# METAPHORS OF TRANSACTION COST ECONOMICS:
## A CASE STUDY ON THE CONVERSATIONS OF ECONOMICS

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## INTRODUCTION

Economics, as other discourse communities, relies on metaphors to build knowledge. Social capital, economic growth, technological spill over, production functions and transaction costs as frictions are just but a tiny sample. Metaphors are part of our daily lives helping us understand the world. They become shared habits or frames of thought that shape our views, inclinations and actions.

No different to other intellectual constructions, Transaction Cost Economics (TCE) has been built on a set of metaphors. Within and around the modern field of economics of organisation, TCE has become a milestone and the works of Oliver Williamson in special have given the field a new breadth of life since the 1970s. As a result, it has been at the centre of many conversations in economics, including methodological ones. These methodological debates can surely benefit from more work on the linguistic construction of TCE. Trying to explore this path, this article examines three key metaphors upon which TCE has been built: transaction costs as frictions, human beings as "contractual men," and natural selection between mechanisms of governance. What role do they play in TCE's theoretical framework and how do they relate?

In order to deal with these questions, the paper has been organised as follows. The next section provides a short introduction to the study of metaphors; it finishes by delineating the scope of the paper in terms of the range of metaphors considered. In what follows, the three selected metaphors of TCE are discussed. Some final notes close the essay.

## METAPHORS

According to Aristotle, a "metaphor consists in giving the thing a name that belongs to something else; the transference being either from genus to species, or from species to genus, or from species to species, or on grounds of analogy" (1941:1457b7). It is an attempt to explain something we do not know well in terms of something we think we know better (Black 1993).

Since Ramus and Descartes, what we know as positivism has gained momentum in the philosophy of science. It has persuaded many scholars that metaphors are language artefacts for entertaining and deceiving and that (good) science, as if by definition, is clear of such devices. From the mid 1950s, however, there has been increasing recognition that all languages are incomplete systems and have some degree of vagueness and ambiguity. Because science cannot be free of language, it needs to deal with argumentation and less than perfect symbolical exchanges. Knowledge is produced by the articulation of arguments through models, stories, facts and logic (McCloskey 1993:138).

Such a view does not imply that scientific argumentation cannot be rigorous; it just implies that standards of rigour are established by those taking part in the relevant conversation and subject to the imperfections of language (Fernández 2000). Arguments in all their forms, thus, need to be scrutinised in light of such limitations and of the demands of those involved in the conversation.

In this context, metaphors used by scientists are not only language ornaments, but constituent parts of how a research object is seen in concrete terms. Metaphors are an essential tool for knowledge acquisition and maintenance, as elements are transferred between different realms of understanding.

Philosophy and literary studies were arguably the first fields of modern inquiry to recognise the role of metaphor in the construction of knowledge, and above all in scientific theorising. Philosophers and literary critics targeted many scientific fronts, which started to internalise the study of metaphor in their own fields. In economics, some authors (e.g. Henderson 1982; McCloskey 1985) started to acknowledge and study the role of metaphor in the work of their fellow economists, opening the field for further exploration. Economists converse with their fellows and with other audiences, striving for intellectual endorsement, and conversations are mostly made of language resources by definition, among which are metaphors.

Following the arguments of Klamer & Leonard (1994) and McCloskey (1995), metaphors are studied here as inevitable parts of theory construction. They can either help or hinder further theoretical developments as much as they can help or hinder communication (and persuasion) with other scholars. This essay explores how some key metaphors of TCE can point to a certain rhetorical strategy and help promote identification with or differentiation towards other approaches.

The pervasiveness of metaphors makes it necessary to delineate our scope from the start. Firstly, insofar as theoretical debates in economics are concerned, the main theoretical pillars of TCE are arguably the place where scholars first search for a hint of its academic relevance. This explains the focus lying mostly, though not exclusively, in the main theoretical chapters of Williamson's trilogy (Williamson 1975 - MH; 1985 - EIC; and 1996 - MG).

Secondly, the kinds of metaphor considered here are based on Klamer & Leonard´s (1994) typology. Heuristic metaphors are "more influential" and "thought-propelling," and "serve to catalyze our thinking, helping to approach a phenomenon in a novel way" (p. 32). Still more important are constitutive metaphors. These "work on an even more fundamental level. Constitutive metaphors are those necessary conceptual schemes through which we interpret a world that is either unknowable … or at least unknown," like when one talks about "the genetic code" (p. 39).

