

# Ba: Introducing Processual Spatial Thinking into the Theory of the Firm and Management<sup>1</sup>

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Over the last two decades, the Japanese notion of *ba*, introduced by Ikujiro Nonaka and his associates to the West, has come to play an important role in management theory. This notion, which has been roughly translated as 'place' or 'topos,' stresses the importance of processual spatial thinking for economics and management alike. As such, it echoes and amplifies recent voices in the business world, which argue that we must understand business strategy in terms of space, that is to say, as an expression of the dynamics of social interaction which involves such factors as connectivity, information flow, external versus tacit knowledge, etc. Despite many efforts, the barriers for fully integrating *ba* into the body of Western management literature will remain for as long as its underlying assumptions are defined by ontologically static categories. This article is an attempt to overcome this theoretical bottleneck, first by critiquing the suboptimal approach to processual problems generated by conventional Western business theories, which can neither recognise their hidden background assumptions about space nor transcend them, and second, by explaining, within the framework of comparative analysis, how *ba* leads to a new processual and dynamic account of business life. Our overall aim is to demonstrate how a new processual notion of space enables a deeper, more integrated understanding not only of the nature of the firm, but also of the role managers play within firms.

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## Introduction

Ronald H. Coase, the founder of the modern theory of the firm, once claimed that "economics has suffered in the past from a failure to clearly state its assumptions. Economists in building up a theory have often omitted to examine the foundations on which it was erected."<sup>2</sup> Coase's observation is especially pertinent in regard to the way economists have made or accepted fundamental assumptions about space. As the humanities in the West occluded the issue of space over the last 150 years,<sup>3</sup> economics and management alike have for long either entirely neglected space or treated it as a given, unambiguous phenomena, one certainly not calling for any theoretical investigation. Two recent developments have finally called such an approach into question, one stemming from practice, and the other stemming from theory. First, practically, as modern business becomes increasingly internationalised, modern strategic management has realised that it cannot focus solely on temporality. Rather, it has found that it must somehow embrace the art of thinking and experiencing spatially, both in local and global contexts.<sup>4</sup> What is critically needed is the successful exploration and movement through different, constantly changing geographical, cultural and social spaces. Managers today have to move from one location to another, to navigate through unknown business cultures and to explore the new and uncharted territory of tomorrow's business opportunities. This requires management tools that explicitly and appropriately deal with the spatial dimensions of business life. Second, theoretically, management scholars have, at least generally speaking, lagged behind theoretical developments in the humanities and the social sciences, exposing the extent to which they have been inhibited imaginatively and conceptually by their disinterest in spatial issues. The so-called 'spatial turn' has made canonically Western assumptions about space explicit, and in so doing, turned them into objects of scientific investigation. Recognising the insufficiency of attempts to understand the contemporary world by focusing primarily on temporal change, the advocates of the 'spatial turn' in cultural studies, the history of science, and philosophy have been rethinking the understanding of space implicit in the methodologies of the human sciences.<sup>5</sup> On the part of economists and management scholars, however, there has been a lack of engagement with this increasing interest in space and spatiality in the social sciences. Luckily, however, this situation has fairly recently begun to change, as especially an increasing number of organisational scholars takes space and place as central

2 Ronald H. Coase 'The Nature of the Firm' *Economica* 4 no 16 (November 1937) pp 386–405

3 Edward W. Soja 'New Twists on the Spatial Turn' in: J. Döring and T. Thielmann (eds.) *Spatial Turn Das Raumparadigma in den Kultur- und Sozialwissenschaften* pp 241–262 Bielefeld, Transcript Verlag 2008.

4 Tiha von Ghyczy *Constructing Strategic Spaces* Boston Consulting Group 2006

5 Compare Henri Lefebvre *The Production of Space* Oxford, Blackwell Publishers 1991. Also: E. Soja 'Keeping Space Open' *Annals of the Association of American Geographers* 89 no 2 (June 1999) pp 348–53. For a critical review compare Tim Unwin 'A Waste of Space? Towards a Critique of the Social Production of Space' *Transactions of the Institute of British Geographers* 25 no 1 (2000) pp 11–29

analytical themes.<sup>6</sup> In line with these developments, we argue that management scholars should intensify their efforts to discuss the various background understandings of space in their discipline, especially in regard to space's dynamic and processual characteristics. By 'background understandings' we refer to the implicit methodological cognitive frameworks within which economists spell out their theories and analyse the real world, without explicitly noticing or questioning them in turn. We speak of cognitive frameworks in the plural here to signify that we don't assume a single, unified understanding of space to exist. As we are going to show, there exist rather varied implicit assumptions as to how space is structured, what its essential characteristics are and what relationships it holds to its enfolded elements.

In order to shed more light on the issue of spatial thinking in management and economics, we introduce the notion of mental maps. Adopting Joan Robinson's famous dictum that "a model which took account of all the variegation of reality would be of no more use than a map at the scale of one to one,"<sup>7</sup> we often refer to maps when explaining the use and necessity of abstractions in our scientific field. What is meant are, however, not maps in the literal sense, but the far more powerful mental maps that serve as cognitive frameworks to guide and orient us in the complex reality of everyday economic phenomena. Robinson's dictum suggests that such cognitive frameworks differ only in scale but not in kind, as if there were just one given perspective from which to view the economy or any part of it. As we are going to argue throughout our article, this assumption is highly misleading. Not all mental maps depict reality from the same vantage point; neither are they simply objective representations of the world. Rather, they approach reality from certain perspectives, selecting particular perceptions while suppressing others. As such, they construct and edit reality.<sup>8</sup> Such power, however, does not usually rise to the level of an object of scientific awareness. Scientists are like other human beings in that they go about their projects in the world by means of a certain mental map only, without explicitly reflecting upon it or its possible alternatives. In this way, they fail to fully utilise the whole repertoire of mental maps that may be at their disposal as a source of creative thinking. We suggest that management is at such an inflection point now, requiring the broadening of its horizons, the development of a wider, more encompassing methodological framework capable of making explicit and incorporating different mental maps or cognitive frameworks concerning space. It is precisely our purpose in this article to apply the lesson of multiple mental maps to the theory of the firm and to management: for in our opinion, differences in how we view

6 Scott Taylor and André Spicer 'Time for Space: A Narrative Review of Research on Organizational Spaces' *International Journal of Management Reviews* 9 no 4 (2007) pp 325–346. For a good example of how the issue of space is treated by contemporary organisational scholars see: Karen Dale and Gibson Burrell *Spaces of Organisation and the Organisation of Space*, Palgrave Macmillan 2008. This book studies how space can influence and affect organisational goals, especially in areas such as commitment, creativity and innovation. For another example compare: Hans Ramö 'Managers of trust: temporal and spatial factors of trust in organizations' *Journal of Managerial Psychology* 19 no 8 (2004) pp 760–775.

