

Economic Rationality and Human Behaviour: Can false Assumptions become Reality?

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"I wonder who it was defined man as a rational animal. It was the most premature definition ever given. Man is many things, but he is not rational. I am glad he is not, after all."

— Oscar Wilde, *The Picture of Dorian Gray*

1 Introduction

Modern economic theories are a somewhat unified framework of approaches, assuming, inter alia, a particular conception of human acting, widely known *homo economicus*. The resulting approach, relying on this assumption, can be called the "economic approach" (Becker 1976). A specific idea of man is applied in its modelling strategies, stating a certain notion of rationality, assuming a selfishly acting, utility-maximizing individual. This theoretical framework is commonly challenged within public and academic discourse (for the latter see for instance Sen 1977 or Rolle 2005) and questioned by the (empirical) insights of other sciences, namely psychology (e.g. Kahneman and Tversky 1979). The critics primarily contest the assumptions of the economic approach, in particular rationality and stability of preferences; also, its application to many kinds of social interactions (replacing the inquiries of sociology or political science) and its explanatory capacity. Another objection is that there may be interdependence between these assumptions and reality. One may argue that economists' assumptions are a kind of self-fulfilling theory, *creating exactly* the behaviour that theorists falsely assumed in the first place. What kind of impact may there be when economists assume a certain idea of man which directly leads to implications for the general behaviour of individ-

uals, as well as for policy environments? Do the assumptions of economic theory have the capacity to change the individual's or society's preferences and actions indirectly (are the theories and assumptions of economists self-fulfilling)? This question is even more essential if the hegemony of economics within science and society is considered. (Ferraro et al. 2005)

The question whether the social sciences may have some self-fulfilling character has firstly been arisen in philosophy of science in the seminal work *Social theory and social structure* by Merton (1949). Some remarks concerning this question whether there is some self-fulfilling influence of social theories and its predictions on reality, and whether it may be stronger than the influence of, say, the physical sciences can be found later in Grünbaum (1956) as well as in the similarly titled works concerned with "*Reflexive Predictions*" by Buck (1963) and Romanos (1973).

The approach of this essay is threefold. The state of the art in economic science shall be reviewed, firstly, by describing contemporary economic methodology. There are two major methodological thinkers for current economics, Milton Friedman (1953) and Gary Becker (1976), with their description (Becker) and apology (Friedman) of current economic methodology, especially regarding the role of assumptions within the theoretical framework. Second, economics' presuppositions and the "economic approach" will be criticised, particularly concerning its realism. This will be done focusing on early thinking regarding the method of investigation and the role of assumptions, particularly using the considerations of John Stuart Mill (1836 and 1844); also, contemporary critique on the assumptions can be found, formulated by Amartya Sen (1973 and 1977). After finding that economic assumptions are unrealistic, it will finally be argued that there *is direct* influence of the economic approach (the presuppositions of economists) on human behaviour. The insights of experimental economics will therefore be taken into account. *If* man has not been a homo economicus in the first place, she will be changed while the influence of economists persists.

2 The Practice of Contemporary Economics

When discussing the methodology of current economics, there are two prominent justifications of the "economic approach" and economics as a "positive science". I will shortly illustrate both views, presenting the basis for current economic thinking, thereby building the foundation for a critique of current economic methodology.

Milton Friedman in his widely recognised, and, despite many criticism of methodologists (Hausman 1994), still influential essay claims economics to be a "positive science", concerned with "what is". There has been and still is widespread critique on the realism

of (micro)economic assumptions. Friedman defends unrealistic economic assumptions, claiming that the realism of assumptions is not at all relevant for the value of a theory. According to him, there is one sole criterion when assessing the value of a theory, its capacity to predict future events. Past events are not appropriate for this valuation, since they are generally compatible with more than one theory, post-validating more than one potential explanation.

The validation through prediction is, according to Friedman, not problematic at all. It is not only difficult to create experiments within the social sciences, but also not necessary. There *is* adequate evidence to assess the sufficiency of a theory.

Friedman's conception of creating scientific (economic) hypotheses involves two stages. At first, hypotheses are to be constructed using old evidence and refuted old hypotheses, second, the *implications* need to be compared to empirical evidence within (p. 152) "the class of phenomena the hypothesis is designed to explain". Evaluation of the quality of hypotheses is therefore possible only through a comparison of the implications of a theory to reality (the quality of prediction). Theoretical assumptions shall be viewed as "*as if*" statements. The realism of the assumptions is not at all relevant.

