

# Proposed Basis for Narrative-Grounded Economics (with links to green economics)

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## **Abstract**

Science does not predate human culture. It is a cultural achievement whose methods must be thought through and agreed upon in order for scientists and others to have a common basis for evaluating their own work and the work of others. Rather than trying to deduce the rules of a given pre-existing objective scientific method, a practical basis for narrative-grounded economics (and for social science in general) is proposed. Its features are also described and its use is justified. Beginning with an acknowledgement of the importance of beliefs about the world, a definition of science as a (culturally produced) system for refining beliefs is proposed. Beliefs (and their corresponding levels of certainty/uncertainty) are discussed here instead of knowledge in order to bypass the issue of whether and/or when beliefs become sound enough to be considered knowledge. The need for a basis for collaborative science will also be justified, as it will serve as the foundation for the proposed framework for doing narrative-grounded (green) economics. The paper flows as follows: Belief → Science → Collaborative Science → Reflexive Social Science → Narrative-Grounded Economics → Green Economics. The proposed framework for collaborative science gives grounds for a critique of itself, is compatible with the way fundamental physics is currently done (which is used as a default standard for science), gives grounds for a critique of the way the empirical work of contemporary economics is done and allows for a narrative-grounded approach to economics, which is the main purpose of the paper. One of the main features of the proposed framework is the two-part process of obtaining data from the world, and then analysing that data in order to refine our beliefs. The first part deals with generalised or extended perception,

and the second with the process of the analysis of the data jointly in consideration of the way it was obtained so as to refine our beliefs – not in features of and relationships in the data, but of and in the underlying phenomena the data allow us to perceive. Both of these depend on our given human sensory and mental endowments. The proposed basis for narrative-grounded economics is not derived from first principles as the one correct methodological foundation for doing economics as a science, but is instead a proposal that would have to become accepted as a reasonable basis for doing so. The absence of such a justifiable and accepted basis leads to bad science.

### **Introduction**

Let us assume for the sake of argument that the world exists in such a way that methodologically rigorous (social) science is possible. What would that world have to be like? What would constitute rigorous science within it? Could we come up with an agreed upon solid framework for evaluating our own and other people's contributions to science? In other words, what sort of framework could (some subset of) the scientific community generally accept in order to ascertain whether or not a given piece of research has improved upon existing beliefs about the world where we take as a plausible assumption that such science is possible? This paper proposes such a framework and gives it over to the scientific community for evaluation. The reason I do this is to let the framework define an epistemic community of researchers who use the framework: The community accepts and adheres to the framework (either explicitly or implicitly); and the framework is that which the epistemic community uses (again, either explicitly or implicitly).

Elaborating: Science does not predate human culture. Rather than trying to deduce the rules of a given objective scientific method, I propose a practical basis for narrative-grounded economics (and social science in general), describe its features and justify its use. I begin with the importance of beliefs about the world and propose a definition of science as a (culturally produced) system for refining beliefs. I will work with beliefs (and their corresponding certainties/uncertainties) rather than knowledge in order to avoid the issue of when beliefs are sound enough to be considered knowledge. I will also justify the need for a basis for collaborative science, which will be the foundation for my proposed system for doing narrative-grounded economics. The paper will flow as follows: Belief → Science → Collaborative Science → Reflexive Social Science → Narrative-Grounded Economics → Green Economics. This paper thus provides further underpinning for previous work on narrative approaches to green economics (Turk 2008; 2009)

There are five further major elements for consideration within this framework:

1. It assumes a transcendently real world in which (social) science is possible.
2. It assumes a human capacity for creativity and insight that allows for the production of new ideas, theories, and models.
3. It demands consideration of how the world is perceived: data acquisition.
4. Its measure of scientific advancement is how well new ideas, theories and models can be shown to be improvements on prior beliefs about the world, using data to mediate between real phenomena in the world and beliefs about them.
5. It requires an epistemic community that uses this framework in its evaluation of scientific advancement.

While most of the focus of this paper is on the latter three points, we begin with a brief discussion of the first two.

First, drawing on Bhaskar's (2008) realist theory of science, we assume that we do live in a transcendently real world in which both physical and social science are possible. This is a safe assumption, since if this were not the case, then grounds for demonstrating the falsehood of the assumption would be lacking. To assume otherwise is to undermine the basis of any science. More importantly, the assumption is plausible and there is a sufficient community of scholars that accept the working assumption of transcendental realism (a growing community of critical realists) so that there should be a sufficiently large community of researchers who could do science on the basis of the proposed framework.

