

Epistemological foundations of economics: the philosophical problem of ranking

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Abstract

In our article, we examine the philosophical challenges of ranking that are economically significant from multiple angles. With our findings, we want to demonstrate that ranking in the actual world is a far more sophisticated, partially context-dependent behaviour enacted via specialised decision-making systems. In some ranking scenarios, the exact preference relation may vary depending on whatever basic set of phenomena we are discussing. On this basis, we can limit the scope of economic modelling to exclude, for instance, aesthetic value judgments. In the study, we would like to demonstrate the importance of the philosophical substantiation of economic phenomena.

Keywords: economic philosophy, ranking, modelling

Introduction

Nowadays, the economy – as the dominant subsystem of society – participates in the significant transforming of the whole society, hence we may say that this subsystem seeks to reshape and orient the entire system. From a philosophical point of view, the question arises: what is the role of the economy from the metaphysical, ontological, aspect of existence, including the human person with self-reflective capabilities? From this perspective, what does value creation mean, and how does it relate to the real good? How does this value relate to society, its structure, and the structure of existence? In the economic philosophy program of the Doctoral School of Philosophy of the University of Pécs, we conduct research related to the above issues.

In our planned series of studies, we would like to flash certain slices of the topic for interested readers. We hope that the raised topic provokes wider interest and generates a productive professional dialogue.

In our first, introductory study, we examine the philosophical issues of ranking. The importance of this field is indicated by the fact that, hitting almost any introductory book on economics, sooner or later we will come across the concepts of preference ordering, and utility, in a short ranking. Nonetheless, the conditions for this possibility are not decisively addressed by economically oriented works, since strictly speaking, this is not covered by economics studies – at least at the introductory level. However, for the explanatory power of theoretical models to increase, the former question cannot be avoided. It is necessary to explore the basic epistemic fringe conditions that are necessary for ranking.

We note that, from a psychological point of view, several works have been produced that seek to capture the basic motifs and characteristics of the bearing of economic actors (see, for example, Simon, 1955, 1991; Tversky & Kahneman, 1973, 1974). And this means that the need has arisen to revise the anthropological concept of economics. However, this has not led to a complete paradigm shift, since in many sub-areas, the traditional image of man and the few epistemic boundary conditions formulated in connection with it still prevail. Although attempts are made to weave the phenomenon of learning or limited rationality into theoretical economic models, all this runs into certain reasonable limits due to the strongly formalised construction of the models (beyond a point, the model becomes overly complicated, the possible computational need associated with it will increase).

Within the management science that studies the business sphere and the life of organisations, the importance of narratives has been discussed for years now (see Ibarra & Barbulescu, 2010). Consequently, the significance of philosophical, or more precisely, interdisciplinary grounding, is not a novelty these days. However, all this has not necessarily been realised either by the academic side or by corporate executives.

We would like to narrow this hiatus somewhat with the help of this study. As mentioned earlier, we do this by epistemological examination of the phenomenon of ranking. Our work is by no means exhaustive, but we hope to contribute to the development of a productive discourse that can have an impact on the disciplines involved.

Our study is divided into three units in terms of content. We deal with the interrelatedness of

1. ranking and context;
2. prioritization and decision;
3. ranking and truth.

In the first-mentioned unit of content, we examine the contextual definition of ranking or evaluation, in the second the relationship of ranking to the decision, and in the third, the truthfulness of statements related to ranking.

Ranking and context

In order to talk about ranking at all in any scenario (possible world), it is necessary to assume phenomenon-level heterogeneity, as well as succession for the formation of ranking. Without the latter, the system of alternatives is unintelligible and cannot even be established. If these are given, the next step is to assume that the set of objects for which I want to rank can be sorted according to some set of criteria. Érdi (2020) formulates this as the need for something that ensures comparability. This set of criteria allows two different objects to have something in common that can form the basis of the ordering (e.g., in the case of a gymnastics row, such an aspect is the height).

At this point, we would like to emphasise that in order to be able to order the elements of the set of objects in question, it is not necessary to quantify them, in other words, to assign some kind of numerical value to them (colloquially speaking, translate them into the "language" of numbers). However, because of order, it is certainly possible to assign values to them (for example, nonnegative natural numbers, see Likert scale) in a way that, with the "usual" ordering relation, exactly the same sort "pattern" will appear as the result of prioritisation on the elements of the set of objects. Of course, this does not necessarily mean that any "acceptable" interpretations can be associated with the assigned values, but rather that they have a kind of technical function in terms of sequencing.