Friedman uses several examples to illustrate this hypothesis. One example is the law of falling bodies. It is possible to describe the distance that is travelled by any falling object in dependence of the time, using the formula $s = 12gt^2$, where s is the distance travelled, g is a constant, and t is the time. This formula, however, is only valid in a vacuum, an instance that is not naturally given on earth. Nevertheless, there is no doubt that the formula as well as its implications are highly useful. The realism of the assumption is obviously not relevant for the scientific relevance of the conclusion at least in this instance.

Friedman altogether claims that there would be confusion between descriptive accuracy (the realism of assumptions) and analytical revenue (prediction) of scientific theories in general, and with respect to economic theory in particular. While being highly controversial and disputed, Friedmans instrumentalist view is even nowadays a most important reference point for many economists.

Following Gary Becker, the distinguishing characteristic of economics is its approach. The strength of this approach is its capacity of universal application to *any* field of human behaviour. The economic approach assumes individuals, households, firms and institutions to maximize so-called "utility functions". It presupposes the existence of markets which coordinate the actions of those protagonists. Preferences which determine the mentioned functions are assumed to be stable over time – at least over the time of interest. These assumptions, hence, utility-maximization, market equilibria, stability of preferences are stated the "core" of the economic approach (see also Blaug 1975). The approach is neither limited to material goods and desires nor markets. It

does not assume (albeit neo-classical (macro-)economists do so, which in turn is often recognised in public debate), that every market-actor has full information or that transactions lack any costs¹. It does in turn assume that there is no "irrational" or erratic behaviour. In addition, the rational behaviour does not have to be intentional.

An analysis that uses the economic approach is additionally not limited to generically economic situations. It is applicable to any kind of situation. Political decisions or the "market for marriage" are instructive examples for those "non-economic" situations. Other social sciences shall find and describe preferences and utility functions, while the economic approach can ultimately be applied to analyse every situation in the social realm.

Hence, when following these two thinkers, economics considers itself as a positive science concerned solely with the prediction of future events, applicable to any field of human action.

3 A Critique of Economic Methodology

The previously described methodology shall be the basis for a critique of the scientific approach of economics. Therefore, the focus shall be laid on the assumptions of economic theory, their role within the framework, their theoretical and empirical validity. Potential influence of economic assumptions on human behaviour can surely only be criticised when these assumptions do not capture the nature of man.

3.1 The Role of Assumptions

In the following, I will challenge the defense of the unrealistic assumptions of economic theory proposed by Milton Friedman, using the early reflections of economic methodology by John Stuart Mill, mainly developed in his early essay *"On the Definition of Political Economy; And on the Method of Investigation proper to it"* (1836) and his later work, namely the *"Logic of the Moral Sciences"* (1844).

Mill in his early essay on the definition of political economy characterises them as (p. 121) "The science which traces the laws of such of the phenomena of society as arise from the combined operations of mankind for the production of wealth, in so far as those phenomena are not modified by the pursuit of any other object." This science is distinct from all other branches of so-called "social economy", being solely concerned

¹Attention is displayed to incomplete information and transaction costs by "New Institutional Economics".

with the desire for wealth (including aversion to labour, and the "desire of the present enjoyment of costly indulgences").

The method of this "separate" science is a method called the method *a priori* or the "concrete deductive method" (the first essay uses the former, the later one relies on the latter formulation). Mill distinguishes this method from the so-called method *a posteriori*, a method of pure induction. Attempting to perform a scientific inquiry, one should not rely solely on specific experience. Observations and experience in the "social state" are, according to Mill – and most people dealing with social sciences – far too complex, indeed more complex and "confounded" than in the realm of the "physical sciences" (Mill mentions Astronomy), as to discover real "causes" by mere experience. Political Economy may thus be called an "inexact science". An inexact science can discover some greater causes which are relevant for all cases, but by its nature cannot consider all causes that may be influential in a particular case. It is distinct from "exact sciences" that can find all relevant causes and can predict future events accurately (Mill again mentions Astronomy) (1844: p.30–).

Taking the mentioned impossibilities, and the impossibility to perform experiments in general, into account, Mill justifies the necessity to use a deductive method (a method *a priori*). Although the formulation suggests it to be a method of deduction, it actually involves inductive elements. The deductive method consists of three steps, involving: first, as starting point, the formulation of some basic principles or axiomata, second the deduction of some conclusions from those premises, finally a comparison of these conclusions to specific experience (1844: p.83–).

