

On the philosophy and logic of human action

A Neo-Austrian Contribution to the Methodology of the Social Sciences (8576 words)

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Abstract

Philosophical action theory seems in quite good shape. The same may not be true for the study of human action in economics. Famous is the rant that the study of human action in economics gives reason to tremble for the reputation of the subject. But how so? Since economic action is *action*, the broader enquiry must surely have a strong bearing on the more specific domain. The paper delineates from scratch how a substantial conception in economic theory—the notion of *competition*—may fundamentally benefit from insights drawn entirely from analytical action theory, broadly conceived. Thus, the paper makes good on an old Austrian promise: It is sometimes said that Austrian economists understand competition better than most economists. This may be a bold claim, however, since Austrian economists have neither followed the understanding of *subjectivity* to its proper origin (the theory of intentionality) nor have they traced their sympathy for *methodological individualism* with regard to market processes to its proper foundation (the theory of action). The paper aims at filling this gap. Also, by grounding an Austrian view of competition in action theory, the paper manages to resolve serious problems incurred by adopting the dominant equilibrium approach. Explaining competition as *rivalry*, the paper reverts to the philosophy and logic of human action to put the (economic) agent back into the picture. In this way, the case is made for an integrated view of Austrian theory as an amalgam of Austrian economics and analytical action theory.

Key words

Competition • Rivalry • Equilibrium Theory • Action Theory • Subjectivism • Ludwig von Mises

Introduction

In the last century, the *philosophy* and *logic* of human action received a lot of attention. Milestones in its development were Anscombe's *Intention* (1957), Davidson's "Actions, reasons and causes" (1963) and von Wright's *Explanation and understanding* (1971). *Anscombe* aimed at bringing out the subjective basis one must appeal to when ascribing an action to someone. *Davidson* defended the claim that action explanations are a sort of causal explanations. *Von Wright* pointed out that explanation in history and the social sciences proceeds in very different ways. Arguably, these studies formed the shape of the philosophical discipline now known as *action theory*. They sparked a host of philosophical contributions that eventually broadened the perspective on the philosophy and logic of human action so much as to include as diverse approaches as critical reviews of age-old problems (like the problem of weakness of the will) and present-day concerns with normative aspects of reason-based approaches (like patient autonomy in medical ethics). So, the stream became a river, and the river became a sea. Today there is no denying that action theory is in fairly good shape. Of course, like in all other scientific disciplines there are controversies and difficulties in action theory too. Yet there is a solid consensus as to the phenomena to be explained, there are paradigmatic theories constantly being made reference to, and there are classic contributions providing starting points for old insights and new debates. Although there are specialists

in the field, philosophical action theory is not at all marginalised. Even theorists not specialising in action theory acknowledge its relevance for the practical disciplines without hesitation. Also, philosophers of every provenance generally have more than an inkling that the relevance of action theory must somehow extend further to the social sciences proper as well. Last, not least: Being a philosopher of action makes you neither left, centrist or right. It carries no hidden or overt implications as to your ideology, political and moral views, or creed. It is thus safe to conclude that as a scientific discipline action theory is a decent, well-established, and worthwhile field of study in its own right.

This seems different in the social sciences, in particular in economics. Apart from the occasional lip-service, the study of human action in economics does not seem to be held in high regard. This is especially true of *praxeology*, the most comprehensive and complete economic approach directed towards it, which emerged from the Austrian school of economics. Praxeology antedated philosophical action theory by roughly the quarter of a century. In contrast to philosophical action theory, however, praxeology has a bad name. The impression seems to be that to engage in praxeology is to engage in a trivial, partisan, dogmatic, or shadowy kind of enterprise. Some economists openly toy with the idea that praxeology is not a scientific enterprise at all. The emerging picture is that the study of human action in economics is a serious menace to the respectability of economic theory. But how can the study of human action in economics give, as Paul Samuelson (1964, 736) once came close to putting it, ‘reason to tremble for the reputation’ of the subject if economics is, as Alfred Marshall (1890, 1) famously stated, ‘a study of mankind in the ordinary business of life’ and an examination ‘of individual and social action’?

As always, the explanation is complex. I can only hint at a few elements. Surely, the rise of socialism to scientific respectability at the turn of the 20th century played its part. So did the missionary impetus of the Vienna Circle. Also, the positivist outlook on science (triggered by the Vienna Circle) and the stunning progress made in the natural sciences contributed their share. Many were tempted to model the social sciences after the image of the natural sciences and mathematics. The last element, not the least though, is the triumphant emergence of equilibrium theory. It gradually led to a transformation of economic theory. Despite appearances, positive economics ultimately evolved into a normative enterprise. All these issues have been discussed elsewhere. They contributed materially to the loss of significance of the study of human action in economics. Consequently, they led to a marginalisation of Austrian economics to the point where it was pronounced dead and mentioned in historical retrospect only. On the present occasion, however, I will not add to that inquiry. This is because it is not entirely clear whether the study of action in economics is really best taken care of in the mainstream of the Austrian school of economics, at least in its present state. To be sure, there can be no doubt that Austrian school of economics openly confesses to *subjectivism*, the central element in the explanation of human action. In the words of one of its key proponents, Israel Kirzner, Austrian economists remain convinced that regularities in economic life can be understood only by focusing analytical attention on individual actions of the acting individual. But it seems this concession it is half-hearted in more than one way:

First, what Kirzner calls the “modern version of subjectivism” aims at steering a middle course between the “flawed subjectivism of Menger” and the “nihilistic conclusions” of the Shackle-Lachmann view (Kirzner 1995, 14 & 19; cf. Lachmann 1983). This modern Austrian view thus rejects both the Mengerian heritage of perfect knowledge and the idea of the radical spontaneity of choice. But while the first dismissal is perfectly justified the second is not. Doing away with the “radical spontaneity of choice” comes dangerously close to disputing the essential autonomy of the agent. So, from an action theoretic point of view, it remains a mystery how you can give the individual actions of the acting

individual the full weight they deserve without accepting a good deal of what Kirzner paints as “nihilistic conclusions”. Consequently, one would really hope that “Lachmann’s influence on modern Austrian economics” were “underappreciated” and that his positions “especially [on] subjectivism” were “the dominant positions within the school” (Storr 2019, 63). Unfortunately, however, this may be too optimistic an assessment.