Note that we can imagine cases where the relationship between these values makes a lot of sense (which is why, for example, weight ratios in decision theory are very important respectively). So instead of talking about entities that can be quantified or have only qualitative characteristics, we follow the former division and talk about quantifying an object that can be interpreted locally or remain unintelligible. Local interpretability refers to the fact that a number of boundary conditions can shape the content of the interpretation, which is, therefore not

independent of the situation or context that designates the relevant boundary conditions, so it may not be possible to speak of temporal permanence.

The mentioned quantification can also be called evaluation, so it is worth thinking about ranking as the ordering of evaluated or value-carrying sorting objects. Here the question immediately arises: what is the relationship between evaluation and ranking? Are they simultaneous phenomena, or does one necessarily precede the other? Based on what we've seen so far, it seems that ranking is an epistemological problem, although later it turns out that metaphysical dimensions can also be opened.

The question arises, how is the value generated, that is, how is the valuation carried out, can all objects be valued at all, and if so, how unambiguous is this? What about incommensurable objects (see Érdi, 2020: 17)? In this context, it is important to see that value formation is essentially a social construct. At this point, we note that we do not intend to take any dualistic approach, and we would also like to avoid the contraverse approaches of both supervenience and ontological individualism. In connection with the above, we would like to draw attention to the factors of ethologist Vilmos Csányi that shed light on the formation and dynamics of communities, which are as follows (Csányi, 2007/2006):

1. joint actions,
2. common constructions,
3. common beliefs,
4. and loyalty as a result of the former.

Taking into account the above factors, we mean by social construction a combination of community construction and beliefs. Consequently, we are not assuming an ontological individualistic position since, for example, the construct includes the object created, not only the social meaning attributed to it (i.e., but it is also not a phenomenon constituted exclusively by individuals). The problem, however, is that communal constructs and beliefs are not well defined, i.e. their boundaries are blurred, and certainly their semantic field is not disjointed. Beliefs can also be seen as a kind of construct, and the former are also elements of the identity-forming narrative that is the result of the constructional activity of the community at all times. Henceforth, constructs, beliefs, and loyalty make a fundamental contribution to the phenomenal character that is an integral part of the evaluation.

Continuing our train of thought, for example, at an auction, the (monetary) value of a given work of art is created through bidding, which has nothing to do with the inherent (aesthetic) value attributed to the work. In this example, monetary value is the end result of a process (unintelligible quantification), while aesthetic value is the result of subjective "interaction" with a work of art. Thus, a number of cases can be thought of where the ranking established by aesthetic interpretation is radically different from the ranking resulting from monetary valuation, which is merely the result of numerical ordering. Consequently, it can be stated that the unanimity of the assessment is far from being ensured.

In line with the above, a further explanation is that value formation in one case or another is context-dependent, which may have different strengths. There may be situations where you can't appreciate a thing. In this case, there is usually a lack of any relevant information "background base", and presumably, no social reference is given. Another aspect of the assessment may be functionality. I address value to an entity in so far as it is functionally useful to me in a given situation. Finally, it also seems plausible that the values of objects are in constant dynamic interaction with each other, which obviously affects the ranking itself.

From the above train of thought, the conclusion arises that value formation is really nothing more than the assignment of a dynamically changing "orientation point" to elements of a particular set of objects. And since it is an "orientation point", it is necessarily related to the other elements of the set. In addition, the value of a thing is added to the meaning of what it influences, nuances. Consider that in colloquial speech, it is more than once the case that a question about the meaning of a particular object is answered with an assessment: "What is this interestingly shaped thing in your room?"; "Just a worthless junk." In the latter case, for the respondent, in the given situation, the meaning of the object being asked is almost exhausted by the value judgment that appears in the answer.

In the context of evaluation, the question of whether it is necessary to assume some kind of absolute, "platonic type" of (meta-) value – as a reference, an unchanging standard – in order for ranking to be carried out cannot be ignored? Another question is whether value actually corresponds to "something" that embodies the "value" concerning the value bearer, or is it a purely social and subjective construct? In other words, is the value bearer merely a semantic phenomenon that provides a particular interpretation of an object?