Inductive elements, however, are not only involved when it comes to *verification* of the conclusions that are derived during the deductive process. Mill strongly emphasizes the necessity of inductive justification and verification of the assumptions that the deductive process relies on (1836: p.127–). Since the method *a priori* assumes some "basic principle" or "hypothesis", its reasoning is obviously not necessarily true, but, as long as the deductive process does not contain errors, is true "in the abstract".

One can find some obvious differences between the methodological views stressed by Friedman and Mill, particularly concerning the question whether the realism of assumptions has anything to do with the scientific value of a hypothesis. Indeed, following Simon (1994), one may argue that the scientific assumptions made in economics are of a different kind than the assumptions that are made in the physical sciences. Economics is basically a science of a different scientific branch than physics; a view that is strongly held by Mill. In the following, I want to emphasize the necessity to evaluate theories and their potential applications according to the truth-value of their assumptions.

As already seen, Friedman in his essay claims that the assumptions of a theory have no

importance at all, Mill, however, strongly emphasizes empirical valuation of theoretical assumptions. His method a priori involves deduction from pre-stated laws of the human mind which are to be derived inductively (from Psychology). Mill in the *Logic* emphasises the importance of finding some "laws of the formation of character" that should be the starting point of the deductive analyses (p. 46–). The causes in *Political Economy* indeed are to be found by observation as is stated in his essay (p. 127):

"Although sufficiently ample grounds are not afforded in the field of politics, for a satisfactory induction by a comparison of the effects, the causes may, in all cases, be made the subject of specific experiment. [...] The desires of man, and the nature of the conduct to which they prompt him, are within the reach of our observation."

The mentioned causes are the "assumptions" for the proposed deduction, Mill later continues, emphasizing the importance of comparing assumptions (causes) to observation (p. 131):

"But the causes are not so revealed: they are to be collected by observation; and observation in circumstance of complexity is apt to be imperfect. Some of the causes may lie beyond observation; many are apt to escape it, unless we are on the look-out for them; and it is only the habit of long and accurate observation which can give us correct a preconception what causes we are likely to find, as shall induce us to look for them in the right quarter."

It is surely questionable whether the assertion of the "deductive method" is at all applicable. Mill is quite optimistic that the inductive derivation of the fundamental laws (psychologic laws) of the economic science is possible. Whether there is, or can be, even nowadays, a science of psychology that *can* find these fundamental laws is surely questionable. However, his conception obviously and particularly involves *empirical validation* of the presuppositions an economic theory applies.

Undoubtedly, the question whether the realism of assumptions has any relevance for the value of a theory is the most important difference between the two thinkers. However, I also want to emphasise another claim that one can already find when studying Mill, and that was important in the discussion of Friedman's essay (e.g. in Simon 1994). The question is concerned not with the realism of the assumptions – by its nature, a non-inductive science needs to have some – but with the possibility or capacity to estimate errors that are caused by assuming certain circumstances within a theory².

As already seen, Mill distinguishes two branches of sciences (*exact* and *inexact*). The latter can only find some major causes and are primarily concerned with the very. Those are, however, not the only causes present in an instance. One may find many more so-called *disturbing causes* that change the effect of the "primary causes" in reality.

²Which is surely related to the realism of assumptions

Mill in the Logic states that (p. 129)

"The disturbing causes have their laws as the causes which are thereby disturbed have theirs; and from the laws of the disturbing causes, the nature and amount of the disturbance may be predicted a priori, like the operation of the more general laws which they are said to modify or disturb, but with which they might more properly be said to be concurrent. The effect of the special causes is then to be added to, or subtracted from, the effect of the general ones."

It is considered necessary to have some idea of the "degree" of disturbance a priori. Indeed, Friedman also emphasises the role of "case-to-case" validation of the assumed premises. Nevertheless, and I want to return to the ball fall example introduced earlier, this validation may be quite difficult or impossible when it comes into question within the social realm (e.g. for example for the behavioural assumptions of current microeconomics). The difference between the mentioned idealization in physics and behavioural assumptions within economics is that perfect vacuums do actually exist, or can potentially be created. It is possible to create some vacuum and validate the hypothesis with experience received by experimentation. The assumption is *testable*. As Mill often emphasises there can be no experimentation in economics. It is, indeed, never possible (even in laboratories, where it is anyway, if anything, quite seldom "proved") to *really* test for instance for the assumed "rationality" within economics³. Both, physics and economics are basically different scientific branches (exact/inexact in the terminology of Mill) that allow for a different kind of traceability and that are different when it comes to a discussion of applicability on reality.