Secondly, and more importantly, Kirzner’s Austrian confession to subjectivism underlines the importance of subjectivism in economics and economising human actions without really enquiring into subjectivism and human action. Kirzner’s “modern Austrian subjectivism” proceeds as if the *differentia specifica* could be understood without understanding the *genus proximum*. It treats *subjectivism-in-economics* and *economising-human-actions* as simple terms whose meanings need not be analysed into their conceptual components. It wants to make good on Ludwig von Mises’s claim that economics is grounded in action theory yet shies away from going beyond the confines of economic theory. And dealing with *subjectivism-in-economics* only, it is silent on the nature of subjectivism in itself.

Mises’s claim that economics is grounded in action theory was, of course, quite disturbing to his fellow economists, even to some fellow Austrians. One can understand why: Reductive claims of this magnitude rarely meet with enthusiasm, especially with enthusiasm among those whose discipline is being subsumed under another. Just think of the resistance the positivist creed of the unity of sciences met with in some of the natural sciences. Chemists and biologists usually pay lip service at best to the assumption of their being engaged in physics, really. However, Mises’s battle cry received at least some support. Sociologist Alfred Schütz, a long-standing member of Mises’s Vienna *Privatseminar* (Prendergast 1986, 5ff.), echoed: “All social phenomena can be traced back to actions of actors in the social world who, in turn, may be observed by social scientists” (Schütz 1936, 96; cf. Schütz 1953, 26 & Kurrild-Klitgaard 2001, 122). Still, in order to give more substance to the claim that the social sciences, in particular economics, are grounded in action theory, it is the purpose of this paper to focus on the two aspects that do not seem to have received all the attention they deserve yet.¹ We will focus on a more general and more thorough understanding of subjectivism and human action. Subjectivism in economics and economising human actions will then emerge as special cases only.

Clearly, these investigations need to be carried out independently of what they will be applied to later on. The impatient reader may thus get the impression of a somewhat lengthy detour. Since this is an essay about proper foundations, however, there is no alternative to starting from scratch. Our reward will be a picture of what the study of human action can contribute to the study of the social sciences. An outline will emerge of a systematic and integrated approach of what the philosophy and logic of human action can contribute to economics in particular. It will also be seen that it can contribute in this way without compromising the rigour, richness and respectability it deserves as the decent, well established and worthwhile field of study that it is.

¹ Schütz (1932, 55–72), leaning on Henri Bergson and Edmund Husserl, has an extensive *phenomenology* of action. This is a very different thing. Arguably, with regard to the essential tenets of acting, (i) *wanting* and *believing* do not have a phenomenology in themselves, and (ii) *doing* is not necessarily a mental event, so does not necessarily have a phenomenology either. Therefore, from an action theoretic perspective, a phenomenology of action will not capture what is essential in acting. Cf. section 2 below.

1. The subjective and the objective: A fundamental distinction

We cannot understand subjectivism unless we understand the subjective. Starting from scratch means going beyond economics and the social sciences. So, philosophy will be our guide. There, the distinction between the subjective and the objective has a very long tradition. The terms refer as far back as to Aristotle's *Categories*. In his commentary Boethius used the latin word *subiectum* as translation of the original Greek *ὑποκείμενον* (*hypokeímenon*, the “underlying thing”). Yet our modern understanding of these terms originates only in early modern times. The distinction they mark as a pair of contradictories is usually described as some sort of *mind-(in)dependence*:

If we say “The North Sea is 10,000 square miles in extent” then neither by “North Sea” nor by “10,000” do we refer to any state of or process in our minds: on the contrary, we assert something quite objective, which is independent of our ideas and everything of the sort. (Frege 1884, 34)

Frege's way of putting it is echoed in many variations:

An element in some subject-matter conceptions of objectivity is *mind independence*: an objective subject matter is a subject matter that is constitutively mind-independent. [...] By contrast, minds, beliefs, feelings, [...] are not constitutively mind-independent, and hence not objective, in this sense (Burge 2010, 46).

According to the received view, then, the objective is objective insofar as it is *independent of the mind*, the subjective is subjective insofar as it is not. But what precisely are the elements independence of or dependence on which make the subjective and the objective thus and so?

There are two ways open to us, the *cognitive* and the *attitudinal*. The cognitive pathway describes the element as a *perspective* or a *view*. Taking a subjective stance towards something would be to view it from a special perspective: the individual perspective of the subject. Taking an objective stance towards it would be to refrain from viewing it from a peculiar perspective. In this manner, it has become popular to distinguish *the view from somewhere* against *the view from nowhere* (cf. Nagel 1979). The single most important metaphor of the cognitive pathway is the metaphor of the eye and what and how it sees. A powerful metaphor indeed but ultimately not a very helpful one: Surely, there cannot be a view from *nowhere*. So, we better explore the attitudinal pathway. In doing so we implicitly acknowledge the importance of the *intentional*. This is what Austro-German philosopher *Franz Brentano* took to be the very mark of the mental (cf., e.g., Crane 1998; 2001; 2013). Brentano's much quoted illustration reads:

Every mental phenomenon is characterized by what the Scholastics of the Middle Ages called the *intentional* (or mental) *inexistence* of an object, and what we might call, though not wholly unambiguously, reference to a content, direction toward an object (which is not to be understood here as meaning a [real] thing), or immanent objectivity. Every mental phenomenon includes something as object within itself, although they do not all do so in the same way. In presentation something is presented, in judgement something is affirmed or denied, in love loved, in hate hated, in desire desired and so on. [...] *This intentional inexistence is characteristic exclusively of mental phenomena*. No physical phenomenon exhibits anything like it. We can, therefore, define mental phenomena by saying that they

are those phenomena which contain an object intentionally within themselves. (Brentano 1874, 68; emphasis added)

Brentano’s re-discovery of the intentional eventually gave rise to the development of the theory of *propositional attitudes*. This is because in natural language we are familiar with a common feature that quite neatly exhibits what Brentano saw as defining feature of the mental:

Recall that in natural language we very frequently ascribe propositional attitudes to persons: For instance, we say that Tom *believes* that the earth is flat, or that Dick *wants* the man in the doorway to stop staring at him, or that little Harry *hopes* that Santa Claus will come visit next Christmas. Believing, wanting, and hoping (and others) are propositional attitudes; they are mental states or events ascribed by reference to a person experiencing the mental state or event and described by (the nominalisation of) a sentence within the scope of a suitable attitude verb. This is no sophistry, however. Having propositional attitudes is a natural feature of man, their being expressible in natural language is a natural feature of language. Rather than being fancy gadgets of sophisticated theorising, propositional attitudes form part of the cognitive toolbox with which man confronts the world. And, quite importantly in the present context, propositional attitudes exhibit the very important feature of intentionality. This is the connection to Brentano. As the examples illustrate, someone can be in a state of mind such that it may be correct to ascribe a given propositional attitude to him even if the object presented in the attitude does not exist or is not the way the subject pictures it to be. The earth is not flat, there is no Santa Claus, and sometimes we mistake a reflection of ourselves for something or someone else. Still, Tom can *believe* that the earth is flat, Harry can *hope* that Santa Claus will come visit next Christmas, and Dick can *want* the man in the doorway to stop staring at him. So, attitudes can, but need not, have a ‘real’ object. One could say they provide an ‘internal’ or ‘intentional’ object. This *intentional inexistence* is what constitutes their intentionality (cf. Simons 1995, xvi). Also, it is what constitutes the subjective. By way of providing an intentional object, attitudes bring out the subjective view of the individual having the attitude. In other words, by describing the attitudes we describe the *peculiar view* Tom, Dick, and Harry have with regard to the earth, the man in the doorway and next Christmas. We describe their *subjective perspective*. Thus, we have an explanation of subjectivity that both supersedes the metaphor of the eye and is capable of incorporating it: The cognitively subjective is subjective if and as far as it is grounded in the attitudinally subjective. The mind-dependence explaining the subjective turned out to be dependence of the propositional attitudes of the individual. So, the objective is objective *because* it is independent of the propositional attitudes of the individual, and the subjective is subjective *because* it is not. The cognitive pathway leads to the attitudinal pathway, and the attitudinal pathway leads to the proper understanding of the matter

Let us illustrate the peculiarity of both subjectivity and individuality in more formal terms. To this end, let us use the basic language of modern epistemic logic as suggested in Hintikka (1962) and explained, e.g., in Ditmarsch et al. (2015, 7). Let us extend it to fit the attitudinal in general using “ Δ_x ” as proxy for any adequate form of an attitude operator, e.g., “ B_x ” for “ x believes that”, “ F_x ” for “ x fears that”, and so on. Note that what “ Δ_x ” goes proxy for comprises the expression of an attitude subject and takes an indicative sentence as argument. Now we can express that subjectivity resides in the following fact of *non-entailment*:

- | | | | | |
|-------|------|--------------|--------------|--------------|
| (Sub) | (i) | p | $\not\vdash$ | $\Delta_x p$ |
| | (ii) | $\Delta_x p$ | $\not\vdash$ | p |

So, from the fact that Columbus discovered America (p) it does not follow (\nVdash) that he *believed* that he had discovered America ($B_x p$). Also, from the fact that George VI. *wanted* to not succeed his brother to the throne ($W_x p$) it does not follow (\nVdash) that he did not succeed his brother to the throne (p). No specific knowledge of early modern or recent history is needed to see this. It is already analytically contained in our understanding of attitude verbs. In like manner, we can characterise individuality by the following fact of *intra-personal non-entailment* (for $x \neq y$, of course):

- (Ind) (i) $\Delta_x p \nVdash \Delta_y p$
(ii) $\Delta_y p \nVdash \Delta_x p$

From the fact that *Cleopatra* (x) feared that she be brought to Rome and paraded in the streets as part of Octavian's triumph ($F_x p$) it does not follow (\nVdash) that *Octavian* (y) feared that Cleopatra be brought to Rome and paraded in the streets as part of his triumph ($F_y p$). Also, from the fact that *Odysseus* hoped the Trojans would pull the wooden horse into their city ($H_y p$) it does not follow that *Laocoön* hoped it ($H_x p$). Again, as before, all that is required is a proper understanding of the attitude verbs. So, mind-independence ultimately boils down to non-entailment. Actually, it is even stronger. The case could be made that $\Delta_x p$ cannot *cause* or *strictly causally determine* that p nor vice versa either (cf. [...]), but this is not the place for another lengthy demonstration. So, let us summarise: *One's attitudes are inferentially (and causally) independent both of the world they are about and of the attitudes of others.* We accidentally stumbled upon the fact that from a certain point of view the subjective-objective divide just *is* the mind-world divide. What is subjective is subjective because it is dependent on someone's attitudes. What is objective is objective because it is not dependent on anyone's attitudes. True, more could be said about the subjective, the objective, and their distinction. But nothing said could be a sound insight into the matter if it did not ultimately rest on this foundation. Basically, therefore, we have just grounded the subjective-objective distinction in the unique mental feature of intentionality, i.e., intentional inexistence. Surely, a lot more could be said in order to clarify. But we need to swiftly move on to the next issue, the issue of (human) action, and this is what I turn to now.

