structure provides us with answers to the whys— and

knowledge of structures intimately results from knowledge of entity properties (Psillos 1995).

A representation of a structure is not necessarily faithful or comprehensive. The understanding of a causal mechanism (i.e. a facet of a complex causal structure) requires us to focus on the relevant causal properties of objects (those that carry the causal mechanism we study) and to highlight these properties via abstraction or distort them in meaningful ways via idealization. In this process we have nothing to do with the properties that are inactive with respect to the causal mechanism under scrutiny—thus abstraction and idealization entail selectivity. However, in spite of this selectivity, pure abstraction (i.e. when abstraction is not accompanied by idealization) results in *correct* representations for causally relevant properties are preserved and kept undistorted. As Chakravartty (2010, p. 407) puts it, abstract models tell the truth, without telling the whole truth. In this context, Mäki (2002, p. 96) says that such abstract theories give nothing-but-true accounts without providing the whole truth.

Idealization is a subtler case. Via idealization properties are assembled in such a way as to differ from the properties of real entities, not merely by excluding factors (abstraction), but by incorporating factors that cannot exist as assumed, given the actual properties involved (Chakravartty 2007, p. 191). However, even idealization is open to realist interpretations in cases where representational codes are available. Broadly speaking, such codes help us understand and decode distorted properties (Sheeh 2015). Therefore, the correspondence between real and assumed properties may be trivial (pure abstraction) or in need of representational codes (idealization). However, as long as the properties we assume in theories can be traced back to the existing causal properties of real entities, causal adequacy applies. For Weber, even ideal types of fictional character have correspondence with socio-economic reality for the highlighted parts can be found 'out there' (Bruun 2007, p. 47). Descriptively unrealistic assumptions can convey sound causal knowledge. And *vice versa*, causal adequacy does not entail good descriptive performance for partiality holds. Only the highlighted parts (relations and the related causal properties) are represented.

The relationship between agent-level assumptions and causal understanding is a point where Friedman's departure from Weber's methodology needs special emphasis. A partial description of a real causal structure cannot be built upon entities lacking the relevant causal properties of real objects. Since causal knowledge requires entity-level assumptions as well (for a causal structure penetrates the objects it interlinks), realism regarding the relevant causal properties

is a prerequisite for casual understanding. Weber's realistic causal concept and his insistence on reality-based albeit descriptively unrealistic assumptions form an epistemological mix Friedman refused to apply. Via his as-if entity-level assumptions he established causal mechanisms that would work in reality only if there was a correspondence between his assumptions and the real causal properties— a correspondence which is far more than saving the phenomena. This is the reason why highlighting how Friedman abandoned focusing on the causal properties of agents can be a strong point in favour of his instrumentalism. In the resulting methodological framework Friedman combined *descriptive inaccuracy* with *causal inadequacy*. Thus, the answer to the initial question whether F53 can serve as a methodological ground for a causal realist strategy is in the negative.

Conclusion

Based on Weber's social scientific methodology some Weberian elements in Friedman's F53 were highlighted. Through his methodology, Weber shed light on the connection between conceptualization and causal understanding. By accentuating the methodological connection between concepts and reality, Weber underlined that descriptively unrealistic assumptions or descriptive inaccuracy do not necessarily lead to the abandonment of causal understanding. Weber's social scientific methodology was applied as an interpretive framework to argue that Friedman's widely accepted instrumentalism results from his neglect of real entity properties. By his emphasis on as-if assumptions, Friedman introduced a theorizing standard in which saving the phenomena as a scientific goal superseded any efforts to save the properties. However, as modern structuralist philosophy has recently shown, causal properties of entities play a crucial role in causal understanding. One may neglect entity properties but there is a price to pay. No causal understanding can be placed upon missing and neglected properties.

Endnotes

[1] In this paper ideal types refer to the neoclassical way of theorizing. However, for Weber ideal type had a more complex (and sometimes contradictory) meaning and covered multiple uses, reaching far beyond neoclassical economics (Bruun 2007, pp. 46-47).

