Chapter 1

Made with Words

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*“And wonder if Man’s consciousness
Was a mistake of God’s.”*

(Thomas Hardy, *I Travel as a Phantom Now*)

Abstract The natural sciences study objects; the social sciences are concerned with events. Objects have properties, events are the products of human intentionality. Modern economics is built on the assumption that events can be transformed by a process of abstraction into things with properties of the sort that permits the formulation of law-like generalities. These assumptions have resulted in the paradigm of the value-free economic agent. This paper rejects this paradigm and defends the claim that the domestication of the methodology of the natural sciences in economics is a category mistake. Instead, economics should develop a methodology that is proper to its subject.

1.1 Introduction

The ambition of modern economics to resemble to the maximum possible extent the natural sciences involves the reconstruction of economic processes into objects that resemble the objects of the natural sciences. This move permits the use of causation theories that are analogous to causation in the natural sciences where causation depends on the properties of the objects participating in the phenomenon under study. But economic events, unlike the objects of nature, come about through human effort and intention. Their characteristics are given not by nature but by the human agent. Natural objects have no meaning; human intentions are inherently value

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laden, the product of human will and intellect. Modern economics excises the human will and intellect from the domain it studies and treats the remainder as if it were the sort of object one finds in nature, such as molecules, compounds, trees or the electrical current. With the indispensable help of this excision, modern economics formulates law-like generalisations that portray economic events as phenomena without moral content. But this outcome is fundamentally at odds with human experience, and it is certainly not supported by either its predictive or explanatory record. The result is that the actual processes of economic life, resting as they do on human will and intellect regularly defeat the predictive and explanatory power of modern economics, constructed to be innocent of that will and intellect. The tension is obvious. Either there are economic laws of universal applicability or economic life is, at least in part, the life of the human mind and will. The third alternative, namely that all humanity is of the same mind and will, does not command the assent anyone who is not a professional economist.

The title of this paper, “Made with Words” comes from Thomas Hobbes and from an era very much alive to the ontological difference between the natural and the moral sciences where the former is concerned with the properties of corporeal objects as opposed to the behaviour of incorporeal, or moral entities.¹ The XVIIth and the first two thirds of the XVIIIth century, still under the influence of Cartesian dualism, firmly believed in the existence of both a physical and a non-physical world, but by the end of the XVIIIth century the unity of nature had become axiomatic, and the idea that the scientific method of the natural sciences could be extended to social reality was already propounded by Newton and heartily endorsed by, among others, Diderot and D’Alembert. As Newton put it, “if natural philosophy in all its parts, by pursuing this Method, shall at length be perfected, the bounds of moral philosophy will be also enlarged.” Throughout the XIXth and the XXth century, economics, born with Adam Smith and the dawn of Rationalism, turned to the notion of the unity of nature and the applicability of the methods of natural science to all of reality with increasingly ungovernable fervour. Einstein claimed that economics could be reduced to microphysics, and some Logical Positivists thought that sociology was no more than a particular instantiation of molecular genetics. The unity of nature axiom spelled for much of the XIXth and the XXth centuries the eclipse of ontology and, correspondingly, introduced a long period during which the *nature* of the subject matter under study, the examination of its properties was largely ignored. The eminent Harvard philosopher, Hilary Putnam went so far as to write as recently as 2004 that ontology was “a stinking corpse” in need of urgent interment.

But surely, if Galileo Galilei was right in claiming, as he did, in his *The Assayer*, that the book of nature is written in the language of mathematics there are other books about other realities and about human experience that are not written in that language. (That he was not right was shown brilliantly by Eugene Wigner in 1959,

¹Hobbes’ phrase was extensively explored in the context of political theory by Pettit (2008).

but that is another story.)² So, what is the nature of economic reality and how does it differ from natural objects?