2. Foundations of action theory

We have come to understand what the subjective is: It is what we conceive of as depending on someone's attitudes. Now we need to understand what action is. Here, our everyday talk about our action will be our guide. Using the long-established method of *variation*, we can identify the underlying basic categories of action in what a competent speaker would identify as action reports. This is basically best practice among logicians, semanticists, and linguists. They all use this very method when defining basic categories via *distribution* (cf. e.g., Burton-Roberts 2016, 46; Tallerman 2014, 34; Lewis 1970, 20ff.; Lyons 1968, 147; Adjukiewicz 1935, 3; Husserl 1913, 242; all anticipated by Frege 1891, 31 and Plato, Sophist 261d–262e), although they apply it to different domains. Our starting point is that action reports, when properly regimented, are *substitution instances* of one another. This holds across contexts, style and register. Thus,

- (1) Peter starts running because he wants to catch the bus and believes he will manage to do so if he starts running

and

- (2) Oedipus married Iocaste because he wanted to become king of Thebes and believed he would if he did

can be conceived of as resulting from one another by substitution *salva congruitate*, meaning that the replacement of a suitable non-logical part of speech by a categorically equivalent one does not turn an action report into something that would not count as such. Of course, substituting “Oedipus” in (2) with “Peter” from (1), or “wanted to become the king of Thebes” in (2) for “wants to catch the bus” in (1), and so on, is apt to lead from a correct action report to one that is most likely incorrect. However, since it is not truth we are after but *logical form* and *conceptual structure* this difference does not matter.² All the contrary, it gives us the *canonical form of action reports*:

(A) $x \varphi$ -s because x wants that p & x believes that $x \varphi$ -s $\rightarrow p$

It is with regard to this canonical form that we can bring our logico-linguistic piece of knowledge to bear. For, understood distributionally, (A) manifests the basic categories of action:

$[x]^a [\varphi$ -s]^b because $[x$ wants that $p]^c$ & $[x$ believes that $x \varphi$ -s $\rightarrow p]^d$

We may therefore distinguish the formal categories of [a] *agent*, [b] *doing*, [c] *wanting* and [d] *believing*. Thus, we have ultimately arrived at what is usually referred to as the classical *desire-belief model* of action, i.e., the general model favoured by Anscombe, Davidson and von Wright in their respective version. However, we did so in a purely descriptive way, with the least theoretic presuppositions possible, and without any of the many substantial theoretical assumptions so common in present day action theory.

Given the formal understanding we arrived at, we are also rewarded with a formal understanding of what *reasons for actions* (or “motivating reasons”) are. Remember that it is customary to call anything following the connective “because” in response to a why-question a *reason*. Why is four even? Because it is divisible by two. Why are dinosaurs extinct? Because the Chicxulub Asteroid hit the Gulf of Mexico some 60 million years ago. So, with regard to (1) and (2) the reason for Peter’s running and Oedipus’ marrying Iocaste is what is reported by citing what follows “because” in (1) and (2) respectively. Thus, reasons for action are a conjunction of two peculiar propositional attitudes: Peter’s (or Oedipus’) *wanting that p* in conjunction with his (or Oedipus’) *believing that if he φ -s then p* .

Actually, this neatly aligns with our findings from the previous section. Given that reasons for actions are described by ascribing complex propositional attitudes it is plain that motivating reasons are (i) subjective and (ii) individual in the following way: (i) Someone’s reason is neither implied nor causally determined by how things are, nor does it imply or causally determine them; (ii) a reason for the one need not be a reason for the other. Also, someone’s reason may not even be a “good” reason at all: Due to the intentionality of the subjective the object presented can, but need not, be the way the agent takes it to be, it may not even exist at all. Remember intentional inexistence. So, the agent’s reason may, but need not, clash with how things really are. It may result in failure. But this merely adds to our account. Unsuccessful action is action too. On closer inspection, it raises an even more interesting question: If reasons for action must be necessarily viewed as subjective and individual, where does this leave us with the nowadays so prominent talk of *objective* reasons? As a matter of fact, the essential subjectivity and individuality of motivation bears striking resemblance to the *eye of the needle* in Matthew 19:24: “And again I say unto you, It is easier for a camel to go through the eye of a needle, than for a rich man to enter into the kingdom of God.” Since, clearly, objective reasons are neither necessary nor sufficient for an agent’s acting, yet his subjective reasons are, it seems objective reasons are like the rich

² For the variant of first-order predicate logic used in this paper see below section 3.3

man from the Gospel. Like him, who would have to strip himself of his fortune in order to enter the kingdom of God, objective reasons would have to strip themselves of their objectivity, become subjective instead, in order to really motivate. So, in order to really explain human action, there is ultimately no abstracting away from the individual agent and his subjective reasons. In sum, we now know that acting is doing something for a reason. Of course, this is just common ground. These are just the foundations of action theory. Having started from scratch, though, we exactly know the theoretical presuppositions of what we arrived at. In particular, we see that they are minimal and entirely descriptive.