7 Joan Robinson Essays in *The Theory of Economic Growth*, London, Macmillan 1962, p 33

8 Ute Schneider *Die Macht der Karten* Darmstadt, Primus Verlag 2006

the firm and the role managers play within it can be attributed to fundamental differences in the underlying spatial cognitive frameworks in use. In order to demonstrate this, we seek to bring to light different spatial notions as they underlie a) the Coasian, b) the Knightian and c) the Nonakaian view of the firm. We also analyse how those notions lead to disparate conceptions both of the nature of the firm and of management in order to demonstrate, in our comparative perspective, how *ba* enables an integrated, dynamic and processual understanding of modern business life. We limit our discussion to the above mentioned three views not only for reasons of economy, but also because the three are exemplary theory types, paradigmatic in economics and management alike.<sup>9</sup> This is to say that we refer to them in order to exemplarily uncover the powerful spatial presuppositions as they are at work below the radar of common scientific awareness. Alfred N. Whitehead recommended that philosophy takes on the essential task of uncovering attitudes and entrenched ideas in science: "The use of philosophy is to maintain an active novelty of fundamental ideals illuminating the social system. It reverses the slow descent of accepted thought towards the inactive commonplace."<sup>10</sup>

### *The Spatial Conception Underlying the Coasian Theory of the Firm*

This and the following section discuss how the two most common Western understandings of space underlie and shape the Coasian and the Knightian view of the firm. Here, we point to the notion of space as a 'container', which goes all the way back in the West to Aristotle, and explore its influence on Coase's theory. When we conceive of space as a sort of container enveloping all sorts of objects, we treat it as a background against which objects may rest and move without that background itself suffering any change or movement. It is, in Foucault's terms, "treated as the dead, the fixed, the un-dialectical, the immobile."<sup>11</sup> Accordingly, its structure appears as prior to and ultimately independent of what is contained within it. In turn, objects as well as their interrelationships can be interpreted only with reference to the containing space. In other words, the latter determines the locations, movements, and interactions of things, and as such must be given primacy over them. This notion of space, paradigmatic especially for mechanics, features most prominently in Isaac Newton, who in his *Principia* constructed space as immovably fixed, determining the velocities, motions

9 More precisely, we believe Coase's implicit spatial concept to be exemplary for the cognitive framework of *mainstream neoclassical economics* (including the resource-based views of the firm), while we tentatively propose the spatial concept presupposed by Knight to represent management based on methodological individualism, including many knowledge-based theories of the firm. We also assume that the notion of *ba* favoured by organisational knowledge creation theory mirrors recent more processual understandings of the dynamic nature of the firm along with the creative role managers within it.

10 Alfred Whitehead, *Modes of Thought*, Toronto, Collier-Macmillan 1936, pp 171–74

11 Michel Foucault *Power/Knowledge*, Penguin 1980, p 70

and measures of distances of the things themselves without being determined by the latter in turn.<sup>12</sup> Although Leibniz challenged Newton's notion of absolute space, at the time, it soon became the orthodoxy in natural philosophy up to Einstein's time. As Albert Einstein, himself an opponent of the container theory, critically remarks: "space is not only introduced as an entity independent from physical objects but it is granted an absolute role in the causal nexus of the theory. Its role is absolute in the sense that space acts upon all physical objects without those objects being able to act upon it in turn."<sup>13</sup>

From its origin in physics, the container metaphor quickly migrated into the social sciences. Here, it is used as a model for viewing society as a great backdrop against which social and economic processes are played out. As such, society is granted distinctive powers, its mechanisms possessing the causal power to force its members to move in foreseeable ways. While the members may be under the delusion that their actions are internally generated, in reality, their relations are externally governed, and fall into predictable patterns. We take precisely this notion of space to be of fundamental importance for much of the economic tradition starting with Adam Smith and leading all the way up to neoclassic theory, whose explicit aim has often been to resemble the physico-mechanical sciences in every aspect.<sup>14</sup> As such, it also influences Coase's conception of the firm, which is securely based upon mainstream economic thought and what Coase calls its 'normal' treatment of the economic system.<sup>15</sup> Coase's normal treatment echoes Newton's conception of container-like space as the following quotation shows: "the normal economic system works itself. For its current operation it is under no central control, it needs no central survey. Over the whole range of human activity and human need, supply is adjusted to demand, and production to consumption by a process that is automatic, elastic and responsive. An economist thinks of the economic system as being coordinated by the price mechanism, and society becomes not an organisation but an organism. The economic system 'works itself.'"<sup>16</sup> Here we find the idea of social space (the economic system) as a given whole, an autonomous domain of causal laws, which by its own powers (the price mechanism) controls its parts in an automatic, quasi-causal fashion. Coase is playing on the famous theme of Adam Smith that the economic system arises not out of any collective will or common decision, but by way of an "invisible hand." Both consumers and entrepreneurs are thought to be involuntarily and ineluctably governed by a system of prices; their collective fate is at the mercy of blind economic forces.<sup>17</sup> The economy itself thus appears as a self-regulating entity of inter-related acts of production, exchange and consumption with its own internal dynamic and

12 See in particular Isaac Newton's classic statement of the case in "Scholium on Absolute Space", *The Mathematical Principles of Natural Philosophy, Book 1*, translated by Andrew Motte London 1729 p 9

13 Albert Einstein 'Vorwort' Max Jammer (ed) *Das Problem des Raumes* pp xii–xv Darmstadt, Wissenschaftliche Buchgesellschaft, 1960

14 Leon Walras *Elements of Pure Economics* Cambridge (Mass), Harvard University Press 1954

15 Ronald H. Coase, *The Theory of the Firm*, p 387

16 Ibid.

17 Ronald H. Coase 'The Institutional Structure of Production' *The American Economic Review* 82 no 4 (Sep., 1992), pp 713–719; 713

autonomous laws. It organises itself, following its own laws of equilibrium and change.<sup>18</sup> In this way, it comes to be mentally mapped as a container analogous to that of Newtonian space, with all economic processes essentially viewed as being played out against its backdrop, or, in other words, directed by the distinctive powers of the market's pre-given causal mechanisms.