1.2 The Objects of Nature and the Objects of Thought

The objects of nature exist independently of any theory or hypothesis about them. Their properties are unaffected by any human thought or action. It is this characteristic of natural objects - their independence from and indifference to any theory about them - that makes it possible to formulate verifiable theories about them. Substances exist regardless of what we make of them, and their transformation under various circumstances is the consequence of their properties interacting with the properties of other natural objects rather than the human attribution of such properties. Their nature cannot be changed by regulation or persuasion. They are impervious to incentives. It is a fundamental requirement for the validity of any scientific theory that the object of the theory be separate from the theory about it. Scientific experiments are repeatable precisely because the properties of the subject matter of the experiment are constant, and, moreover, they are universal. The valences of the elements in Mendeleev's table are the same in Denmark, Argentina or the Philippines.

In sharp contrast, the objects of economic activity are objects of thought. They are mind-, or as Russell has it, representation dependent,³ brought into being through collective intentionality. Although the objects of thought may result in the production, distribution and consumption of tangible, corporeal objects, the object of economic thought itself is incorporeal. A 'market' may be a physical space, but the economically significant aspect of a market is not its physical configuration, not its physical properties, but, rather, the properties of the activities carried on therein. The economically significant properties of physical objects are not their physical properties, but the terms and conditions for their ownership, exchange and the conditions for the determination of their value. These intangibles are *not* properties of the objects themselves, but, rather, they are the generally accepted social conditions for their creation, ownership, use and consumption. Economic objects come into being as the fruit of human thought relating to both their conception as objects as well as the social organisation that permits their creation and sustenance. These objects are social facts, the embodiments of collective intentionality, emerging from a collective ethos and they come into being through language, reflecting the thought that gives rise to them. Because they are the product of human intention, they are inherently subjective, reflecting the intent of those who create them. Thus, 'money', a piece of paper with specific size, colour design and printing is endowed with specific properties and functions by the collective intentionality with which it is

²Wigner (1960, 1–14).

³Russell (1919)

constituted and with which it is continuously redefined. The piece of paper is an objective or corporeal object, but its significance and role are not a function of its physical being. Indeed, money no longer needs to have any physical form at all.

1.3 What Is Intentionality?

Intention, including intentional action, is one of the most complex aggregate of issues in philosophy, involving the mind/body problem, causation, knowledge, truth, practical reasoning, ethics and ontology. Economic events, the complex aggregate product of intentionality – including opposing or contradictory intentions – are the products of intentional human action.

Philosophical interest in intentionality, developed first by Aristotle's medieval followers, most notably St. Thomas Aquinas, was largely forgotten until revived by Brentano, Husserl and Meinong. The publication of G. E. M. Anscombe's *Intention*⁴ combined the Aristotelian – Thomist tradition with analytic philosophy in place of Brentano's empiricism. Since then the philosophy of intentionality has been greatly expanded by, among others, Peter Geach,⁵ John Searle,⁶ Graham Priest⁷ and Tim Crane.⁸

A review of the many theories and subtleties of intentionality is beyond the scope of this paper, and for our purposes the simplest definition of the notion will suffice. It is the capacity of the mind to direct itself onto any object, be it existing or not existing and be it a concept or a thing. For the narrower purposes of this paper intentionality is the name of the mental constitution and representation of the habits, beliefs and rules with which objects are endowed with exchangeable value, how that value is created, preserved, diminished and exchanged, in short Adam Smith's famous human „propensity to truck, barter and exchange”.

Whereas modern economists, such as the Nobel Laureate N. Gregory Mankiw believes that economists “approach the subject of the economy in much the same way as a physicist approaches the study of matter and a biologist approaches the study of life... (economists) devise theories, collect data, and analyse these data in an attempt to verify their theories”,⁹ Smith sees the heart of the matter in the „offering of an argument to persuade one to do so and so.”¹⁰ These two conceptions of economics could not be further apart. According to Mankiw, the subject matter is much like matter, harbouring data which is there to be collected for the verification

⁴Anscombe (1957)

⁵Geach (1967, 627–32)

⁶Searle (1983)

⁷Priest (2005)

⁸Crane (2013)

⁹Mankiw (2011)

¹⁰Smith (1978)

of some causal generalisation. For Adam Smith it is about the argument to persuade, given our propensity to truck, barter and exchange. Mankiw believes that economic objects have an objective, independent existence. Smith, in contrast, believes that they exist only by virtue of human propensities, that the economy is not a collection of objects but an array of human propensities.