The discussion that follows concentrates on three metaphors of TCE that are essential to the systematic development of a "distinctive worldview," as Williamson suggested (MH: xii). The first is the metaphor of transaction costs as frictions, which is at the very core of Williamson's definition of transaction costs. The second is the metaphor of economic agents as "contractual men," which defines the relevant human traits to be taken into account when analysing decision-making and institutional choices. And third, the metaphor of natural selection between mechanisms of governance on which the logic of transaction cost minimisation ultimately relies.

## THE CONSTITUTIVE METAPHOR OF TRANSACTION COSTS AS FRICTIONS

Economists have invested heavily in modelling idealised transactions that occurred at no costs to the underlying parts. But, as argued by Williamson, economic organisation depends fundamentally upon the costs of transacting. Transaction costs, as he explains, are like frictions in physics (MH:20):

> Although failures can be and often are assessed with respect to a frictionless ideal, my concern throughout the book is with comparative institutional choices. Only to the extent that frictions associated with one mode of organization are prospectively attenuated by shifting the transaction … to an alternative mode can a failure be said to exist.

The metaphor is uncomplicated in establishing a picture of how the world of TCE is to be mentally drawn or framed. In EIC, the metaphor is used to state what exactly transaction costs are (EIC:1; emphasis added): "In mechanical systems we look for <u>frictions … The economic counterpart of friction is transaction cost</u>." Frictions constitute the world of mechanical systems as much as transaction costs constitute the world of TCE, so Williamson´s choice of metaphor tells us. Frictions are ubiquitous, as transaction costs, and can be reduced but not eliminated. What can be achieved in this regard is precisely what determines how a mechanical system, or economic organisation, is designed and performs.

The metaphor draws on a notion from physics, a subject highly esteemed by mainstream economics. In TCE, however, the engineer's pragmatic attitude towards physics is added. But before any elaboration on Williamson's engineering approach, it is necessary to discuss how the metaphor fits within economics.

## TCE, frictions and economics

The metaphor of transaction costs as frictions permeates TCE from its theoretical inception. Williamson said in 1971 (p. 113): "A complete treatment of vertical integration requires that the limits as well as the powers of internal organization be assessed. As the frictions associated with administrative coordination become progressively more severe, recourse to market exchange becomes more attractive."

By the time Williamson used it, the metaphor of costs as friction was well known to economics. By working with the familiar mechanical metaphor of friction, he shapes TCE into a pervasive frame of mind within economics. He adds to it a pragmatic bias associated with his engineering training, which prevails over the accounting approach of other NIE economists and the physics approach of mainstream economics. How can such a bias impinge on the use of the metaphor?

## The metaphor in associated mind frames: the physicist, the accountant and the engineer

Economists have absorbed models and values not only of the physicist, but also of the accountant. Both mind frames exert a strong influence in the way economists carry out their work (Klamer & McCloskey 1991). The accountant seeks to accurately balance of pros and cons, whilst the physicist seeks to translate real phenomena into precise formulas. Both mind frames have left their marks in the way the metaphor of transaction costs as frictions has been advanced.

Wallis & North (1986), for instance, have pursued what Klamer & McCloskey (1991) would identify as an accounting approach to the economic problem in which measuring the costs is central. On a different direction, Grossman & O Hart (1986) seem to have taken the physicist ethos onboard to deal with agency problems and transaction costs in formalised language.

Williamson, however, seems more appreciative of the pragmatic bias of his engineering training (MG:350). Calculations, for instance, are needed to the extent in which viable real alternatives are involved, and formal analysis is to be pursued but not at the cost of a better understanding of the variables at play (Williamson 2000). Frictions are accounted for in comparative terms and conceptual richness is not to be cheaply sold to premature mathematical formalisation.

Williamson uses the metaphor of transaction costs as frictions in a way that encompasses this disciplined but pragmatic way of reasoning. This is likely to sound better to scholars of similar frame of mind. Note, for instance, what is said in Williamson (2000:596):

> Initial scepticism [about the economics of institutions] has gradually given way to respect – it being the case that economists are very pragmatic people. Tell them something different and consequential about phenomena that are of interest to them and demonstrate that the data are corroborative: that will get their attention.

The pragmatic bias espoused by Williamson and claimed for his fellow economists, however, may not be as widespread as suggested. Mainstream economics has developed increased interest in mathematical abstractions at the expense of economic realities. Precise formulation is highly esteemed, even at the expense of relevance to real problems. "The physicist" mind frame has shown significant resilience, for instance, in the property rights strand that now seems to compete with TCE within the New Institutional Economics (NIE).