How does such mental mapping affect Coase's view of the firm? Here, we need to recall that Coase's problem is a classic container/contained issue: how to define a unique characteristic of the firm (the contained) that sets it apart from the overall market process (the container). Coase finds this characteristic in the firm's supersession of the price mechanism: "Outside the firm, price movements direct production, which is coordinated through a series of exchange transactions on the market. Within a firm, these market transactions are eliminated and in place of the complicated market structure with exchange transactions is substituted the entrepreneur-coordinator, who directs production."<sup>19</sup> "A firm, therefore, consists of the system of relationships which comes into existence when the direction of resources is dependent on an entrepreneur."<sup>20</sup> Thus our framing container/contained binary is reproduced, on a smaller scale, within the firm (the container) and its employees (the contained). The firm becomes a 'small container' located within the larger container of the market system, organising itself by a determining force embodied in the entrepreneur, who takes "the place of the price mechanism in the direction of resources."<sup>21</sup> The orders of the entrepreneur are thought of as a causal mechanism determining the location and movement both of resources and employees within the firm, while the price mechanism continues to determine the location of factors and individuals outside the firm's boundaries. As in a Matryoshka, the famous Russian doll, in which smaller dolls are nested in bigger ones with the same features until some arbitrary scale has been reached, the firm is viewed as a "specialised unit" within the much larger economic specialisation, a "single cell" in a larger organism or, to use D. H. Robertson's brilliant expression, "an island of conscious power in this ocean of unconscious co-operation like lumps of butter coagulating in a pail of buttermilk."<sup>22</sup> The problem for Coase, given this positing of two coordinating mechanisms,<sup>23</sup> is how they relate with one another. His solution is that it must be by means of a superordinated mechanism: "the governing factor of all productive organisation – the relationship of prices and cost."<sup>24</sup> Carrying out transactions through the ordinary price mechanism is thought to involve some costs, as does the organising of transactions within the firm. The firm's size increases as long as "its costs of production (including its costs of contracting

18 Charles Taylor, *Philosophical Arguments*, Cambridge (Mass), Harvard University Press 1995, pp 215–16

19 Ronald H. Coase, *The Theory of the Firm*, p 388

20 Ibid. 393

21 Ibid. 388

22 Quoted in ibid.

23 Oliver E. Williamson 'Introduction' in: Oliver E Williamson and Sidney G. Winter (eds.) *The Nature of the Firm, Origins, Evolution, and Development*, Oxford: Oxford University Press 1993

24 Ronald H. Coase 'The Nature of the Firm: Meaning,' *Journal of Law, Economics, & Organization* 4 no 1 (Spring, 1988) pp 19–32, p 25

with the factors of production or other firms and its costs of selling the product) are less than the transaction costs that would be incurred in a complete market system.”<sup>25</sup> The limit to the size of the firm, thus, “would be set when the scope of its operations had expanded to the point at which the costs of organising additional transactions within the firm exceeded the costs of carrying out the same transactions through the market.”<sup>26</sup> Simply said, the firm expands in size, as long as the entrepreneur can be seen as a low-cost substitute for the price mechanism of the market.<sup>27</sup> In this way, the firm’s proper place within the market becomes causally dependent on the working of a superordinated, pre-given mechanism. Here we find unconsciously reflected the assumption of Newtonian physics that overall space is not structurally affected by the multitude of spaces contained within it but, to the contrary, serves as the precondition of the latter. It is the mechanical forces of the wider space that completely determines the size, shape and momentum of the smaller, not vice versa.

Summing up our findings, the Coasian theory of the firm implies the following spatial conception: a) the market system forms a container like space, in which all objects (inputs and outputs) appear as givens, their location, movement and relationships being determined externally by the price mechanism; b) the firm is conceived as something like a ‘container within a container,’ in which all objects equally appear as givens. Within its boundaries, the place of the determining force of the price mechanism is taken over by the entrepreneur, while c) the relative size of the firm is determined by a superordinated price mechanism. With this, Coase aims at developing a theory that is both tractable and manageable: “It is hoped to show ... that the definition of a firm may be obtained which (...) is tractable by two of the most powerful instruments of economic analysis developed by Marshall, the idea of the margin and that of substitution, together giving the idea of substitution at the margin. Our definition must, of course, ‘relate to formal relations which are capable of being conceived exactly.’<sup>28</sup> Such a definition necessarily presupposes that we treat space as a pre-given, immutable background against which all objects rest and move. The mental map of space as a container from which we started has provided the structural logic that allows us to depict the economy as a world of given resources in the Coasian sense; a world in which managers can simply take as givens the inputs to be used and the outputs to be produced. In fact, the *raison d’être* of their firm, on this model, is to act so as to minimize the cost of transforming the former into the latter. In this worldview, the only task allotted to managers is to combine resources so as to minimize costs of production (including, of course, transaction costs) and, by means of this, to determine the size of their firm. They never act to as to create the space surrounding them (i.e. the economic sphere) but only react to its distinctive powers.

25 Ronald H. Coase ‘The Nature of the Firm: Influence’ *Journal of Law, Economics, & Organization* 4 no 1 (Spring 1988) pp 33–47, p 39

26 Ronald H. Coase The Nature of the Firm: Meaning p 19

27 Donald J. Boudreax and Randall G. Holcombe ‘The Coasian and Knightian Theories of the Firm,’ *Managerial and Decision Economics* 10 no 2 (June 1989), pp 147–154

28 Ronald H. Coase *Theory of the Firm* pp 386–87

Coase writes that he intends to develop a view of the firm that is “realistic in that it corresponds to what is meant by a firm in the real world.”<sup>29</sup> We should be careful to note here that mental maps, by their very nature, cannot ever simply depict reality. Rather, they actively shape and construct possible views of it. Thus they form systems of representation and description of which countless alternatives exist; systems, which, far from being simply given, are the products of “stipulation and habituation in varying proportions.”<sup>30</sup> In other words, mental maps function like lenses through which we view and experience reality, though we might not be aware of wearing them at all. They form the silent background determining which parts of reality we perceive and which we cast into shadow, while the map itself and its arrangement of elements is seldom the product of choice, nor an object presented for questioning. Given this, the container conception of space forces strategic management to focus on certain aspects of reality while entirely and unconsciously bracketing others. Most importantly, it narrows strategic thinking to a very small set of possible activities: the set of holding costs down, for example by deciding whether to produce in house or contract out. Cost efficiency thus becomes viewed as the only viable key to successful management. Managers limit themselves to the discovery of and reaction to market signals so as to lead their firm towards predetermined outcomes. All other sets of activities, for example those aiming at truly *creating* or *forming* new business opportunities, remain utterly unintelligible. Said differently, any cognitive framework in line with Newtonian space does not allow managers to meaningfully conceive the alteration of their firm’s inputs, outputs or the relationship between them (i.e. production technology). This is especially true in those cases where such alterations would work so as to alter, reshape or even offset market forces. In this sense it generates *inner censorship* so as to keep important tasks of management below the radar of attention.