A further specification is that the intentionality at play in the economy is collective. The intentions of the individual agent operate in the context of a collective, socially constructed and socially legitimated intentionality. There are no economic events within the domain of a single person. Whereas the protagonist of modern economics is the utility maximising *homo oeconomicus* with a single motive for his actions and the exclusive prerogative to determine his utilities, in fact, utilities are social constructs and so are the rules with which choice among available utilities may be made.

The intentional objects of human economic activity, Smith's propensities, are incorporeal, rendering the usual techniques of abstraction and idealisation regularly employed in the natural sciences problematic. The elimination of „disturbing causes” – to use Mill's famous phrase, – leaves after the elimination some corporeally identifiable object with verifiable properties. But in the case of incorporeal objects this is not possible. The conceptualisation of experience may produce a useful metaphor or icon for the sum of that experience, but it is not its distillation through the elimination of eliminable components because such components are themselves abstractions. A demand curve is an effective visual representation of the abstraction called demand, but it is not the sum and cannot be the sum of empirical data. As Nicholas Kaldor noted, the enemy that defeats the successful summary is time. Demand for a good takes shape over time, but during the same period other relevant factors, such as the availability of substitute goods, a change in interest rates or the level of confidence, the operation of monetary policy, etc. alters the context in which the demand takes place, and the demand curve cannot account for such changes. Economists deal with this problem with the help of the *ceteris paribus* assumption, but the conceit that everything else remains constant is just that, an arbitrary conceit. The intuition that there is a relationship of some sort between prices and quantities is undoubtedly a useful generalisation, but it does not have the sort of truth value that a typical law in physics or any branch of the natural sciences carries.

1.4 Is This Just a Question of Complexity?

It is frequently claimed that the difference between the facts of nature and social facts is one of quantity rather than quality. The facts leading to price formation, according to this view, are qualitatively the same as those that produce nuclear fission. The difference is only that there are more of them. Social facts involve greater complexities because they are the composites of a much larger number of components than the facts of nature. But this claim is mistaken for two rather fundamental

reasons. First, social facts are intentional facts, depending on human intentionality, whereas natural facts do not contain any intentionality. Second, social facts operate in an open world where new facts come and old facts go without there being any principle regulating the coming and going, in contrast with natural facts where the context, as in a laboratory experiment, can be determined. The difference between facts that come into being through human agreement and custom and facts that are totally independent of us is quite basic to science. It is the precondition of the separation of the experimentally verifiable theory from its object. If monetary theory were about the properties of the piece of paper serving as a ten pound note, it would have no difficulty in resembling the natural sciences. But it is not about that piece of paper. Monetary theory aims to be about the *functions, purposes, effects and responses in individual and collective behaviour* we collectively ascribe to the ten pound note together with the rules, the terms and conditions we explicitly and implicitly posit that renders that note operational. *That ceaseless variation in the value of that ten pound note is the consequence of the ontological subjectivity of the collective intentional object we call money.* As Adam Smith had it, the value of that ten pound note is a matter of persuasion, a matter of how, through that dialogue between buyer and seller and the ceaseless interaction within society at large value is arrived at, how they reach agreement that the note is worth more or less or just about the same as the object for which it is exchanged.

1.5 Do Economic Objects Exist?

One of the most intensely debated issues in the philosophy of intentionality is whether the object of thought must, in fact exist in order to be the object of intentionality. The materialist view answers the question in the affirmative, claiming that the existence of imagined objects is an altogether different sort of existence from real existence. Others, like Tim Crane, hold that, inasmuch as nonexistent objects can have specific properties, they can be the objects of intentionality. If it is reality that grounds the truth of a claim and if reality does not contain more than what exists, the question what objects exist becomes quite important. If economic objects exist in the same sense as molecules, the determinism of modern economics is well founded. Economists can then claim to be making discoveries about the world much like any natural scientist. But if economic objects do not exist, there is nothing that can be discovered about them and the claim to science collapses. Non-existent objects have no laws of nature and cannot have causal powers because causal powers require spacio-temporal locations, something non-existent objects do not have.