The second point is that we simply assume that (at least some) people have the creative capacity to be able to come up with new ideas, theories, models and beliefs that can be compared to what happens in the world. In order to make science possible, we assume that these ideas are not uniquely predetermined by given circumstances, but that there is room for independent human creativity. We as researchers and people thus have some freedom of thought and independent agency. This point is just assumed and is not treated further in this text.

The third and the fourth points on data acquisition (extended perception) and data analysis (comparison of beliefs to real phenomena through the judicious use of data) are the main points of this paper and are treated in the discussion of the progression from beliefs to narrative-grounded social science. The paper ends with some comments on the possibility of an epistemic community forming around this or a similar framework so that social science can progress with some common grounds for the evaluation of new developments.

### **From belief to science**

It is left to the reader to convince herself that she has at some time in her life come to some new belief about the world through the consideration of some evidence. She should therefore conclude that the world in which she lives must exist in such a way that she is able to come to beliefs about it; and since that would have to be a correct belief, she would be right in concluding that the world exists in such a way that she can come to correct beliefs about it. This little exercise in navel gazing should be enough to justify the belief that science is possible, if we define science as a system of improving upon prior beliefs in relation to the real world. In what follows, we do not talk about how to come to absolute knowledge, just additions to and improvements on prior beliefs about the world in which we live.

### **From individual to collaborative science**

In this section we take the bold step of leaving the comforts of our own thoughts and rationality to a dependence on our senses. Here we enter the scary world of illusions and false perceptions as products of our less than perfect sensory systems. However, our goal is to be able to interact with a community of scientists, so we must make the assumption that there are indeed other beings such as ourselves with whom we can actually interact. How do we know there are such others without relying on our faulty senses to perceive them? Although this may only be a matter of belief, it is important to understand how fundamental that belief is to human society.

For this purpose we consider the importance of the development of a theory of mind (ToM) in normally functioning children at about three or four years of age. It is an essential feature of socially functional people, but not all people. Indeed Simon Baron-Cohen (1995) coined the term 'mindblind' to describe the condition of an impaired ToM faculty, associating it with the autism spectrum disorders. He has also proposed empathising and systemising as two important and complementary cognitive facilities shared by most people (Baron-Cohen 2004). "Empathizing is the drive to identify with another person's emotions and thoughts, and to respond to them with an appropriate emotion. ... Empathizing occurs when we feel an appropriate emotional reaction, an emotion *triggered* by the other person's emotion, and it is done in order to understand another person, to predict their behaviour, and to connect or resonate with them emotionally. (Baron-Cohen 2004: 2)" Mindblindness is indicative of a dysfunctional capacity for empathising. This is contrasted with systemizing: "Systemising is the drive to analyse, explore and construct a system. The systemizer intuitively figures out how things work, or extracts the underlying rules that govern the behaviour of a system. This

is done in order to understand and predict the system, or to invent a new one. (Baron-Cohen 2004: 2)” He stresses

“systemizing and empathizing are wholly different kinds of processes. You use one process – empathizing – for making sense of an individual’s behaviour, and you use the other – systemizing – for predicting almost everything else. To systemize you need detachment in order to monitor information and track which factors cause information to vary. To empathize you need some degree of attachment in order to recognize that you are interacting with a person, not an object, but a person with feelings, and whose feelings affect your own.” (Baron-Cohen 2004: 5)

Here we stress that both are essential to social science: without empathising there would no *social* (at least not the elaborate human form we observe), and without systemising there would be no *science*.

However even physical science becomes problematic if we cannot reliably stand upon the shoulders of the giants like Newton, accepting them as brilliant thinkers whose thoughts could be and were communicated. Hence collaboration even in the physical sciences assumes a capacity for understanding the thoughts and ideas of others as thinking beings similar to ourselves. Furthermore, this is not a trivial capacity. It is a quintessentially human capacity that is quite possibly unique to humans (Premack&Woodruff 1978; Penn&Povinelli 2007). The bottom line here is that not only do we assume that collaborative science possible; we would be tossing out an extremely powerful human gift if we thought otherwise. So rather than attempting a formal proof that collaborative science is possible, we marvel at our capacity for making that assumption.

### **From collaborative science to reflexive social science**

From collaborative science to reflexive social science is a straightforward step. If scientists are able to share ideas, models and beliefs with each other, we can do the same with the people we study, thereby gaining an understanding of their individual actions as affective agents similar to ourselves, and systemising that understanding into wider understandings of collective social systems. Here there is no reason not to use the marvellous cultural achievements of mathematics and statistical tools. However, we still need to ground models of human behaviour and actions in what real people do. Empathising plays an essential part in reflexivity.