There do exist common strategies of immunization in economics, mainly since its hypotheses, assumptions and predictions are not sufficiently comparable to reality. One can always claim that particular experience is not relevant for a general hypothesis when it comes to empirical refutation (Hausman 1981). This is surely done when it comes to refutation of presupposed behaviour in the laboratory.

The logical value of hypotheses implications is basically of another kind in the natural science. The "realism" of the assumption has less importance since it is at all possible to find or create a situation of the assumed type. The complexity of the causes within the social realm does not allow for such a comparison. The assumed situations and behavioural principles are not replicable and thus verifiable at all. Nevertheless, one is able to refute them to some degree, and thus damage the basis that the deduction relies on. Such refutation of the behavioural assumptions of economics do exist (e.g. Lichtstein and Slovic 1971 or Kahneman and Tversky 1979). The deductions that result out of the assumed premises may thus be without any value; or worse, they may be

³One may be, however, more optimistic nowadays; randomized controlled trials may render causal inferences possible.

completely mislead. Mill emphasises the claim that the scientist may not even be aware of this latter fact in his earlier essay when he states that (p. 131)

"We are consequently in great danger of adverting to a portion only of the causes which are actually at work. And if we are in this predicament, the more accurate our deductions and the more certain our conclusions in the abstract, (that is, making abstraction of all circumstances except those which form part of the hypothesis,) the less we are likely to suspect that we are in error: for no one can have looked closely into the sources of fallacious thinking without being deeply conscious that the coherence, and neat concatenation of our philosophical systems, is more apt than we are commonly aware to pass with us as evidence of their truth."

Hence, a scientist who stops debating his presuppositions may deduce truly but arrive at statements that are quite wrong. When, additionally, implications of theories in the social sciences are not accurately testable, because there may be, for instance, a quite narrow range of phenomena the hypothesis is intended to explain, one should not and cannot refuse to value theories according to its assumptions.

I compared the early methodological reflections of John Stuart Mill to the not contemporary, but still highly relevant and widespread view of Milton Friedman, mainly to emphasise the importance of debating the realism of assumptions within the theoretical framework of economics. John Stuart Mill already shared the view that the assumptions of a deductive science should display some degree of realism and need to be compared to observation.

3.2 That Economic Assumptions are untrue

There can obviously only be influence of economic assumptions on human behaviour when the original motivation within the social and economic realm is of another kind than assumed by economists. In the following I will argue that there *is* other motivation in the social realm; some kind of motivation that is not captured by an "economic approach". Preferences, as assumed in economics, must fulfil a set of three properties to be described as rational, *transitivity*, *completeness* and *continuity* (e.g. described in Reis 2013). Transitivity of preferences of an individual (A), in avoiding maths, can be formulated as follows; if A prefers a good x over a good y and y over another good z it also prefers x over z. Having "complete" preferences means that individual A can overview all possibilities associated with a certain decision, continuity ensures differentiability. Prominent counterexamples against transitivity have been displayed for example by Sen (1973), illustrating intransitive behaviour which can hardly be described as "irrational", particularly when decision processes contain a time component.

Argumentation can also be found against the assumption of completeness by the practical notion that there obviously are situations where a protagonist does not have an overview over all possibilities (e.g. grocery shopping, considering all possibilities for a future situation, etc.). Additionally, there are cases of incommensurability of goods and situations where individuals simply do not have any preference about some alternatives (e.g. decide between "death by hanging" and "death by lethal injection"⁴). Also, as already mentioned, firstly, Lichtstein and Slovic (1971), most prominently Kahneman and Tversky (1979) empirical findings contest both assumptions of transitivity and completeness.

Amartya Sen (1977) additionally claims that there may be other motivation with relevance for economic decisions of individuals that cannot be captured by the economic approach. Sen's work addresses the assumption of "self-interest" as the key aspect in the idea of man that is applied in economics. This idea limits the approach of modern economic theory. It is argued that modern economic theory is not concerned (p. 322):

"[...] with the relation of postulated models to the real economic world, but with the accuracy of answers to well-defined questions posed with preselected assumptions which severely constrain the nature of the models that can be admitted into the analysis. [...] The nature of man in these current economic models continues, then, to reflect the particular formulation of certain general philosophical questions posed in the past."