The non-existence of economic objects – their lack of ontological objectivity – does not, however, preclude the possibility of constructing objects with a subjective ontology. Sherlock Holmes, Pegasus and the planet Vulcan are all non-existent objects, and yet, it is possible to make true as well as false statements about them. It is, for example, true that Sherlock Holmes was a detective, and it is not true that he was an aerobics instructor. It is true that Pegasus has two wings but not true that it

won the Kentucky Derby, etc. In the same way, demand curves, ‘markets’ or ‘marginal propensities are no easier to locate in the real world than Sherlock Holmes, but it is quite possible to make true as well as false statements about them. The demand curve is a line in a textbook the shape of which is not the property of any object, but, rather, the visual rendering of a collection of generalised characteristics of the relationship between prices and quantities. A market may be a place – and therefore a real object – but need not be in order to possess characteristics of the processes taking place in real markets. The problem facing economics is compounded by the fact that, whereas the three non-existent objects mentioned above are corporeal, this form of fictional corporeality is typically unavailable to economic objects. That corporeality becomes important when the truth claims about Sherlock Holmes may have truth value if they are consistent with the postulated axioms about him. A claim that he can fly will not satisfy this condition. Pegasus on the other hand may well be able to fly but it cannot smoke a pipe, converse with Watson or solve a crime. The question for economics therefore, is how to determine the truth value of claims about non-existent intentional objects where the object would be ontologically objective if it existed, but where the object not only does not exist, but does not have even fictional corporeality. The short answer is that it cannot be done in compliance with the requirements for truth value in the natural sciences because *truth value in the natural sciences is a function of experimental confirmation while the truth value of non-existent objects is a matter of consistency with assumptions and postulates.* (A concrete illustration will be given below in the discussion of Walras.)

Uncertainty about the ontological objectivity of the entity under study leads to a failure in demarcating the distinction between theory and its subject matter. This failure deprives the theory of its scientific status and leads to the sort of circularity noted by Joan Robinson: „*Utility* is a metaphysical concept of impregnable circularity; *utility* is the quality in commodities that makes individuals want to buy them, but the fact that individuals want to buy them shows that they have *utility*.”¹¹ A comparison of the definition of chemistry set out by Robert Findlay Henry with the two on offer from Adam Smith and Mankiw quoted above will reinforce this point. According to Henry, „Chemistry attempts to understand transformations between substances.”¹² If we follow Adam Smith in attempting to formulate a similar definition of economics, and claim that „economics attempts to understand the nature and causes of the wealth of nations”, the question arises whether ‘substances’ are the same as ‘wealth’, and whether ‘transformations’ pose an analogous challenge to Smith’s ‘nature and causes’ and whether the sort of understanding posited by Hendry is the sort of understanding that can be had of wealth.

Substances exist regardless of what we make of them, what utility we apprehend in them, and their transformation under various circumstances takes place quite independently of human action. But wealth, utility, equilibrium, inflation and so on

¹¹ Robinson (1962)

¹² Hendry (2008)

are socially constructed – they are ‘social facts’¹³ – subject to significant and more or less continuous reconstitution. Social facts cannot be separated from the theory or rules under which they are formulated.

The difficulty of separating subject from theory where the subject has no independent ontology is also apparent in Lionel Robbins’ famous definition: „Economics is the science which studies human behaviour as a relationship between ends and scarce means which have alternative uses.”¹⁴ But ‘ends’ and ‘scarce means’ are socially constructed non-existent objects and the ‘human behaviour’ under study is an integral part of that social construction. It is human behaviour that constructs both the end and the scarcity, and it is the ends and the scarcity that constructs human behaviour. We are back to Joan Robinson’s „impregnable circularity”.