### **From reflexive social science to narrative-grounded economics**

The step from reflexive social science to narrative-grounded economics is just a restriction of scope. Economic activity is just one interlinked part of other social activity. Here we stress that economics is *not* a way of thinking, but rather a subject matter to be studied within the scope of the social sciences. Narrative grounding is the means of anchoring the economic

ideas and models of the social scientists in the actual lives of people through systematic reflection on the thinking that guides the economic actions of human (as opposed to fictitious economic or computer-generated) agents, as made tangible through their narratives.

### **From narrative-grounded to green economics**

A method of accessing the internal conversation (Archer 1995; 2003; 2007) by means of biographical narrative methods has been proposed for a narrative-grounded approach to green economics (Turk 2008; 2009). However, it should be noted how this framework works within some of the foundational works in green economics, particularly those dealing specifically with issues of its philosophical underpinnings, which was the main topic of issue 3/4 of the *International Journal of Green Economics*. The reason for the importance of ontology in green economics is explained in the editorial to that issue (Kennet 2007) and strongly argued in the contribution by Tony Lawson (2007). Both argue that the methods used in mainstream economics are incompatible with the subject matter; and green economics further argues for a widening of the scope of what is included (or internalised) in economics (Kennet & Heinemann 2006; Anderson 2006). Green economics also plays an active role in trying to impact the world for the better, with policy, business and campaigning comprising three of the four major pillars (along with the academic pillar) of the Green Economic Institute – a leading proponent of the field as well as host institution of the *International Journal of Green Economics* – thus stressing its active engagement with the world in which we live. Green economics is therefore particularly well suited to the kind of narrative-grounded social science advocated here.

### **Our epistemic framework and community**

The last essential part of our framework is the community required to oversee it. So far we have just laid out a set of principles (as opposed to deriving them), which can stand as a foundation for green economics. Another crucial part of the framework is the community of researchers who choose to use it in order to have a common basis for evaluating potential contributions to science. Researchers who want their work to be favourably evaluated would have to argue that their contributions make an improvement on current beliefs to a community that accepts (either implicitly or explicitly) the framework just outlined as a grounds for evaluation.

Even realists have to accept that we are a community of scholars that socially construct our understanding of the world (which exists prior to and independently of our understanding of it). However the crucial part about being realists is that we must demand that our findings be connected to the real world by clearly understanding how that world is perceived: the process

of data acquisition. That process has to be a fully integrated part of our work. This implies that the rules of the game are different from axiomatic mathematical approaches. Instead of objectively deducing the laws of social science on axiomatic foundations, the truth of which can be demonstrated on purely logical grounds independently of external evaluation, the goal for realist social science has to be shifted to the demonstration to our realist epistemic community that the theories and models we propose (as the products of our human creativity) are firmly grounded to the real world through well-considered data acquisition techniques before they become generally accepted. Furthermore realist social scientists dealing with social structures should not be lax and say that social structures are real but cannot be studied rigorously because they cannot be directly perceived. This is a failure of ingenuity. Neutrinos are also difficult to perceive directly but that does not prevent rigorous scientific study of them. We must be creative in finding ways to study social structures by formulating and testing ways to perceive the effects they do have as directly as possible. One such approach has been discussed elsewhere (Turk 2008; 2009). In the next section a diagram is proposed as a visual aid.

**The epistemic framework in a diagram**

The proposed framework for science that can be used in green economics is depicted in Figure 1:

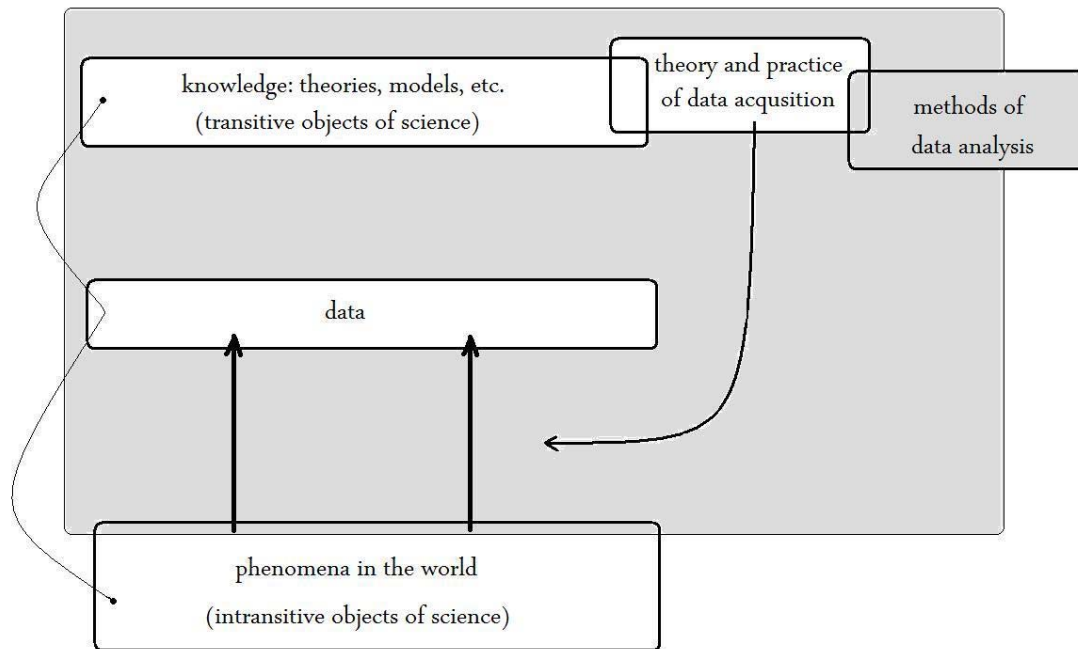


Figure 1. The basic structure of realist science

- 1.) We can simply assume that the world in which we live is (at least somewhat) independent of our knowledge of it, but we can interrogate it and form some beliefs about it. (Note that 'knowledge' here is meant in a provisional sense as current/conventional beliefs.)
- 2.) This implies that we can have corrigible ideas about how to obtain information about the world; and that we can also have and develop ideas about how to improve our beliefs about the world through comparing our current ideas/beliefs with information we obtain from the world. These are the data acquisition and data analysis portions of the diagram. We do not assume that there is necessarily a given optimal way of going about either of these, but that science itself (the construction and improvement of beliefs about the world) is a cultural product – which may be continuously and iteratively improved as our beliefs about the world improve.
- 3.) Furthermore we also assume that the world is populated with people with whom we can communicate and share our ideas. In other words, even if we can only be aware of others through our sensory apparatus and assumptions about them, we assume that they are thinking and communicative beings similar to ourselves; and this is sufficient in order to make collaborative science intelligible. In terms of the diagram of Figure 1, we posit that the ideas of the other people in the world form a subset of the intransitive objects that we can learn about.

Together these propositions form a minimal set of assumptions that can be used as a basis for green economics. With these assumptions about the nature of the world, we can make use of inputs from the natural sciences as well as direct inputs from people living in poverty, business people, political figures at all levels, scientists and any other people about the respective narrow worlds in which we and they live.

From these main assumptions we can also test and demonstrate a fourth fundamental proposition:

4. The ideas and beliefs we have about the world can and do affect at least some parts of the world. Here we have to note that the intransitive objects of science are not intransitive in the sense of unchanging; but that they are intransitive in relation to the transitive beliefs (knowledge) constructed about them. Thus transitive beliefs can be formed about how beliefs affect the world, which could then in its turn be an intransitive object of study.



We can therefore use the grounded beliefs (knowledge) we have acquired to have what we consider a positive impact on the world and how it develops through strategically imparting our findings to key people, monitoring our own effectiveness and modifying and improving our methods as appropriate. This last proposition does not need to be assumed like the others, since it can be demonstrated through science done on the basis of the other assumptions. Nevertheless it is fundamental enough to be made explicit. Knowledge is a creative act that has an impact on the world.

### **The pitfalls**

Shouldn't we as scientists worry about making assumptions about the world simply because they cannot be falsified? Is this not the same as assuming some goddess who controls everything by capricious whim beyond our understanding, thus making science impossible? This would also be a belief system that arguably could not be falsified and could therefore undermine the foundations of science. Any system founded on unshakeable dogma should be viewed with scepticism; and the science we do is based on some unproven assumptions about the world existing in such a way that collaborative science is possible.

Nevertheless we must not lose sight of our goal. We *want* to do science as objectively as possible. Our purpose was to explore some assumptions that can be made in order to do so. If we want to have faith in science, we have to understand the assumptions upon which that faith is or could be based. In order for that to work, we have to assume that the world is structured in such a way that collaborative science is possible. However it would not be good science if it did not make explicit and question its own assumptions.