The concern here is that theories are limited to this certain anthropological preconception. Models that can be considered within economic science need to apply a certain notion of man in its modelling strategies. Sen eventually introduces "commitment" as a potentially meaningful ingredient for human behaviour. There would be a break between an individual's choice and benefit, if it was true that there was some other kind of motivation in the economic realm. It is stated (p.334):

"Indeed, to take an extreme case, in the Chinese "cultural revolution" one of the primary aims was the increase of the sense of commitment with an eye on economic results: "the aim of the Great Proletarian Cultural Revolution is to revolutionize people's ideology and as a consequence to achieve greater, faster, better and more economical results in all fields of work"."

Some empirics suggest that something like "commitment" *can be* a relevant ingredient for the nature of economic decisions and the condition of economies. May there thus be consequences of stating and particularly advising egoism in the economic sphere? May this assumption alter the behaviour of the object of the inquiry?

⁴This is not a case of indifference, but a case where individuals do not have *any* preference at all. It is simply impossible to chose between those two alternatives.

4 That there is Influence of Economic Assumptions on Human Behaviour

So far, the very fact that economic assumptions do not match reality, while economists consider this not to be problematic at all, has been noticed. I want to consider whether this antirealism can have an impact on mankind, especially on the nature of man and human action.

4.1 Types of Influence

The question whether the social sciences have a deeper impact on reality than the natural sciences has been debated in philosophy of science by Merton (1949). It seems, for instance, to be intuitively plausible that the prediction of an economist that wheat prices will rise, may have influence on the supply of wheat and eventually lead itself self-frustrating; while the wheat supply rises exactly through the economist's prediction, the price remains the same or even falls. Grünbaum (1956) tried to create an example for the natural sciences that shows that the natural sciences can also be self-fulfilling or self-frustrating in a similar manner. A computer that predicts a rocket to hit some target may change the rocket's path, thereby influencing the real world, leading its own prediction self-frustrated. Later, Buck (1963) and Romanos (1973) reflected this debate, creating criteria to determine whether a prediction is reflexive or not. They agreed by concluding that the reflexivity of predictions is not different for the natural sciences.⁵ However, this debate was concerned mainly with the reflexivity of *prediction*, while the concern here shall be the influence of assumptions (nevertheless, influencing the real world also through prediction as well as policy advice).

Ferraro et al. (2005) find an influence of assumptions on actual behaviour between management science and management decisions. They identify three mechanisms "through which theories can become self-fulfilling: institutional design, social norms, and language."

"Theories can become self-fulfilling when institutional designs and organizational arrangements – structures, reward systems, measurement practices, selection processes – reflect the explicit or implicit theories of their designers, in the process that transforms "image into reality" [...] by changing material organizational conditions and practices." Hence, the behavioural assumptions of economics may become true for mankind, since

⁵Which I doubt at least in the context at hand, since against Grünbaum's general claim the "counterexample" does not appropriately grasp the common prediction of the natural sciences which surely not alters the object of their inquiry.

political and social institutions are designed according to the theoretical implications of economics. Privatization or the dismantling of the welfare state may be examples for this changed institutional background that can create different/new behaviour. Eventually, while the change of the institutions proceeds, the theory would not look but *be* true.

Also, "theories can also become self-fulfilling when, regardless of their initial ability to predict and explain behavior, they become accepted truths and norms that govern behavior". One can find several examples (e.g. in Sandel 2012) of a replacement of noneconomic norms by economic "normativity" within many branches of social life. Acting egoistic (economically rational) becomes the generally accepted guideline for human behaviour.

"Finally, theories can become self-fulfilling because they provide a language for comprehending the world. Language affects what people see, how they see it, and the social categories and descriptors they use to interpret their reality. It shapes what people notice and ignore and what they believe is and is not important [...]." Nowadays, economics is the most influential of the social sciences. Its language limits the substance of debates on social and economic policies. Non-economic arguments may gradually lose their impact on those policies (e.g. while discussing austerity in Europe or minimum wages). All those three ways can be relevant parts of the influence that economic assumptions have on the behaviour and nature of man.