[2] In a conference paper, Ross B. Emmett (2015a, p. 5) also intimates an indirect connection between Weber and Friedman, with Knight as the mediator. As he puts it, '[Knight's] Weberian methodology led him to emphasize the relevance of basic economic principles to real world analysis, while denying the necessity of providing theory with realistic assumptions—an argument that Friedman maintained albeit with an instrumentalist defence.'

[3] A more comprehensive and refined set of Weber's methodological texts is available in English today (Weber 2012), however, the focus here is on the versions that shaped the ideas on Weber in Knight and Friedman's time. This new edition revealed the poor quality and the embedded distortions of the earlier translations, thus we are justified to say that Weber of the 1930-50s and today's Weber for the English-speaking world were two disparate authorities (Scaff 2014, p. 276, Bruun and Whimster 2012, pp. xiii-xiv).

[4] Recently, Edward Mariyani-Squire (2017) gave a bird's-eye view on these various interpretations from falsificationism to pragmatism.

[5] Talcott Parsons was the translator of Weber's most influential book, *The Protestant Ethic and the Spirit of Capitalism* (Weber 1930) and was amongst the few early American scholars who did the most for disseminating Weber's ideas on American soil (Scaff 2011, pp. 201-238; Derman 2012, pp. 167-175).

[6] Emmett (2015b) enumerates further details about how Knight's family wavered between the Methodist and Congregational Churches and how the austere religious family background affected Knight's later critical attitude towards religion.

[7] According to Emmett (2006, pp. 106-107), this encounter must have happened between 1913 and 1919. The earliest point is marked by Knight's journey to Germany in 1913, whilst the other endpoint is his first appearance at the University of Chicago in 1917-19.

[8] Even though the history of economics today takes Knight's Weberian roots as a given, this intellectual relationship is hidden at the level of Knight's citations. Only seldom did Knight cite Weber explicitly, not even in his reflections on Weber (Noppeney 1997, p. 328), whilst in his methodological works scrutinized in the present study we cannot find a single reference. However, personally he was always willing to admit his admiration for Weber (Emmett 2006, p. 101).

[9] Such a comparison comprises, first, the registration of the differences between model and reality and, second, giving a causal explanation of these differences. It is a far cry from confirming an abstract model with empirical data. Contrasting an abstract model with reality (that is, when one focuses on the similarities instead of the differences) may be perilous for such a comparison may lead to one's distorting reality in order to empirically confirm a theory. It is exactly this caution that necessitates complex econometric methods for detecting the presence of causal mechanisms.

[10] It is Georg Jellinek, the German historian, and not Weber who coined the term 'ideal type'. However, thanks to Weber's refinements today ideal types are commonly regarded as a constituent part of Weber's methodology (Ringer 1997, pp. 110-111; Bruun 2007, p. 215).

[11] Even though this remark appears trivial, it is not so—recall the Røgeberg–Nordberg account of abstract-idealized economic theories (Røgeberg and Nordberg 2005). For them, causality is not a concern, models are only shorthand summaries of observed facts, not theories in the strict sense. Moreover, *watching* causality *into* phenomena seems to be a common feature of our thinking, thus we ought to avoid taking our causal accounts too seriously. Here causal thinking is conceived only as an unfavourable by-product of the human mind. Weber with his firm emphasis on causal understanding and on preserving real properties of agents subscribes to a strict causalist tradition.

[12] Here it is interesting to refer to the well-documented inconsistency in Friedman's AEA presidential address. As James Forder (2016) puts it, there is an error of logic in the way Friedman outlined the mechanism between price dynamics and changes in unemployment. Galbács (2015, pp. 153-167) traces back this confusion to some arbitrary assumptions on price flexibility and the information structure of employers and employees—these assumptions were not designed to seize some real properties of entities.

[13] As far as the realism of assumptions is considered, his billiard player is a different case. In his philosophy of science, Michael Polanyi (1958/2005, p. 51) draws attention to the tacit component in our scientific (and everyday) knowledge. When acting, we rely on skills that we know only in an unconscious way. On these tacit or unaware components there is no focal awareness placed. Thus, we can appropriately describe the behaviour of a billiard player with a mathematical formula for a billiard player really obeys such a rule, albeit unconsciously. Here

there is no problem reconciling this assumption with a realist philosophy— which is unlikely to be to Friedman's liking.

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