We should note that such inner censorship is not an especial property of the Coasian conception of the firm only. We put so much emphasis on analysing this view in order to give an example of a textbook economic theory that gives a powerful and determining role to the underlying cognitional framework of container-like space without even being fully aware of it. In essence we believe this power to be at work in *any* theoretical framework that views inputs, outputs and production processes as *data* ultimately determined by the price mechanism. Especially, we believe it to determine the worldview of all theories based on the notion of general equilibrium, including the resource based view of the firm. However, this issue goes beyond the aims of this paper, and must be relegated to future research. Instead, we seek to make explicit the spatial mental map of textbook economics in order to contrast it with an entirely different mental map, in which space is not preconceived as being given and immutable, determining all elements contained within it, but as being itself continually *produced, performed, contested*, thus ultimately being open to *indeterminable change*.

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29 Ibid

30 Nelson Goodman, *Languages of Art: An Approach to a Theory of Symbols* Indianapolis, Hackett Publishing 1988 p 37

## *The Spatial Conception Underlying the Knightian View of the Firm*

Within the West, the most important alternative to the container conception of space was given, in Newton's time, by Leibniz, and has been taken up by various philosophers down to the present, including, notably, Henri Lefebvre. This is the relational conception of space, according to which space is not something pre-given, but rather something produced.<sup>31</sup> It does not precede the objects contained within it because it is essentially formed by the presence and interactions of those objects itself. The relational theory of space presents a very different view of society than does the container theory: neither society at large nor any of its sub-systems are considered as pre-given domains governed by ineluctable laws and forces. Social space in and for itself does not exist; it only acquires meaning out of the interaction of individuals. It is given status by human agents as well as their relationships one to each other. While the cognitive framework of the container theory presupposes that space both precedes and determines its content, a relational understanding denies that space is pre-given or absolute. On the contrary, space, according to this view, is created by the interplay of objects and subjective human beings. In regard to social space, this means that it is to be considered as a netlike arrangement of agents, objects and activity. Thus, agents are given precedence over objective, formal structures. Consequently, the economic system turns from a fixed, yet ultimately inexplicable presupposition into a dynamic process calling for further explication and investigation. More specifically, economic events are seen as unfolding indeterminately so as to shape and reshape the economic system itself in unforeseeable, uncertain ways. As a result, human beings become the active, formative factors in the companies for which they work, and ultimately of the economy.

Equipped with this rough account of the relational theory of space, we are now to explore its influence on the Knightian view of the firm. To begin with, it should be noted that Knight's understanding of entrepreneurial activity cannot be meaningfully accounted for by the container view of space. It rather presupposes a different cognitive framework. Knight considers entrepreneurial activity to be an essential element in the creation of markets while within the container framework – as we have seen in the case of Coase's theory – markets and their forces (mechanisms) are thought to exist prior to any specific human instantiation. For Knight, objective data of markets are not simply given. Resources, for instance, cannot be taken for granted; they do not simply exist, waiting to be discovered by an entrepreneur. Rather, they are created by the latter's activity. Neither can goods produced be thought of as given outputs. It is the role of the entrepreneur to decide what and how much to produce in the first place, so as to make choices today which alters the course of future events in ways impossible to predict.<sup>32</sup> Speaking about human activity in general, Knight remarks that "the purposes of men are inherently dynamic and changing;

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31 Henri Lefebvre, op cit

32 Donald J. Boudreax and Randall G. Holcombe, op cit

want-satisfying activity ... is largely explorative in character; a repetitive experience is looked upon more or less as a necessary evil and its motive as a goal rather than an end. The problem of human life is less that of getting preconceived results than of finding out the results of actions and acquiring 'better' wants."<sup>33</sup> Thus, Knight overcomes the container/contained metaphor by replacing it with the contrasting binary that has deep cultural roots in the American context: that of the explorer/explored: Human beings do not simply find themselves contained in their larger environment but explore the latter so as to 'discover' and claim their own space.

Probably Knight's most important insight into the firm's nature is that it cannot simply be deduced from an already-existing technical production structure; on the contrary, it is an extended performance which at any one time is actually shaping the later. This insight is at the core of Knight's account of true uncertainty; a phenomenon that cannot in any ways be meaningfully accounted for in the cognitive framework of container-like space.<sup>34</sup> Whenever we map the economic system as a container, we implicitly or explicitly assume its overall structure to be fully determined. This means that all future events could be predicted with apodictic certainty if only men's knowledge were complete. This is essentially what Knight critically refers to as ignorance theory: in the Coasian world any problem of determining future events appears to be the result of our contingent factual ignorance. We could fully predict any event if it only were possible to measure, with absolute accuracy, all its determining circumstances. Once our knowledge was perfect, there would be no real probability at all but only certainty. In contrast to this, Knight insists on the fact that within the economic system there also exists structurally necessary ignorance: there is an inherent unknowability in the factors, which is not defined merely by a contingent ignorance in the present.<sup>35</sup> This is to say that the economy is characterised, at least to some measure, by genuine indeterminacy. There is no possibility of knowing the future in all its details, because it is not bound or determined to emerge from the present in stochastically predictable ways. Most importantly, Knight considers conscious individual behaviour as severing any rigid connection between the present and the future, because of its capability of truly changing a future situation inferred from the present; a capability whose essential element is its lack of mechanical accuracy, its liability to error.<sup>36</sup> Such capability, which is chiefly present in living beings, can be conceptually mapped only in ways that differ in kind, and not merely in degree, from Coase's spatial mental map. This is because in the

33 Frank H. Knight 'Economic Psychology and the Value Problem' *The Quarterly Journal of Economics* 39 no 3 (May 1925) pp 372–409, pp 404–05

34 Frank H. Knight Risk, *Uncertainty and Profit* Mineola, Dover Publications

35 Ibid pp 19–21

36 Ibid p 203. In order to define "real change" proper, Knight distinguishes between natural changes and changes due to human action. In natural objects we usually only consider the unchanging property of changing in certain ways. Change here occurs only to known laws that do not change themselves; it is merely progressive in the sense that it does not carry unpredictability with it. Changes due to human action often involve, however, a change of the laws of change themselves and thus becomes utterly unpredictable. It is this kind of change that Knight refers to as "real." Ibid pp 313–317

Coasian cognitive framework the entrepreneur can only be viewed as the low-cost substitute for an unconscious mechanism: the price mechanism in the direction of resources.<sup>37</sup> His activity is thus reduced essentially to an automatic response to given data or stimuli, that is, to an unconscious automaton. The task of the Knightian entrepreneur, however, is not mere execution but the active decision what to do and how to do it so as to actively shape the environment. Therefore, "the internal organization of the productive groups is no longer a matter of indifference or a mechanical detail."<sup>38</sup>