Interestingly, human action is viewed as necessarily subjective and individual in the Austrian School of economics too. This is what Austrian subjectivism amounts to, or at least what it should rest upon. However, our brief enquiry into the philosophy and logic of human action was carried out independently of any presuppositions in economics or the social sciences. Frankly, it was independent of any issues pertaining to the practical disciplines, including moral philosophy, political theory, law and economics, and so on. So, our subjectivism rests on nothing but a fundamental understanding of intentionality and a distributional understanding of action explanations. As a result, it is much more encompassing than the surrogate discussed so far. Subjectivism in economics or the social sciences now just emerges as a special point in case.

Note, in passing, that those branches of philosophy that usually come into play when economists discuss the fundamentals of their subject, i.e., Kantianism, positivism, sometimes even phenomenology or hermeneutics, neither were needed nor would have helped at all. Also, to conquer a common misconception on the ultimate foundation of economic science, our investigation was not at all epistemological (pace Mises 1962). So, if the philosophy and logic of human action really is the ultimate foundation of economic science, as Austrians should assume, epistemology is not. This should be a note of caution for all those Austrians who tend to think that at the heart of economics there is a knowledge problem (cf. Condit & Morefield 2019; Rajagopalan & Rizzo 2019, 94; Knudsen 2004; Yeager 1994; Ebeling 1993, 63f.; Boettke 1990, 23ff.; Lavoie 1985, 50; Hayek 1945; 1937, 33; Schütz 1936, 98f.). Most importantly, however, we have seen the sketch of a sound and solid philosophical foundation of the study of human action. Since the study of human action in economics is quite regularly accused of being founded “upon a weak philosophical basis” (cf. Barrotta 1996, 65) it is virtually all-important to be capable of demonstrating that we are not like the foolish man in Matthew 7:27 who built his house on the sand, and the rain descended, the floods came, and the winds blew and beat on that house; and it fell.

3. The study of human action in economics

We have now acquired a thorough and robust understanding of the notion of human action and the phenomenon of subjectivity. If economics really is a part of the study of the individual and social action of mankind in the ordinary business of life, we should expect these insights to bear fruit with regard to substantial economic issues. Actually, first steps in this direction were already taken when it was demonstrated with the help of analytical action theory that two cornerstone theorems of praxeology, the *uneasiness theorem* and the *scarcity theorem*, are analytic, hence *not* synthetic, yet still *a priori* (Oliva Córdoba 2017). The uneasiness theorem, stating that the incentive to act is always uneasiness (Mises 1949, 13), and the scarcity theorem, stating that action is the manifestation of scarcity (Mises 1949, 70), are at the very heart of Mises’s programme of founding economic theory in action theory. Given the controversial nature of this programme even among Austrian economists it seems that in order to make a more lasting impression on economists this vindication of the proper study of human action in economics was way too subtle. But, as the proverb says, it is through wisdom that a house is built and by

understanding that it is established; the foolish tear it down with impatience. Given the demonstration of the purity and soundness of the foundations we may now advance the study of human action in economics a step further and address an issue that surely qualifies as a substantial issue both in theory and practice: The problem of competition.

3.1 *The problem of competition*

Competition is both an old phenomenon and a central concept of economics. Along with the growing importance of welfare economics as a policy advisor, competitiveness acquired an increasingly important role as main criterion by which to judge the so-called efficiency of actual markets. This significance stands in stark contrast to the still insufficient understanding of the phenomenon and the inadequate grasp of the corresponding concept. Admittedly, a better understanding was hoped to emerge as result of the development of the theory of *perfect competition*, a centrepiece of general equilibrium theory; and present day mainstream economic theory seems to consider itself more or less satisfied on this issue. But as we will see shortly, there are even graver and more serious difficulties with the equilibrium approach of competition, which aims to explain competition in terms of a perfectly realised market structure.

This market structure, economic textbooks will repeat *ad nauseam*, is said to exist when (i) the number of sellers is very large and (ii) the goods traded are homogeneous (cf., e.g., Mankiw 2020, 62). Usually, also, the requirements are at least implicitly added that in a perfectly competitive market (iii) transaction costs or other obstacles to free and immediate exchange and (iv) knowledge differences among participants in the market are negligible. The point of these provisions is to ensure that sellers under conditions of perfect competition have no influence over market prices and thus take prices as given. Perfect competition, as standard textbooks put it, “is the world of *price-takers*” (Samuelson & Nordhaus 2009, 150). However, since from a more general point of view there is no clear-cut division between buyers and sellers in the first place there is no difference in principle between the case where Dick exchanges his goat for Tom’s sheep or where he exchanges it for Tom’s \$ 40. Consequently, there is no saying in principle who the buyer is and who the seller. What we can say is that both Dick and Tom are economic *agents*, *individual participants* in the economy, or, if you will, *traders*. So, the idea of a world of price-takers must be formulated more generally. What the provisions for perfect competition really aim to ensure is “the fundamental competitive assumption that agents cannot influence market prices” (Safra 1987, 225; cf. Khan 2008). So, the fundamental perspective of the econometrist becomes to ensure that “the influence of an individual participant on the economy [...] be mathematically negligible” (Aumann 1964, 39). This, as Aumann demonstrated, is best captured by rendering the ideal infinity of traders as a single *continuum*. Since the circumstances in which individual economic agents are economically negligible are precisely the circumstances in which they are numerically negligible (Bryant 2010, 332), this amounts formally to the introduction of a single entity, the *all-trader*, as the single unit of economic exchange. Likewise, the assumption that the goods traded be *homogeneous* has a similar function. What is being abstracted from are the differences between goods, so the target here is product differentiation. It is assumed that under perfect competition it would make no substantial difference whether the items of trade were, say, a bit heavier or had a slightly different smell: “A perfectly competitive [trader] sells a homogeneous product (one identical to the product sold by others in the industry)” (Samuelson & Nordhaus 2009, 150). So, the homogeneity assumption on part of the goods and the continuum assumption concerning the traders are two sides of the same coin: Both serve the purpose of mathematical integration. In this, they are aided by the third provision that there be no transaction costs or any other obstacles to free and immediate exchange. This ensures uniqueness of mapping.