Williamson has used the particular engineer mind frame to establish the main direct analogy through which transaction costs are defined. As shown, it has its differences to both the accountant and the physicist mind frames, posing an obstacle for TCE to reach a wider audience in economics. He is aware that the variables that determine transaction costs do not fit easily in formal models as much as the correspondent causes of frictions in physics, but seems resolute to keep them (Williamson 2000). Such a decision charges its toll. A comment by game theorist David Kreps (1999:154) after an attempt to build a formal TCE model illustrates the case: "Since the model is a very bare metaphor, these are not conjectures on which I would care to stake my professional reputation."

## THE HEURISTIC METAPHOR OF THE HUMAN BEING AS CONTRACTUAL MAN

Williamson argues that TCE is an attempt to operationalise Coase's insights. This is an action with a strong pragmatical connotation. The strategy to operationalise TCE, as Klaes (2000:210) notes, has involved not the meticulous elaboration of the notion of transaction costs, but rather the scrutiny of the factors that give rise to them.

In MH, the causes of friction are distinguished between human and environmental. The human factors considered are opportunism and bounded rationality. In EIC, Williamson metaphorically describes the human being of TCE as "contractual man" – someone rationally bounded and potentially opportunist who engages in transactions, and whose main concern is to organise them through the least costly contractual arrangement.

"Contractual man" is essential to TCE as much as homo oeconomicus is central to traditional theory. The concept redefines the economic agent with new human attributes, helping us "to catalyze our thinking" and "to approach a phenomenon [human agency] in a novel way" – and thus working as a heuristic metaphor (Klamer & Leonard 1994:32). With "contractual man," interaction between agents poses significant problems. Consider the firm: it used to be a black box with homo oeconomicus, changing into an entity that needs explaining because it comprises a number of "contractual men." Consider also economic calculus and optimal choices: they used to be of absolute nature, and were made imperfect, comparative and remediable by "economic man."

As Klamer & Leonard (1994:33) say, "Heuristic metaphors usually will not immediately reveal all possible elaborations." For one thing, the very suggestion of dropping the "flash calculator" image of homo oeconomicus and rely on another agent metaphor is a remarkable move. Taking human beings as a cause of friction reopens the debate about their relevant economic attributes.

Indeed, TCE has helped to trigger a change of atmosphere in the economic discussion of human attributes. Although authors of different areas criticise the emphasis TCE gives to opportunism and bounded rationality, few go as far as to suggest that a theory of the firm or of economic organisation would do well in forsaking those notions altogether. Stressing opportunism and bounded rationality is one of many other possible elaborations of the metaphor and some authors lean on TCE to propose a complementary or "beyond TCE" approach.

Much of the criticism of "contractual man" targets the attention given to opportunism and bounded rationality that comes to the exclusion of other human attributes (Pessali 2006). For coherence's sake, "contractual man," needs to fit with the constitutive metaphor of transaction costs as frictions. As Williamson presents the causes of friction, he stresses human features that are detrimental to the harmony of transactions, leading to the necessity of contracts. Alternative metaphors, for example, usually emphasise human traits accountable for cooperation and synergy between individuals that can be seen as substitutes for contract and for the calculativeness TCE claims to be involved therein.

Had TCE focused on human features that reduce transaction costs, contracts would have lost importance and "contractual man" would probably be mischaracterised as such. On occasion, Williamson brought out dignity, reputation, altruism, and "quasimoral involvements" (MH:37; EIC:44; 1991). They, however, do not make for the contractual calculativeness claimed in TCE. Williamson, thus, seems compelled to defend contractual man in detriment of a broader approach

(see Williamson 1993). Otherwise, individuals would not create but alleviate frictions and make contracts less important. It is consequential, for instance, that a debate that looked promising in terms of increasing the interfaces between TCE and competence-based approaches to the firm has become less productive and more antagonistic.

## THE CONSTITUTIVE METAPHOR OF ECONOMIC SELECTION

From a set of governance forms, "contractual men" adopt the one with lower transaction costs. Such a characteristic should assure its survival. As transaction costs are difficult to measure and, thus, to compare *ex ante*, the only means to check whether the chosen governance form was the right one is to verify its survival. Wrong or unfortunate choices with higher transaction costs will have died out. This is the working logic of TCE. It is expressed in the constitutive metaphor of economic selection, a metaphor that holds together a logical and conceptual scheme "through which we interpret a world that is either unknowable…or at least unknown" (Klamer & Leonard 1994:39).