In order to account for truly conscious behaviour capable of changing future situations inferred from present ones, Knight builds his theory of the firm on the concept of relational space, if only implicitly: he considers individuals to be the most fundamental building blocks out of whose interactions the economic system gradually emerges. It is only out of a relational network of individuals that the economic system acquires its form: "before taking up economic organization, a first main division of study must deal with the economic conduct of an individual, abstracting from social relations ... One must postulate a man living in isolation, like the familiar Robinson Crusoe on his island, otherwise uninhabited by man."<sup>39</sup> Thus, Knight turns the exploring individual into a sort of monad unshaped by its environment – just as Robinson Crusoe comes upon his island with his sensibility and intellect already formed – but ready to impose his shape upon it. Only after having established, in this manner, a complete theory of the individual, based on an abstract individualism, does Knight set out to explain the relationships between individuals as well as the system of free markets and free enterprise as a whole, referring to the latter as "the mechanism of individualistic economic organization."<sup>40</sup> From this approach we can infer that Knight does not conceive the economic system as a pre-given social phenomenon but rather as a matter of human creation. For him, no fundamental data of this system exists prior to individuals. The former is, rather, a result of the latter's activity. Thus, Knight maps social space not as a container but essentially as relational space in which "people are formally free to act as their motives prompt in the production, exchange, and consumption of goods. They 'own themselves'; there is no exercise of constraint over any individual by another individual or by 'society'; each controls his own activities with a view to results which accrue to him individually. Every person is the final and absolute judge of his own welfare and interests."<sup>41</sup>

Without considering the Knightian concept of the firm in any further detail here, we suggest that Knight's presupposition of relational space it is a good example of another thematic in textbook economics: that underlying not only all theories based on methodological individualism, but, as well, the motive behind recent discussions on the micro

37 Ronald H. Coase *The Nature of the Firm* p 388

38 Frank H. Knight Risk, *Uncertainty and Profit* III IX 8

39 Frank H. Knight 'Methodology in Economics: Part I' *Southern Economic Journal* 27 no 3 (January 1961) pp 185–193, p189

40 Frank H. Knight 'Methodology in Economics: Part II' *Southern Economic Journal* 27 no 3 (April 1961) pp 273–82, p273

41 Frank H. Knight Risk, *Uncertainty and Profit* II.III.41

foundations of economic performance. Of course, it is beyond the scope of this paper to explore this suggestion in detail. Rather, we will confine ourselves to exploring the potential strength as well as possible shortcomings and explanatory gaps arising from the (implicit) use of such framework itself. We start our observations with the insight that any theory built on the implicit background understanding of relational space lacks the formal precision of mathematical language that is often considered as the single most important achievement of the container theory of space. However, we suggest conceiving of this 'lack' not as a weakness but as strength. While it is undoubtedly true that a theory such as Knight's does not fulfil the criteria of being "tractable" or "manageable" in the Coasian sense, we should be careful to note this does not come due to a deficiency of the theory, but due to its intention of explaining an important element of entrepreneurial activity that can never, for logical reasons, be mechanically treated within the cognitive framework of container-like space: the activity of producing goods and services as it shapes and directs the future course of the economy, rather than treating the latter as though it were an already predetermined abstraction, derived from unchanging conditions. The Knightian view of the firm is not simply a variant of Coase's mental map but fundamentally alters the process of mental mapping itself so as to bring to light essential aspects of firms' activities that otherwise remain inexplicable. Its uniqueness and importance does not stem from simply choosing the 'right scale' of a given kind of map but from deciding which kind of map to use in the first place.

Yet, although the Knightian approach might seem 'richer' or 'deeper' than the Coasian cognitive framework, the former nevertheless reveals internal weaknesses and explanatory gaps, some of which become apparent once we focus on Knight's account of entrepreneurial activity. As we have seen already, within the Coasian worldview managers are only thought as low-cost substitutes of the price mechanism. They do not effect real, indeterminable change within the economic system. In contrast to this, the Knightian entrepreneur ultimately takes responsibility for the production process, continually working at shaping and recreating its inputs and outputs. What often escapes the attention of economists and management scholars, however, is the fact that Knightian entrepreneurs only effect changes within the outer world of technology, resources and demands, while being incapable of changing themselves in any meaningful way. This is to say that entrepreneurs do not act so as to change their own character.<sup>42</sup> More specifically, they do not change the 'inner' rules of their actions because "all their acts take place in response to real, conscious, and stable and consistent motives, dispositions or desires; nothing is capricious or experimental, everything deliberate."<sup>43</sup> The concept of relational space presupposes every individual as the fixed relata, the "real" substance or entity, whose essential characteristics never alter, but merely find expression, much as Robinson Crusoe's character found expression on his island, to use Knight's well worn example. For such individuals, their relationships with others

42 Silja Graupe 'The Basho of Economics An Intercultural Analysis of the Process of Economics Frankfurt, Ontos 2007 pp 81–96

43 Frank H. Knight Risk, Uncertainty and Profit, p 77

remain coldly external. In this schema, the individual is not seen as creating or causing its own characteristics, but simply possessing them. The true source or location, in which individuals dynamically shape and create themselves, thus remains obliterated by design. Most importantly, once the individual is created ex nihilo, we cannot meaningfully account for any mutual interdependence between individuals that might possibly constitute such source or location. To the contrary, individuals are treated as the unchanging background, against which all changes in the relational structure of space are depicted. More specifically, within the relational theory of space, they are, following the tradition of Descartes, reduced to nothing more than thinking entities or substances, unextended in space (that is as pure *res cogito* but not as *res extensa* in Cartesian terms). As such, they determine the overall structure of space while being curiously immune to any changes of that structure in turn.

This conception of individuals has far reaching consequences for Knight's conception of the firm. For him, firms appear as independent 'nodes' of a network-like arrangement, together creating the economic system. Within each node, the centralization of the deciding and controlling functions becomes imperative. All creative activity shaping social space inside and outside organizations is seen as being determined by the unextended, space-less mind of individual entrepreneurs<sup>44</sup> Rather than viewing the firm as a dynamic network of individuals, Knight traces all its creative potentials to a single entrepreneur. The latter makes the crucial decision of selecting employees, while "any other sort of decision-making or exercise of judgment is automatically reduced to a routine function."<sup>45</sup> As a result, a fixed managerial hierarchy becomes the defining characteristics of modern business enterprise.<sup>46</sup> Entrepreneurs are thought to function like army commanders, giving orders in unified and unambiguous language that is free of interpretation or potential misunderstandings. The role of employees is therewith reduced to pure routine functions.<sup>47</sup>

Our quick summary of the cognitive framework of relational space underlying the Knightian view of the firm is meant primarily to contrast it with the container-like spatial mental map. Its further strengths and weaknesses are beyond the scope of this paper. Rather, this exercise is a way of pointing us to a cognitive framework that conceptually differs both from container-like as well as from relational space; a framework, in which both the economic system and the firm are conceived as mediating spaces of interactive creation, which are produced and created by human work and activity while simultaneously producing and creating the individuals who interact in it in turn.