To try to answer the first question, it is necessary to clarify the concept of metavalue. If by metavalue I simply mean a point of reference formed by experience as a result of my dynamic existence in the world, then the answer is

affirmative. However, we take a rather skeptical position if we approach the reality denoted by the concept in question as an objectified ideal being (edios), permanently present. For our part, we consider the reference back to the previously mentioned invaluable objects to be a plausible argument, since if there were any metavalue that would allow the evaluation of an arbitrary object regardless of my own epistemic situation, then they could not be invaluable as well as incommensurable objects.

In connection with what we have seen so far, we will write down two analytic lines of thought that condense some pivotal findings into them:

- (P1) Local ranking requires an assessment in a specific context.
- (P2) For evaluation, it is necessary to have heterogeneity at the level of phenomena in a given context.
- (K) If no epistemic difference between objects can be established in a given context, then evaluation cannot be performed in that context, i.e. no local ranking is possible.
- (P1)' The individual $i(w)$ performs the evaluation $e(w, f_i(w))$ dependent on the condition $f_i(w)$ in a given context $c_i(w)$ in a possible world w .
- (P2)' The individual $i(w)$ performs the evaluation $e(w, f_i(w))$ in a given context $C_i(w)$ in a possible world w if $C_i(w)$ context is not substantially different from $c_i(w)$ in an epistemic sense.
- (K)' If an individual $i(w)$ cannot perform the assessment in $C_i(w)$, then $C_i(w)$ and $c_i(w)$ are epistemically significantly different (epistemically incomparable).

In this line of thought, if we consider $f_i(w)$ as part of each context, then $e(w, f_i(w))$ can be written $e(w, C_i(w))$. And (P2)' can be paraphrased:

- (P2)'' The individual $i(w)$ performs the evaluation of $e(w, C_i(w))$ in a given context $C_i(w)$ in a possible world w if $C_i(w)$ context is not substantially different from $c_i(w)$ in an epistemic sense.

Please note that it does not seem to be possible to reverse the direction of implication within (P2)' or (P2)''. This is because a situation cannot be ruled out in which, despite the epistemic incompatibility between the different contexts, the assessment is feasible in both cases.

Ranking and decision

When it comes to ranking, of course, we are always faced with a decision situation. Approaching the phenomenon in a naïve and superficial way, we discover circularity in the fact that the establishment of a ranking is preceded by a decision, but at the same time ranking is necessary for a decision to be made. However, if we look at this more closely, we need to realise that our perceived individual narrative, which plays a role in how we understand it, how much it matters, what content we fill our concepts with, what kind of normative character they acquire, or even what emotional implications they have, are embedded in a broader narrative. Without the latter, the former is meaningless and even impossible. We encounter the broader (frame) narrative in question in the course of our socialisation, and this in turn, fundamentally determines the individual mental model that underlies our decisions. We mobilise this model at every moment, often without actually knowing it. In view of this, the following statement, quoting Nietzsche, is of substantial importance:

"Thus he [Nietzsche] maintains that there can be no 'absolute knowledge', and that there are no 'facts'; and that, rather than either, there are only 'interpretations' – or (even more pugnaciously) only 'beliefs.'" (Schacht, 1984: 79)

In order to make the description above, which seems a bit alien to life, more picturesque, we will engage in a short thought experiment. If we imagine, for example, that Katie heard from her parents the importance of conscious nutrition from childhood, and then this was further reinforced by her environment in her later life stages (i.e. the secondary, tertiary steps of her socialisation) (say, through a number of positive emotional feedbacks), then healthy eating will be central to the narrative that is the point of reference for Katie and directs her thoughts and actions. Then, if Katie has to decide whether to buy, say, vegetables, fruits, or high-carb foods containing a number of artificial compounds when shopping, her narrative is that she chooses the former, preferring them. Moreover, her mental model – aside from the possible circumstances – even plays a role in her decision to choose a multinational grocery store or the corner vegetable shop.