The metaphor of economic selection usually refers to the idea of natural selection in biology. Chapter 2 of MH offers the idea that markets and hierarchies deal with uncertainty and complexity in an adaptive way to economise on transaction costs. In EIC, Williamson outlines the larger context in which TCE is to be set (pp. 22-3): "The argument relies in a general, background way on the efficacy of competition to perform a sort between more and less efficient modes and to shift resources in favor of the former … This intuition would nevertheless benefit from a more fully developed theory of the selection process."

By saying that his use of the metaphor could "benefit from a more fully developed theory of the selection process," Williamson accepts its insufficient elaboration. Most of the time, the metaphor seems to be conflated with the operation of an "invisible hand." As such, it appeals to many economists as a general worldview rather than a theoretical construct in need of lengthy elaboration.

As authors strive to produce compatible arguments, they tend to avoid extensive discussion of possible incompatibilities. The case of the less than fully developed metaphor of economic natural selection in TCE seems to fit a reading along these lines. After all, detailing one's position means expanding a theoretical set. As a result, there will be more elements inviting all sorts of comparisons and coherence checks, and the chances of a critical reader identifying incompatibilities increase.

But nourishing incompatibilities has not been the strategy pursued by Williamson. According to Perelman & Olbrechts-Tyteca (1969:198), one can use a "diplomatic approach" to avoid such problems by "postponing the moment of decision until a more convenient time." Williamson seems to go along this line by taking in the metaphor in a general sense and avoiding further elaboration. But the selection metaphor has direct implication on testing TCE. According to Williamson (1999:1092) "I have no hesitation…in declaring that transaction cost economics is an empirical success story." This success, however, has been disputed and one point in question is exactly the constitutive role of the metaphor.

One obstacle in refining the selection argument is the difficulty towards operationalising transaction costs in terms of their constituent parts – which has a parallel with the difficulty in defining ex ante a winner trait, individual or species in biology. Given the difficulties in measuring transaction costs directly, empirical tests of TCE have been carried out mostly with reduced form models. Reduced form models are not as inclusive as one would wish to support the selective predictions of TCE. First, a single transaction feature responds for the selection process whilst TCE defends an interactive set of them. Second, it subjects TCE to ex post rationalisations that are unpopular in economics: by definition, there are no losers to be tested in a comparative analysis.

The metaphor of economic selection, thus, gives us ground to keep working on a causal link that is either unknowable or very difficult to identify. At this point, the metaphors of transaction costs as friction and "contractual man" can bring reassurance. After all, "contractual man" is both an enduring source of transaction costs and the pursuer of systems that work better - with less friction.

The selection metaphor in economics has become widely accepted in its broad sense as a ubiquitous and uncomplicated force. Apparently, the effort by some evolutionary economists to refine the selection metaphor has made only partial inroads on that habit. Considering thus that professional pressure to refine the idea has been limited and that much of TCE empirical work has been done on the realm of entrepreneurial intentionality rather than on selection results, there seems to be no strong reason for Williamson to change his diplomatic approach.

## CONCLUSION

The three metaphors help us understand the "distinctive worldview" offered by Williamson in terms of what we already know. They illustrate vividly the key elements of TCE world: the individual, the forces of the environment and the economic factor that connect them. Additionally, they work as ambassadors for TCE, establishing identification with and differences from other established or developing views on the economics of organisation (and beyond).

The mechanistic metaphor of transaction costs as frictions and the metaphor of economic selection arguably stand out on this regard. They are well known and widely accepted in a broad sense among economists. They seem to be less successful with more specific audiences, however, as in niches where the metaphors are worked to detail (e.g. evolutionary theories of the firm).

The metaphor of the human being as "contractual man," in its turn, draws on the metonym used initially by neoclassical economists to construct economic man based on rationality and motivational features. Through sharing these two structural aspects with economic man, "contractual man" may still be attractive to mainstream economists as a less restrictive metonym. Indeed, the core of economics seems to have become more receptive to notions like opportunism – although arguably more in connection with agency theory than with TCE. The case for bounded rationality, however, gives less room for enthusiasm. More recently, Williamson (2002) has made more explicit his suggestion that the economics of organisation needs to use the lens of contract in contrast to the lens of choice. The wording is stronger in suggesting not a simple theoretical fine-tuning but a change of weltanschauung.

These tensions have been part of TCE from its beginning. Williamson's framework has made inroads into economics – even more intensely into the economics of organisation and anti-trust. Its metaphors might have influenced economists' interpretations, inclinations and actions. Further theoretical developments on TCE may depend on how those metaphors can be sustained and articulated in the heterogeneous discourse community of economics.

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