44 Ibid pp 293–98

45 Ibid pp 295

46 Alfred Chandler *The Visible Hand* Cambridge (Mass), Harvard University Press 1977

47 "But a more important change is the tendency of the groups themselves to specialize, finding the individuals with the greatest managerial capacity of the requisite kinds and placing them in charge of the work of the group, submitting the activities of the other members to their direction and control. It need hardly be mentioned explicitly that the organization of industry depends on the fundamental fact that the intelligence of one person can be made to direct in a general way the routine manual and mental operations of others." Frank H. Knight Risk, Uncertainty and Profit, III.IX.10

## The Spatial Conception Underlying the Nonakaian View of the Firm

Nonaka Ikujiro and his associates have made an attempt to develop just such an alternative framework, which they call the “knowledge creation theory of the firm.” They have taken terms and concepts out of Japan’s cultural context, using them to embrace elements from both “East” and “West.”<sup>48</sup> In this respect, it is interesting to note that Japanese philosophers and scientists are currently playing a leading role in formulating and establishing a new theory of space, one that goes ‘beyond’ both the container theory and the relational theory of space. In particular, the Japanese philosopher Nishida Kitarō developed a logic of topological space (or basho in Japanese) that allows mapping social space in entirely new ways, thus opening up a whole new mapping system by which to explore social phenomena.<sup>49</sup> We will first introduce this theory of topological space in some detail before turning to the way in which the notion of *ba* can be seen in its light.<sup>50</sup>

The mental map of relational space, when compared to that of container-like space, offers a more dynamic spatial understanding: it does not presuppose the whole (either the firm or its environment) as a stable, atomic entity operating according to a set of universal principles, but explains how it develops out of the dynamic interplay between the many (the individuals or parts of the social structure or system). The shortcoming of any relational understanding of social space, however, is that it cannot explain how the parts are indeterminably produced, performed and contested. Like the unexplained primacy accorded to the relation between container and contained in the container spatial theory (which, as we demonstrated, explains the container/contained relationship by endlessly generating ever more container/contained relationships) the dynamic interplay between the whole and the parts in relational theory treats the parts as monadic givens, immune to further reduction by scientific analysis. The underlying philosophical problem here lies in the fact that both theories presuppose some sort of substance enduring in space and time. Both conceive the world as an aggregation of pre-given things that only externally relate to each other. In other words, they understand the world as a static reality only, that is of an accumula-

48 Ikujiro Nonaka and Hirotaka Takeuchi *The Knowledge-Creating Company*

49 Kitarō Nishida Logik des Ortes: Der Anfang der modernen Philosophie in Japan Rolf Elberfeld (trans.) Darmstadt, Wissenschaftliche Buchgesellschaft 1999. Also compare the translations of Nishida's works in: David Dilworth and Valdo Viglielmo (trans.) *Sourcebook of Modern Japanese Philosophy: Selected Documents* Westport, Connecticut and London, Greenwood Press 1998

50 Theories of topological space have, of course, not only developed in Japan, though they seem to be far more popular with the Japanese than with Americans or Europeans. In order to make this point clear, we relate Nishida's findings to the work of one of his Western contemporaries, namely Alfred North Whitehead. It might also be noted here that Nishida's theory of topological space finds a distant analogue in Einstein's theory of gravitational space and thus in modern physics, where space is not independent of the physical objects in it but rather is shaped by them. However, its concept of interactive creation allows for a dynamic understanding of human activity that exceeds any account of physics. Compare Robert J. Wargo *The Logic of Nothingness: A Study of Nishida Kitarō* Honolulu, University of Hawaii Press 2005

tion of things (the word reality originates in the Latin “res” meaning things or entities). In this way, they fail to explain how those things themselves dynamically come into existence. They overlook that the latter are both formed and forming elements within a nexus of processes and activities. It is precisely this shortcoming that is overcome by the cognitive framework of topological space: rather than speaking of substances, it views the world as actuality (from the Latin word “action” meaning action or activities), that is, as a field of activity out of which both the whole and the part (the one and the many) as subjects in process are continually and mutually created.<sup>51</sup> Space itself thus becomes understood as a ‘magma of processes.’ It is productive activity and engagement and, as such, cannot be expressed in terms of substance, neither objectively nor subjectively, but only in terms of activity. Nothing obscure or ‘mystical’ is involved in this account. However, we should be equally cautious to resist the temptation of hastily translating it into the common-sense terms of either the container or the relational theory of space. Rather, we should consider it as a unique alternative to the way we habitually see without paying attention to what we see. In other words, we should praise it as an entirely new way of seeing as such.<sup>52</sup> For example, it gives us the opportunity of perceiving production as process arising ‘inbetween’ subjective activity and the objective result. When we produce something, we act on that thing out of our subjectivity, at the same time we are acted upon the thing. Production is realised by mutual interaction – or reciprocal transaction – of subjectivity and objectivity. In it we are, so to speak, made by making.<sup>53</sup> Thus, there is nothing simply pre-given to it, neither objectively nor subjectively. There simply exists no fixed data from which to start our observation. Rather, production is to be viewed as a state of becoming. More precisely speaking, it is formed and forming, created and creating.<sup>54</sup>

The process of actualisation, not some substance that actualises, is what becomes manifest in the theory of topological space, and what thrusts itself upon our attention.<sup>55</sup> Accordingly, space is to be seen as a living, dynamic nexus made up of activities and processes. It is neither a container nor a nexus of relationship among irreducible entities. In a strict sense, it is not substance or made up of substances at all, but an “invisible unity of the visible multiplicity of the processes.”<sup>56</sup> In Nishida’s terms, space is simply ‘no-one,’ or ‘no-thing-ness.’<sup>57</sup> This does not mean that it is nothing in a nihilistic sense. On the contrary,

51 Bin Kimura Kokoro no byouri wo kangaeru [Thoughts on the Pathology of Mind] Tokio, Iwanami Shoten 1994, p 29

52 Vanzgo ‘The One and the Many: Reflections on Whitehead’s Notion of Personal Identity’ in: Franz G. Giffert and Michel Weber (eds) *Searching for New Contrasts. Whiteheadian Contributions to Contemporary Challenges in Neurophysiology, Psychology, Psychotherapy and the Philosophy of Mind* Frankfurt am Main, Peter Lang 2003 pp 189–242

53 Kitarō Nishida Sourcebook of Modern Japanese Philosophy pp 40–41

54 Kitarō Nishida *Intelligibility and the Philosophy of Nothingness* Robert Shinzinger (trans.) Honolulu, East-West Center Press 1958