Physical objects, such as the chemist’s elements do not have a purpose, an end, a *telos*. The purpose with which they may be endowed, the use to which they are put is not a property of these elements. Aristotle’s famous unsolved problem of the incommensurability of use value and exchange value – as indeed the constant problem of incommensurability in economics – cannot be solved if we are searching for a ‘value’ that is common to both.¹⁵ His beds and shoes do not have either use or exchange values. Such values are attributed to these objects by the intentionality of the exchanger or user. Whereas the valence of a chemical element is a *property* of that element, exchange and use values are attributions depending upon the intention of the agent. The value is in the intentionality as opposed to the valence which is in the object. Keynes was acutely aware of the problem but did not quite know what to do about it. In a letter to Roy Harrod he wrote:

In chemistry and physics and other natural sciences the object of experiment is to fill in the actual values of the various quantities and factors appearing in an equation or a formula; and the work when done is once and for all. In economics that is not the case, and to convert a model into a quantitative formula is to destroy its usefulness as an instrument of thought ... I also want to emphasise strongly the point about economics being a moral science. I mentioned before that it deals with introspection and with values. I might have added that it deals with motives, expectations, psychological uncertainties. One has to be constantly on guard against treating the material as constant and homogeneous, even as the material of the other sciences, despite its complexity, is constant and homogeneous. It is as though the fall of the apple to the ground depended on the apple’s motives, on whether it is worth its while falling to the ground, and whether the ground wanted the apple to fall.¹⁶

Although Keynes comes very close to recognising intentionality as the ontologically decisive difference between the moral and the natural sciences, he does not solve the dilemma implicit in modern economics¹⁷: are economic objects like

¹³ Gilbert (1989)

¹⁴ Robbins (1932). In a later version the puzzling phrase „behaviour as a relationship” was replaced with the notion of „allocation”.

¹⁵ Meikle (1955)

¹⁶ Letter to Roy Harrod, of 10 July 1938 (misdated 16 July) in *Collected Letters of John Maynard Keynes* Vol XIX, 299–301.

¹⁷ In fairness to Keynes, he wrote this letter during the glory days of logical positivism when ontology was seen as the thoroughly disreputable branch of philosophy. It is a mark of his genius that he was swimming against this tide.

Newton's apple that yield data with which the actual values of the various quantities and factors in an equation or a formula can be filled, or is the idea of a non-existent object burdened with values, introspection, motives and expectations altogether absurd? If apples cannot be combined with motives, expectations and psychological uncertainties, but economics must nonetheless deal with them, must the apples be jettisoned, or is there a way of both having your apples and not having them by pretending that what you have is not an apple, but just like one? This, of course, is the route proposed by Adam Smith and the classical economists, including Marx, when they attribute an abstract character to labour in order to come up with an explanation of how different and incommensurable types of labour can nevertheless have the kind of homogeneity with which a theory of exchange can be stitched together. Smith writes:

The greater part of people, too, understand better what is meant by a quantity of a particular commodity than by a quantity of labour. The one is a plain palpable object; the other an abstract notion, which, though it can be made sufficiently intelligible, is not altogether so natural and obvious.

In seeing the difference between the quantity of commodities and a (non-existent) quantity of labour as a matter of degree of naturalness or obviousness, Smith misses the fundamental ontological difference.

Mill's notion that there are apple-like objects that can be understood if separated from „disturbing causes" haunts Keynes reasoning. On the one hand, in this same letter he deems it „most important... to investigate statistically the order of magnitude of the Multiplier" as if the Multiplier were an apple-like object, but on the other, he sees that the „material" of economics, unlike that of the natural sciences, is „neither constant nor homogeneous". Is the Multiplier then an apple, or is it one of those materials that, due to being infected with motives, is neither constant nor homogeneous? Or is it neither? What should one do? Achieve homogeneity with Mill's device of eliminating as a „disturbing cause" anything obstructing homogeneity and constancy or admit that the inconstancy and heterogeneity of the „material" renders it unsuitable to scientific treatment. Keynes blinks.

Having posited as its singular objective the achievement of scientific status, much of modern economics has been about possible ways of overcoming this dilemma. The path was first set out in a systematic manner by Léon Walras, and, for the most part, remains the basic paradigm of economics. Walras offers his basic definition of „pure economics" in the Preface to the fourth and definitive edition of his *Elements of Pure Economics*¹⁸ with deceptive clarity: „*Pure Economics* is, in essence, the theory of the determination of prices under a hypothetical regime of perfectly free competition." Note that, unlike Hendry, who is interested in understanding the *actual* transformation of substances, Walras wants to construct a theory about price determination under hypothetical circumstances. With this simple statement Walras makes it clear that the subject matter of economic theory, so to speak its apple, the determination of prices, is an imagined object that exists only under a

¹⁸Walras (1954)

non-existent hypothetical regime. And yet, he and his successors believe that one can do science without the apple.