Ranking and truth

The preference ordering that appears during ranking can manifest itself in statements such as: "I prefer B over A", "I like D better than C" or simply "E is better than F". The former, in a formalised way, appears like this: $A < B$, $C < D$, as well as $E < F$. It is clear that in each statement the relation " $<$ " corresponds to a different sequence of signs. In the first case, it is in the place of "I prefer", in the

second it is in the place of "I like it better than", while in the third it is in the place of "better than". Consequently, the preference relation depends on what objects you bring into a relationship. For example, it makes sense to say that "Toyota is better value for money than Renault", but that "blue is better value for money than yellow" no longer makes any sense.

After so many introductions, let's raise the question of whether every statement linked to a preference ordering (more precisely, the proposition "behind" the statement) can be a truth bearer? Obviously, it can't be. Whereas, while on the basis of certain community-accepted criteria, the statement "Toyota is better value for money than Renault" can be determined to correlate with reality, the truthfulness of the statement "Rodin's thinker is more beautiful than Leonardo's Mona Lisa" is by no means so clear – at least if we think in terms of collective standards. For the former, there are procedures and protocols in the communal narrative by which this statement can be called "true" or "false," but with regard to the latter, "beauty" is not a quality that is inherent in the works of art in question – at least not in an objectified sense – so we cannot point to any method that would allow for a clear resolution.

In view of what has been said so far, the following quote from Quine should be considered:

"It is obvious that truth in general depends on both language and extralinguistic fact. [...] Hence the temptation to suppose in general that the truth of a statement is somehow analysable into a linguistic component and a factual component. [...]

The totality of our so-called knowledge or beliefs [...] is a man-made fabric which impinges on experience only along the edges. [...] A conflict with experience at the periphery occasions readjustments in the interior of the field. Truth values have to be redistributed over some of our statements." (Quine, 1951: 34, 39)

Summary

In our study, we analysed the economically relevant philosophical problems of ranking from several perspectives. In each of the areas presented here, questions arise that provide grounds for further investigation, which are partly interpreted as a given and partly not raised by economic theories; *ab ovo* they imply as a given, a self-evident, natural phenomenon.

With our analyses, we wanted to point out that ranking in real life is a much more complex, partly context-dependent act that is expressed through specific decision-making mechanisms. In some ranking situations, the specific preference relation

may differ depending on which basic set of phenomena we are talking about, and with regard to certain types of rankings, there are not necessarily socially prescribed standards that make a statement unquestionably a truthbearer in a collective sense. The latter statement identifies the range of phenomena that may be considered in a way that makes any sense at all from the point of view of economic modelling that is relevant in practical terms. Based on this, we can delimit the scope of economic modelling, excluding value judgments in the field of aesthetics, for example.

We hope that in the study, we managed to demonstrate the importance of the philosophical substantiation of economic phenomena. As indicated at the beginning of the article, our discussion is far from complete. We are confident that our thoughts, formulated with the need for interdisciplinarity, can be a kind of far-fetched point in both domestic economic and philosophical thought and can bring about further discursiveness in this topic.

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Sustainability and Education

Sustainability and innovation in an educational context¹

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Abstract

Innovation and sustainability will be of utmost importance in the educational workshops of the next decades and will necessitate distinct techniques and specialised skills. Regarding education, sustainability, and environmental awareness, the European Union has issued a number of suggestions to its Member States. These proposals include objectives such as incorporating sustainability into teaching and learning, integrating environmental consciousness into the education system as a whole, and supporting the acquisition of awareness, comprehension, and action-based competencies. Innovation in education is essential to modernising the nation's educational system and preparing pupils for the future. Developing an inventive mentality is a crucial objective of education, as it stimulates creativity, the development of problem-solving abilities, and the capacity to adapt to rapid change. Sustainability and innovation are essential components of contemporary education because they help students prepare for the future, provide chances for practical learning, improve career preparation, and increase environmental consciousness. Students that incorporate these ideas into their schooling will be better equipped to face future obstacles and capture opportunities.

Keywords: sustainability, innovation, education

Sustainability and the green turn

The 'green turn' on a worldwide scale is causing fundamental changes in economic and political life, with increasingly noticeable cultural implications. The package of ideas for the European Green Deal to be adopted by the European

¹ Prepared with the professional support of the doctoral student scholarship program of the Co-Operative Doctoral Program of The Ministry Of Innovation And Technology financed from the National Research, Development And Innovation Fund.