55 Alfred North, *Whitehead Process and Reality*, New York, The Free Press 1929/1957

56 Luca Vanzgo The One and the Many

57 Silja Graupe The *Basho of Economics* pp 134–37

it is what makes possible the fullness of life. Precisely because it is not statically determined as this or that thing, it serves as the source of creation. On this view of space, it is to be conceived as essentially creative beyond the limitations of causal explanations or the framework of a language over which we can quantify. It is not something we can theoretically grasp completely. Essentially, it is a living social *topos*. We cannot relate to it from the outside as observers, but only be “indwelling” and experiencing it. We are always participant observers. Thus, the actual rather than the conceptual counts. The world comes to be seen in a verbal sense as the activity of individuals – or their “here-now-relationships in action”<sup>58</sup> – interacting and mutually determining one another. In other words, it becomes ‘pure activity;’ an open process which is not causally attributable to any substantial “prime mover,” neither the one nor the many, the whole nor the parts.<sup>59</sup> This essentially means that we are forced to overcome the tacit presupposition of (Western) science that everything is to be expressed in terms of static spatio-temporal, and physical forms of order. “The absolute generality of logic and of mathematics vanish”<sup>60</sup> so as to be enriched, for example, by metaphorical and narrative language as well as intuitive understanding. All of these shifts in our worldview demand another style of management in our businesses.<sup>61</sup>

To view space as *topos* or *basho* enriches our understanding of human beings ‘beyond’ methodological individualism. This is because it explains how the relationality of processes functions as the hidden or forgotten ground out of which subjectivity develops. Already Locke, in his *Essay on Human Understanding*, had introduced the West to the idea that a person is not always a continuous substance through time. While it is the terminus ad quem of a network of responsibilities, it is not necessarily the terminus a quo of a set of properties or attributes.<sup>62</sup> Thus, we find ourselves in need of a new conception of the person. The theory of topological space, which Locke did not himself develop, fulfils this need. Here, each actual entity becomes defined in terms of experience; it is an experiencing being. What exists is simply what is experiencing.<sup>63</sup> Thus, experience – understood as an ongoing process within a specific context – becomes constitutive of the very being of the subject. “The being of a subject is constituted by its connections or relations with other subjects. Thus the plurality of a subject is interior to the subject itself. Each subject in fact is what its relations with the others make of itself. Each subject arises out of this pattern of relations. There is no previously given identity for such a subject.”<sup>64</sup> Expressed in more Japanese terms, we understand the “in-betweenness” (*aida*) of social actors as a prior condition to any given

58 Ikujiro Nonaka, Ryoko Toyama and Tōru Hirata *Managing A Process Theory of the Knowledge-Based Firm* Basingstoke, Palgrave Macmillan 2008 pp 40

59 Takie S. Lebra *Japanese Patterns of Behavior* Honolulu, University of Hawaii Press 1976, p 6

60 Alfred North Whitehead *Modes of Thought* 1936, p 98

61 Ian Palmer and Richard Dunford ‘Conflicting Uses of Metaphors: Reconceptualizing Their Use in the Field of Organizational Change’ *The Academy of Management Review* 21 no 3. (July 1996), pp 691–717. Also David J. Teece ‘Introduction’ in Ikujiro Nonaka, Ryoko Toyama and Tōru Hirata *Managing Flow* pp ix–xvii

62 Luca Vanzgo *The One and the Many* p 191

63 Alfred North Whitehead *Process and Reality*

64 Luca Vanzgo *The One and the Many* p 196

individual of the type presupposed by methodological individualism.<sup>65</sup> "The 'betweenness of person and person' and 'betweenness' do not signify merely a relationship between two individuals. The 'betweenness of person and person is the 'locus' (*basho*) functioning as the source from out of which both I and others arise."<sup>66</sup> Accordingly, within topological space, the individual is no longer taken as a unit of society.<sup>67</sup> This, however, is not meant to subsume him or her under a given totality, as is the case with the container theory of space. In contrast to Hayek, for example, it does not take the price mechanism of the market to be working behind the individual's back, so to speak.<sup>68</sup> Individuals do not simply devote themselves selflessly to *basho* but rather see themselves as active parts of it. As such, they create social structures out of their interactivity. Given this, neither subject nor world, neither individuals nor social structures can be seen as pre-existing 'lumps' in the process. Rather, they emerge as such in the process itself. More specifically, they only emerge as the extreme (abstracted) poles of the latter, given a certain mental map: if we just stress the role of environment, we come to view the world as process of causation, mechanistically determined by some given whole. If we only stress the role of immediate patterns of individual activity, we can only see substantial individuals and their self-determination.<sup>69</sup> Topological space itself, however, is not reducible to either side. It is neither to be digitised into a collection of substantial entities nor assembled into a machine made up of mechanical parts, however intriguing and orderly such substantial or mechanical assembly might be.<sup>70</sup>

So what are the implications of such an understanding of topological space for the theory of the firm?<sup>71</sup> This question can be answered by revisiting the knowledge creation theory of the firm and its notion of *ba*, which we find clearly grounded in the cognitive framework of *basho* or topological space.<sup>72</sup> As indicated above, Knight could overcome the limitations of the Coasian view of the firm by considering the fundamental structure both of the economic system and the firm not simply as givens, but as being produced and performed by individual decision making processes. However, he did not explain how the

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- 65 Silja Graupe The *Basho* of Economics pp 158–75  
 66 Bin Kimura quoted in Steve Odin *The Social Self in Zen and American Pragmatism* New York, SUNY Press 1996, p 70  
 67 Hajime Nakamura, *Ways of Thinking of Eastern Peoples: India-China-Tibet-Japan*, Japanese National Commission for Unesco 1960 p 380  
 68 Friedrich A. Hayek 'The Use of Knowledge in Society' *The American Economic Review* 35 no 4 (1945) pp 519–30  
 69 Alfred North Whitehead *Modes of Thought* p 166  
 70 Lik K. Tong *The Art of Appropriation: Towards A Field-Being Conception of Philosophy* Fairfield 2000  
 71 A more detailed account of topological space and its role in economics in general is given in Graupe 'The *Basho* of Economics 2007 pp 175–205.  
 72 *Ba* refers to the first syllable or Japanese character (kanji) of the Japanese philosophical term *Basho*. The difference between the former and the latter can be explained as follows: The term *basho* is part and parcel of a very complicated, philosophical theory not only of space but also of consciousness developed by the Japanese philosophers Kitaro Nishida. With the notion of *ba*, only some important aspect of this theory are utilized, which can enhance and deepen our understanding of economic process in general and the dynamic and creative nature of firms in particular.