4.2 Evidence from Experimental Economics

There may be some philosophical argumentation for the fact that there is influence of economic assumptions on human behaviour. However, I want to deliver an argument that relies on empirical insights of experimental economics.

Indeed, there is seldom any proof and quite often rejection of the stated behavioural basis of economics. However, one *can* find empirical "validation" of man behaving "rationally" under certain circumstances and in specific experiments.

Binmore (1999) tries to answer the question why to conduct experiments in economics. Against the mentioned empirical refutation of economic assumptions in the laboratory, he argues that these experiments are not appropriate to assess the validity of economic assumptions. Indeed, economic experimentation needs to fulfil some criteria to actually be relevant for economic discussions. It needs to be sufficiently simple so that the generic economic motivation of individuals can be found. Additionally, and that is the main (empirical) argument I want to deliver for the claim of an influence of economic assumptions on human behaviour, economic motivation and rational (economic) action

will never be found when individuals face a new and unknown (economic) situation in the laboratory. Participants usually start to decide upon motives that are non-economic, fairness being a main ingredient for their behaviour. They do, however, change their behaviour when they understand that the situation they are facing is one that does not demand any "morality" at all. As time goes on, their behaviour changes towards a behaviour that can be described as economically rational. Hence, individuals do act economically rational when incentives are high enough, when there is enough time to understand a situation that demands economic behaviour and when the situations the individuals face are not too complicated (in the laboratory). Experimental economists such as Binmore celebrate this as the ultimate victory of the economic approach. However, I want to cast doubt on this notion. The sole insight that is generated by those empirics is that individuals behave as they should do under economic rationality when they have had enough time to learn how a situation's functions and when facing a situation that is *solely* designed to *create* economic behaviour. I doubt that these empirics do anyhow prove that there is some sort of generic economic behaviour within every individual that can be extracted, eliminating every other motivation. What is indeed proved is that it is possible to create economic rationality when the environment is designed appropriately. This is surely not the case within the social state. Given that one has done *everything* to eliminate *any* other possible motivation, individuals will behave economically rational.

One may thereby conclude that it is not only possible to replace any non-economic motivation within a laboratory, but that it is also possible to replace any non-economic motivation in other non-laboratory situations. One of these situations may be the social state or society. Economists are the most influential social scientists, having the greatest impact on political decisions. There has been great confidence about the implications of macro-economic models that rely on micro-foundation. Effectively, the political systems and environments, normativity and language have been changed massively due to the assumption of utility-maximizing egoism as the sole motivation within the social realm. Having the findings of experimental economics in mind, it is obvious that individuals should change their decisions and behaviour due to these changes within the social state in the long run. Ultimately, egoistic behaviour will be *created*.

5 Conclusion

This work can, if anything, only have presented a small extract of the broad methodological discussions related to the question whether there is an influence of economic assumptions on reality. However, I tried to rationalize both the notion that economic

assumptions are not to be found in reality; also, the claim that this may be problematic not only for the scientific revenue but also for actual human action within society, since the assumed premises of a social science are likely to also alter the object of the inquiry. Ultimately, there should indeed not be much doubt that mankind while living in a social state, changes due to the direct and indirect impact of the social sciences.

Since Hegel, the self-defining criterion of modernity obviously *is* rationalization itself (Habermas 1988), however, one can find increased economic "rationalization" in recent years. Consequently, there is also many contemporary critique regarding an "economization" of all parts of society and life. Prominent argumentation against and "proof" for the existence of such phenomena has been given by Michael Sandel (2012). Ignoring the moral implications arising from Sandel's statement, effectively, one needs to note the fact that people are adopting (rational) economic thinking in an overwhelming number of situations in social life that have been formerly viewed as generically non-economic, be it through institutional design, language or social norms.

Eventually, there is something to say about the self-perception of economics. It is questionable whether the conception (and widespread seminar space apology of unrealistic assumptions) of economics as "positive science" is reasonable. It is not only some realism of assumptions that should be demanded from economic theory, economists must also be aware of the fact that unrealistic assumptions might ultimately change their studied object. Assuming some foolishly selfish automat in the light of this very fact can be most hazardous. The same applies to the tendency of economics to disseminate its approach on all other branches of the social sciences. Instead of *really* finding the causes in those other fields of human action, all decisions of the social life (political and world views) might eventually be solely seen and analysed as economically motivated. Surely, mankind will not entirely change, however, one may already discover some changes within the social realm nowadays.

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