So, from a logical perspective, the picture drawn is this: In perfect competition, *the all-trader is uniquely mapped onto the all-good*. As a corollary, we can derive the fourth provision: Perfect knowledge. We are now in a position to understand what is problematic about the equilibrium picture of perfect competition. It is not what Friedman thought to have countered, i.e., the lack of realism in the assumptions (Friedman 1953), although, clearly, the structural assumptions *are* very strong and highly unrealistic. What speaks against them is something different. To see this, we need to address the default move to brush off any arising inconsistencies of the perfect competition picture. Incompatibilities with real-world markets and real-life competition are usually countered by saying that perfect competition is an *ideal* only. It is routinely compared to, e.g., the idea of *frictionless surfaces* (Samuelson 1947, Friedman 1953, Aumann 1963, Khan 2008, *etc. pp.*).

The reasoning goes roughly along these lines: Although there cannot be frictionless surfaces, making progress towards the ideal contributes to the reducing the friction of real-world surfaces. This is precisely why frictionless surfaces *are* an ideal. Unfortunately, the situation is completely reversed in the case of perfect competition. Here, every step towards perfection contributes to the *diminishing* of competition. Take for instance (product) differentiation. Decried in applied equilibrium theory as an unfair barrier to entry detrimental to pure competition it is in real life rather a function of consumer acceptance. In the attempt to secure business for himself every provider or producer will try to attract consumers to *his* product or service. He will aim at making it as peculiar from the point of view of his potential customers as they will reward. As a result, with increasing competition we are likely to expect more differentiation rather than less. If need be, not in the product itself but in the service, in the transaction costs, or elsewhere in the economic sphere. Differentiating, i.e., making a difference, is of the very essence of true competition. Strip the notion of this feature, abstract away any and all remaining differences, and you really are talking about something else. So, in the light of day the idea of perfect competition is not at all an ideal which to pursue enhances competition or which to grasp gives us a better understanding of it, but quite the opposite. It is a false, mock, or anti-ideal. To pursue it gradually removes all competitiveness up to the point where there is none left at all. So, the very idea of perfect competition lures us into misconceiving the very nature of competition. It installs an irredeemably distorted picture instead. The most charitable way to put it would perhaps be to say that perfect competition is about perfection, not about competition. A perfection admittedly neither attainable nor desirable in the real world. A neat mathematical rendering of a quasi-*Parmenidean* idea of a nearly all-encompassing monism. Surely, in such a metaphysical picture there is neither change nor waste. So, there is Pareto optimality and even a Nash equilibrium. But this was just stipulation. Fine sleight of hand. And look at what cost: There is no competition either. This is why the immense intellectual efforts invested into this idea have never ceased to provoke contradiction. What has been left out of the picture, and what might help us to get a better understanding of competition instead, is the individual economic agent with all his subjective attitudes. To him we must turn next.

3.2 *Competition as rivalry*

The idea of pure competition came into being as an effort to understand more precisely the ultimate ground of truth of two very popular and plausible classical propositions. One was Adam Smith's contention that the greater the number of sellers the lower the price (Smith 1776, 59), the other was John Stuart Mills assumption that there can be only one price in the market (Mill 1848, 242). It was the aim of the forefathers of general equilibrium theory to render these assumptions truisms and to do so in a mathematically convenient way. The imprecise understanding econometrists sought to refine, and which they came to replace instead, made reference to man's behaviour: "'Competition' entered economics

from common discourse, and for long it connoted only the independent rivalry of two or more persons” (Stigler 1957, 1). Today, where the economic mainstream almost exclusively understands competition in terms of perfect competition, the original understanding is nonetheless taken for granted. It is pervasively implicit in standard textbooks (cf. Acemoglu *et al.* 2016, 357; Pindyck & Rubinfeld 2013, 281 *et passim*; Samuelson & Nordhaus 2009, 172f.; Stiglitz & Walsh 2006, 241 *et passim*; and others). Sometimes, it is stated very clearly: “Competition exists when two or more firm are rivals for customers” (Mankiw & Taylor 2014, 42).

Inherent in all these characterisations is the concession that competition resides essentially in human behaviour. However, competition as rivalry is then usually explained in terms of equilibrium theory rather than the other way around. In contradistinction to the economic mainstream, the Austrian School of economics has long acknowledged that this reversed order of explanation puts the cart before the horse. In his seminal *Rivalry and central planning*, Don Lavoie made the case that the informational function of rivalry is fundamental for the understanding of the market process. “Markets are inherently rivalrous, [...] they work only as a consequence of a competitive struggle among incompatible plans” (Lavoie 1985, 180). But like other Austrian approaches, Lavoie’s account is full of strong assumptions and, more importantly, does not give us an action theoretic explanation either. Rather, we are offered an inherently economic explanation citing stipulated “market forces”, which account may or may not be plausible, but is certainly not fundamental in the sense explored in this paper. So, how are we to make sense of the idea that competition is essentially rivalry without introducing strong assumptions or making economic presuppositions on our part? It is here where the minimalist philosophy and logic of action sketched in the first two sections will make the difference.