In a passage of enormous significance for the development of modern economic theory, anticipating both Milton Friedman and Paul Samuelson, he sets out his claim with great clarity.

... the physico-mathematical sciences, like the mathematical sciences in the narrow sense, do go beyond experience as soon as they have drawn their type concepts from it. From real-type concepts, these sciences abstract ideal-type concepts which they define, and on the basis of these definitions they construct *a priori* the whole framework of their theorems and proofs... the pure theory of economics ought to take over from experience certain type concepts, like those of exchange, supply, demand, market, capital, income, productive services and products. From these real-type concepts the pure science of economics should abstract and define ideal-type concepts in terms of which it carries on its reasoning. The return to reality should not take place until the science is completed and then only with a view to practical applications. Thus, in an ideal market we have ideal prices which stand in exact relation to an ideal demand and supply.

Remarkably, he adds a few lines later: „after that they (the scientists) go back to experience *not to confirm but to apply their conclusions.*” (Emphasis added.) He concludes his triumphant declaration with the dethroning of Ricardo and Mill and the crowning of mathematics:

As to mathematical language, why should we persist in using everyday language to explain things in the most cumbersome and incorrect way, as Ricardo has often done and as John Stuart Mill does repeatedly in his *Principles of Political Economy*, when these same things can be stated far more succinctly, precisely and clearly in the language of mathematics?

The *a priori* framework of economic theory is, on this view, the product of two abstractions. The first abstraction produces „real-type” concepts from experience, to be followed by a second abstraction, which yields „ideal-type” concepts. Although Walras does not specify what each of these steps may involve, it seems reasonable to surmise from the text that the first of these steps involves some sort of isolation and/or reduction, something comparable to Mill’s removal of disturbing causes, while the second one is ordinarily called idealisation. Both operations encounter serious difficulties when performed on objects of thought. In addition, Walras, as indeed all his successors leave us without an explanation as to how the representation of the ideal-type concept by numbers or symbols might be validated. When we substitute a number for that C, standing for capital in an equation, what exactly is that capital, and in what sense does that number comprise that C? The principal – often the only – known property of the ideal-type concept is that it bears a mathematically expressed relationship to something else. Unless we take as an axiom the view urged by Russell or Ryle that only quantifiable things exist, we must somehow account for intentionality. Are the numbers or symbols with which the ideal type is represented already embedded in experience, or do they materialise out of thin air in the course of the abstraction as the real-type and thereafter the ideal-type concepts emerge?

One could continue with an explication of the other great figures of the social sciences, such as Max Weber, John Stuart Mill or Carl Menger, but the common

denominator is obvious: the methodology of the social sciences purports to create an ontologically objective object, but the object with which it ends up is not a suitable object for scientific treatment. At the same time, notwithstanding their unsuitability to science these surrogate objects, like allegories, metaphors and similes can reveal with great power some truth about a complex and confusing reality. There *is* relationship between supply and demand, between prices and quantities, and Alfred Marshall's two curves do reveal something important about that relationship. But price formation in the real world is far more complex and elusive, and, most importantly, far more a matter contingent on the interplay of an indeterminate number of factors than Marshall's curves allow. It is perfectly reasonable to build idealised models in the hopes of gaining some insight, but it is a great mistake to pretend that the subject matter of economics can be analogised to that of the natural sciences. Unlike the latter, in the famous words of Thomas Hobbes, it is „made with words”.

Perhaps the most important consequence of this view of economics is that moral judgment is an inextricable part of its subject matter, that the construction of models and hypotheses without regard to that moral judgment leads not to the understanding of some sort of natural reality operating according to the laws of nature, but, rather, to an ideology parading as a science in order to be all the more convincing.

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