### **Comparing the assumptions with the world**

Having simply assumed that our world is structured in such a way that collaborative science is possible does not guarantee that the world indeed matches our assumptions. However we can place our assumptions as working hypotheses in the beliefs/transitive objects of science box in Figure 1, come of with ideas about how to get information about the world/intransitive objects and develop ways of comparing that information with our hypotheses. So does the information we obtain from the world in our various natural and social science studies tend to support the basic hypotheses we make that the world is structured in such a way that collaborative science is possible? I would suggest that the hypotheses hold up well to such scrutiny. The world apparently *is* structured that way. At least some parts of the world can be understood through sensible forms of data collection and the comparison of our tentative knowledge/beliefs about the world with data taken from the world. However, more work

needs to be done in understanding the human social aspects of the world. For this, the methods of directly perceiving the social aspects of the world need better understanding.

### **Conclusions: Methodological as opposed to mathematical rigour in the social sciences**

The purpose of this paper was to provide a workable practical basis for narrative-grounded green economics. The reason for doing so was the lack of methodological rigour in mainstream economics, which overcompensates with mathematical rigour (Lawson 1997; 2003; 2007; Turk 2008; 2009). While a perfect axiomatic basis for science may not be possible, some basis is needed if economics is going to get off its addiction to mathematical rigour and pay more attention to the more important issue of methodological rigour.

Using the framework outlined we can make use of inputs from the natural sciences as well as direct inputs from people living in poverty, business people, political figures at all levels, scientists and any other people about the respective narrow worlds in which we and they live. Furthermore we can use the results of our work to have what we consider a positive impact on the world and how it develops through strategically imparting our findings to key people, monitoring our own effectiveness and modifying and improving our methods as appropriate. Science is a creative act that has an impact on the world.

In conclusion, we are all subjectivities embedded in a life support medium. The medium is the world. It is everything that sustains our subjectivities including fundamental physics, social reality and processes of the mind. The natural sciences study the physical environment in which those subjectivities are embedded. Reflexive social science studies the subjectivities and what they do in their natural environment. Green economics studies the interactions between the subjectivities and the supporting medium. It is reflexive social science, but must take natural world phenomena into account. Green economics takes responsibility for the knowledge it creates and uses it strategically. Green economics is furthermore not ashamed of or evasive about its ontological assumptions. It reflects on its own suppositions and strives for consistency in its methods with the nature of the world around us. This is its strength.

### **References**

- Anderson, V. (2006) 'Turning economics inside out', *International Journal of Green Economics*, Vol. 1, Nos. 1/2, pp. 11-22.
- Archer, M.S. (1995), *Realist Social Theory: The Morphogenetic Approach*, Cambridge, UK, Cambridge University Press.
- (2003) *Structure, Agency and the Internal Conversation*, Cambridge, UK, Cambridge University Press.
  - (2007) *Making our Way through the World: Human Reflexivity and Social Mobility*, Cambridge, UK, Cambridge University Press.

- Baron-Cohen, S. (2004) *The Essential Difference*, London, Penguin.
- Bhaskar, R. (2008) *A Realist Theory of Science*, London, Verso, first published by Leeds Books in 1975.
- Kennet, M. (2007) 'Editorial: progress in Green Economics: ontology, concepts and philosophy. Civilisation and the lost factor of reality in social and environmental justice' *International Journal of Green Economics* 1(3/4): pp. 225-249.
- Kennet, M. and Heinemann, V. (2006) 'Green Economics: setting the scene. Aims, context, and philosophical underpinning of the distinctive new solutions offered by Green Economics', *International Journal of Green Economics*, Vol. 1, Nos. 1/2, pp. 68-102.
- Lawson, T. (1997) *Economics and Reality*, London, Routledge.
- (2003) *Reorienting Economics*, London, Routledge.
  - (2007) 'An orientation for green economics?', *International Journal of Green Economics*, Vol. 1, Nos. 3/4, pp. 250-267.
- Penn, D.C. and Povinelli D.J. (2007) "On the lack of evidence that non-human animals possess anything remotely resembling a 'theory of mind'" *Philosophical Transactions of the Royal Society B* 362, pp. 731–744.
- Premack, D. and Woodruff, G. (1978) 'Does the chimpanzee have a theory of mind?' *Behavioral and Brain Sciences* 4, 515–526.
- Turk, J.D. (2008) 'The green economist as reflexive social scientist', *International Journal of Green Economics* 2(3) 256-268.
- Turk, J.D. (2009) 'Traction in the world: economics and narrative interviews', *International Journal of Green Economics*, forthcoming.