3.3 *The philosophy and logic of competition*

We will use a simplified, slightly extended variant of first-order predicate logic with logical connectives, variables and the usual quantifiers. *Connectives* are “ \neg ”, “ $\&$ ”, “ \vee ”, and “ \rightarrow ” corresponding to their natural language counterpart “not”, “and”, “or” and “if ... then”. Standard *individual* variables are “ x ”, “ y ”, “ z ” and so on, replaceable by proper names (or expressions of the same logical type) like “Tom”, “Dick”, and “Harry”. Standard variables occupying *predicate position* are “ ϕ ”, “ ψ ”, “ χ ” and so on, replaceable by predicates (etc.) like “sleeps”, “dropped out of High School”, and “will be joining the Military”. Standard *propositional* variables are “ p ”, “ q ”, “ r ” and so on, replaceable by complete declarative sentences (etc.) like “Tom will be joining the Military”, “Dick sleeps”, and “Harry dropped out of High School”. The essence of variables is that they can be bound, so we have the quantifiers “ \exists ” and “ \forall ” corresponding to their natural language counterparts “at least one (is such that)” and “all (are such that)” so that we can render formulae like “ $(\exists x) (x \text{ sleeps})$ ” giving us (roughly) “Somebody sleeps” or “ $(\forall x) (\exists \phi) (\phi x)$ ” to be read (roughly) as “Everybody is somehow” or “ $(\forall p) (\text{Harry says that } p \rightarrow p)$ ” expanding to (roughly) “Everything is as Harry says”. The last step, already used in section 1 above, is the addition of attitudinal operators “ B_x ”, “ W_x ”, “ F_x ”, and “ H_x ” corresponding to their natural language counterparts “believes that”, “wants that”, “fears that”, and “hopes that” so that we can render formulae like “ $B_x r$ ” which may be expanded to “Tom believes that Harry dropped out of Junior High”, “ $W_y q$ ” giving us “Harry wants that Dick sleeps”, “ $F_x p$ ” going proxy for “Tom fears that nothing is as Harry says”, and “ $H_z r$ ” expandable to “Harry hopes that somebody will join the Military”. So much for the quick sketch of the apparatus involved. A richer yet still basic logical apparatus will be found in Quine (1959), Lemmon (1965), Mates (1972), Haack (1978), or Sainsbury (2001) but is not needed for the purposes of this paper.

Now picture, to start with, a simple exchange like when Dick's exchanges his goat for Tom's sheep. At least the following is involved:

- (a) Tom gives Dick his sheep
- (b) Dick gives Tom his goat
- (c) Tom wants that Dick gives him his goat
- (d) Dick wants that Tom gives him his sheep
- (e) Tom believes that if he gives Dick his sheep then Dick gives Tom his goat
- (f) Dick believes that if he gives Tom his goat Tom gives him his sheep

But this is not all. Tom gives Dick his sheep, and Dick Tom his goat, *because* they want what they want and believe what they believe:

(a) & (b) *because* ((c) & (d)) & ((e)&(f))

Therefore, we have a case of intertwined (we might as well say: reciprocal) action since the above is nothing but a more perspicuous way of spelling out a plural instance of our well-known canonical form of action reports (A):

(A) $x \varphi\text{-}s$ because x wants that p & x believes that $x \varphi\text{-}s \rightarrow p$

So, according to the simple formal language adopted, the exchange of Tom and Dick thus would have to be rendered in the following manner:

(TD) $\varphi xy \ \& \ \psi yx$ BECAUSE $W_x \psi yx \ \& \ W_y \varphi xy \ \& \ B_x (\varphi xy \rightarrow \psi yx) \ \& \ B_y (\psi yx \rightarrow \varphi xy)$

This may look somewhat cryptic at first glance. Remember, however, that it translates to previously explained and innocuous parts of speech only. So, there is no hat and no rabbit and nothing to be surprisingly put pulled out when it is convenient. (TD) may be complex, but it is not complicated. Remember also, that (TD) is but an action theoretic rendering of a reciprocal doing, a *do ut des*. There is nothing peculiar *economic* about this, or, put differently, an economic exchange would be nothing but a special case of (TD).

Now, rivalry comes into play only when another participant enters the picture. Let us, therefore, imagine an alternative situation. Tom is still open to trading with Dick but now there is another trader, Harry. Nothing has happened yet, but in this alternative situation it is also conceivable that Tom trades his sheep for Harry's llama. In strict analogy to (TD), but with suitable replacements, this would give us (TH):

(TH) $\varphi xz \ \& \ \chi zx$ BECAUSE $W_x \chi zx \ \& \ W_z \varphi xz \ \& \ B_x (\varphi xz \rightarrow \chi zx) \ \& \ B_y (\chi zx \rightarrow \varphi xz)$

In order to give an action theoretic account of rivalry we need to piece these parts together in the right way. The essential step we have to add comes from the theory of intentionality: We must take into account the *attitudes* Dick and Harry have towards the possibilities (TD) and (TH). That is what makes them rivals in the first place.

Appreciating that it is essential to introduce an intentional element to explain rivalry is a near truism. What makes two runners run a race is not that they are speedily moving in the same direction. So

many men do that every day. Rather, it is the fact that the one wants to outperform the other. So, obviously, they must have attitudes toward each other. This introduces an intentional (hence subjective) feature as an essential element. As the role of man in general equilibrium theory does not really differ from the role of “these individualistic atoms of the rare gas in my balloon” (Samuelson 1963, 1411) we cannot be surprised that the essential element of competition must be lacking in the equilibrium picture of perfect competition. However, with the help of the philosophy and logic of human action, it is not difficult to put this element back in. The essential step is that Dick *hopes* that he will make the deal but *fears* Harry might close it instead, and vice versa. This is what it means to say that they *see* each other as rivals, and further, that if they act accordingly, they *are* rivals. So, the next step is to note that if and only if

(PR) $H_y (TD) \& F_y (TH) \& H_z (TH) \& F_z (TD)$

Dick and Harry *perceive each other to be rivals*. They *act rivalrously* if and only if

(AR) γy BECAUSE $W_y ((TD) \& \neg (TH))$ and $B_y \gamma y \rightarrow ((TD) \& \neg (TH))$
 &
 λz BECAUSE $W_z ((TH) \& \neg (TD))$ AND $B_z \lambda z \rightarrow ((TH) \& \neg (TD))$

where “ γ ” and “ λ ” go proxy for what Dick and Harry do in order to outperform the other.³ What might that be? Well, Dick might offer Tom a discount or some other gratification, Harry might offer Tom special trade relations or immediate delivery. As long as that is what they do in order to make the deal (and prevent the other one from making it) that is what their acting rivalrously amounts to.

So, finally, rivalry *exists if and only if someone acts rivalrous because he perceives someone as a rival*. By conjunction elimination in (PR) and (AR) the understanding of competition as rivalry thus has a clear sense in our framework:

(C) $(\gamma y$ because $W_y ((TD) \& \neg (TH))$ and $B_y \gamma y \rightarrow ((TD) \& \neg (TH))$) BECAUSE $(H_y (TD) \& F_y (TH))$

Again, this may be complex, but it is not complicated. More importantly, we can trace this understanding of competition back to its well-known origins in the theory of action and intentionality, i.e., in sections 1 and 2. So, we are dependent on nothing but the frugal and innocuous assumptions we incurred there and the assumptions pertaining to our variant of first-order predicate logic, which are indispensable for any sound reasoning anyway.

4. Conclusions and a glimpse beyond

It is sometimes said that “Austrian economists understand competition better than most economists” (Nell 2010, 142). However, Austrian economists have neither followed the understanding of subjectivity to its proper origin, the theory of intentionality, nor have they traced their sympathy for an agent-based modelling of market processes to its proper foundation, the theory of action. So, they struggled with justifying what makes their contribution to economic theory so truly peculiar: The philosophy and logic of human action. Looking back at our explanation of competition as rivalry one might be tempted to say: Well, we knew this before. And true, I never meant to cast doubt on the fact that economists were

³ Obviously, both in (PR) and in (AR) (TD) and (TH) would have to be expanded for what they go proxy for. In the interest of readability, I have refrained from doing so.

aware of the *truth* of the conclusion. What some did not know, however, or others could not argue without bias, was that in this understanding there was neither need nor room for something only remotely resembling an equilibrium picture of perfect competition. (C) makes plain that explaining competition as rivalry cannot be achieved within a market structure approach. The market structure leaves out what is essential to it, i.e., the individual with its subjective attitudes. In contrast, explaining competition as rivalry dissolves the mysteries of the equilibrium picture. Also, it can give us a good idea of what the study of human action can contribute to the study of the social sciences in general and economics in particular.

So, apart from solid foundations, what else can the action theoretic approach contribute to economic theory? Due to limitations of space I can only give a sketch: a) *Coase's conjecture; competition without competitors*. Ronald Coase (1972) made the famous argument that in the long run even a monopolist could not charge anything but competitive prices. The conjecture helped to explain real-world phenomena, e.g., why OPEC did not raise oil prices arbitrarily even when it had a (near) monopoly. Our approach can accommodate these findings without extravagant assumptions (such as Coase's assumption of competing with a future self). According to (C), it is sufficient for there being competitive behaviour that an agent *perceives* someone as a rival and acts accordingly. This perception may be erroneous. It may merely be an anticipation of a possible future behaviour. Since, on our account, the competitor is merely the intentional object of the agent's attitudes, "due to the intentionality of the subjective" he can, but need not, "be the way the agent takes [him] to be", he "may not even exist at all" (see section 2 above). b) *Risk, uncertainty, and profit*. It is a near commonplace in action theory that an agent will not aim at what he (really) considers impossible nor at what he (really) considers achieved already. So, motivation can only live in the realm of the uncertain. But only where the agent acts can the point of all competitive behaviour, making profit, arise. We thus can underscore a championed result of Frank Knight's (1921) with the means of the philosophy and logic of action only. c) *Market failure and anti-trust*. Competition does not require an equilibrium of whatever kind to exist. To the contrary, if there were such an equilibrium there would not be competition. Consequently, there is no market failure exhibited by rivalrous behaviour such as (product) differentiation, merger and acquisition. Hence the conceptual basis for most of the anti-trust legislation (cf. Armentano 1972) is undermined. What drives competition is intentional, thus subjective: It is the fear of losing business and the hope for somehow still securing it. As a result, action theoretic grounds make it hard to make the case for government intervention at all.

As I said earlier, Mises took economic science to be founded in action theory. This claim many found too disturbing to defend. Also, he thought that action theory was ultimately founded in epistemology. He even came to coin the phrase of epistemology as the ultimate foundation of economic science (Mises 1962). In this latter regard Mises erred. There is nothing epistemological about action theory or the theory of intentionality. We have demonstrated this by way of omission. More important is that what has been demonstrated here is evidence in support of something akin to Mises's former claim: The proper foundation of economic science is analytical action theory. As was demonstrated elsewhere (Oliva Córdoba 2017), praxeology can be rendered nicely compatible with analytical action theory retaining the spirit but not the letter of Mises's original approach. So, the prospects of an integrated approach of Austrian theory as an amalgam of Austrian economics and analytical action theory would seem bright. But even if Austrian economists abstained let us not overlook that in the course of this investigation we never compromised the rigour, richness and respectability of analytical action theory and the theory of attitudes. If these were decent, well established and worthwhile fields of study before, we most likely will have added to that and not have subtracted from it. Also, if this way of studying

human action can make a substantial contribution to the explanation of competition, this not only demonstrates the use of the philosophy and logic of human action in the social sciences, but it does that at the very heart of economics.

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