individuals themselves change by means of their productive involvement. More specifically, he failed to conceptualise how entrepreneurs interact with others so as to create knowledge dynamically within social contexts beyond the mere exercise of tight and uniform control. The knowledge creation theory of the firm overcomes this problem without returning to the Coasian assumption that individuals are mechanically controlled, replaceable parts of a machine. The knowledge creation view is of the firm as *ba*, which means a shared situation or time-space nexus where the various subjective and historical dimensions of its members intersect and their heterogeneous experiences interact.<sup>73</sup> Here, 'interaction' does not denote a relationship external to autonomous subjects, but a context of shared, direct experience, in which individuals co-creatively and dynamically create themselves as well as their environment. Employees and entrepreneurs are not seen as necessarily in confrontation, the latter manipulating the former according to given desires and preferences. Rather, in going beyond mere preferences,<sup>74</sup> they share and dwell in the same particular world, actively embracing contradictions and commonly searching for new solutions. As a result, an "entrepreneurial culture" develops, in which "all employees ...are active entrepreneurs at the same time that they are mutually dependent on one another."<sup>75</sup> "All workers must become more entrepreneurial"<sup>76</sup>, so as to suspend or 'bracket' their preconceived values and ideas so as to question their own existence. Breaking through their own boundaries, they transform themselves, others, the organisation and the environment.<sup>77</sup> Thus, within *ba* the individual does not take him or herself as a self-evident fact, but as ever-changing processes developing out of a field of common interrelationships. More specifically, they view themselves as dynamically and co-creatively arising out of a field of implicit knowledge embodied in the social atmosphere that is neither determined subjectively or objectively itself. This is essentially so because they do not perceive themselves as just as thinking, rational 'animals' but as acting creators. While the Knightian view, following the tradition of Descartes, one-sidedly perceives entrepreneurs as *res cogito* only, incapable of interacting with spatial-extended environments, in *ba* the latter become essentially embodied: By interacting and inter-intuiting each other in a field of activity (e.g. in working groups or project teams), they create novelty beyond mere subjectivity or objectivity. Creativity, thus, neither simply takes place inside individuals' heads, as Herbert Simon believes,<sup>78</sup> nor can it simply be considered as residing within individuals, as for example Robert Grant has

73 Ikujiro Nonaka, Ryoko Toyama and Toru Hirata *Managing Flow* p 37

74 Nicholas Rescher *Rationality in Pragmatic Perspective* Lewiston NY, Edwin Mellen Press 2003

75 Georg von Krogh, Kazuo Ichijo and Ikujiro Enabling Knowledge Creation: How to Unlock the Mystery of Tacit Knowledge and Release the Power of Imagination Oxford, Oxford University Press 2000 pp 194

76 Ibid 257

77 Ikujiro Nonaka and Ryoko Toyama "The Theory of the Knowledge-Creating Firm: Subjectivity, Objectivity and Synthesis" *Industrial and Corporate Change* 14 no 3 (2005) pp 419–36

78 Herbert A. Simon 'Bounded Rationality and Organizational Learning' *Organization Science* 2 no 1 (1991) pp 125–34

argued.<sup>79</sup> Rather, it arises out of the firm in the sense of a concrete and living ‘inbetweeness’ of humans. Also, such inbetweeness cannot be expressed by one-sidedly looking at the firm’s formal structure. This is because such structure only represents something already thought and theoretically grasped but not the active source, out of which everything known dynamically arises in the first place. The firm as *ba* does not denote any kind of knowable entity or substance but a dynamic, forever changing *topos* of pure act or pure experience eluding any definite conceptual grasp.<sup>80</sup>

Knight, in developing his theory of the firm, discovered the fundamental importance of uncertainty for our understanding of the dynamic reality of firms, but undermined his insight by opting for an unrealistic account of individual autonomy that, indeed, reduces it to a kind of autism – a being completely separate from the social. Knight’s move was a way of putting a bound on uncertainty. Knowledge creation theory dissolves that bound by viewing persons as interactive, caught up in actions that cause them to transcend and change themselves and their environment. Here, it is insufficient to speak of uncertainty only; for this is the point at which true creation and innovation emerge. The firm as *ba* is precisely the enabling context for such true creation and innovation. It should be carefully noted that *ba* here cannot be simply read in the singular but is to be understood also in the plural.<sup>81</sup> Depending on context and situation, various dynamic social fields can arise, subsist, and again vanish, together establishing the ‘firm.’ Going beyond the simple economic textbook notions of control and of ownership that define the boundaries of the firm,<sup>82</sup> the knowledge creation theory of the firm pictures it not as a single *ba* with pre-fixed boundaries but, rather, as a dynamic configuration, a multi-layered *ba*.<sup>83</sup> Such layered *ba*, conceived as a dynamic process of contextualisation or world-formation, always exceeds static contexts terminating in an ultimate genus. Just as the cognitive framework of topological space, thus, gives us a radically different theoretical view of the firm, it gives us, as well, a radically different view of the role that managers play within firms. In short, while both Coase and Knight view managers as regulating, manipulating and controlling physical and human resources externally, in *ba* the latter are understood as creative factors immersed within concrete circumstances. Rather than enforcing universal, abstract rules from above,

79 Robert M. Grant, ‘Toward a Knowledge-Based Theory of the Firm’ *Strategic Management Journal* 17 (Winter Special Issue) (1996) pp 109–122.

80 The notion of ‘pure experience’ has been coined by William James as for example in ‘A Word of Pure Experience’ *Journal of Philosophy, Psychology, and Scientific Methods* 1 (1904) pp 533–543; 561–70. It is also plays a prominent role in Nishida Kitarō *An Inquiry into the Good* Masao Abe and Christopher Ives (trans.) New Haven and London: Yale University Press 1990.

81 In fact, the Japanese term can be read both in the singular and the plural. This is because Japanese language never distinguishes between the two forms. *Uchi*, for instance, can mean ‘the house’ or ‘houses’ depending on context.

82 Louis Putterman and Randall S. Kroszner (eds.) *The Economic Nature of the Firm, A Reader* Cambridge, Cambridge University Press 1996.

83 Ikujiro Nonaka and Ryoko Toyama ‘The Theory of the Knowledge-Creating Firm: Subjectivity, Objectivity and Synthesis’

leaders are ‘to read the situation’ so as to emphatically share it with others. *Phronesis*, the Greek term for practical wisdom, lies in the ability to engage in and cultivate sharing among the *ba*’s members so as to create care, trust, and, probably most importantly, values.<sup>84</sup> This wisdom is not to be performed by a single mind, Knight’s explorer/entrepreneur, held apart and over the others, but only by one horizontally aligned with the simultaneity of concrete action and intuition of the many.<sup>85</sup>

The single most obvious flaw in applying a topological understanding of space might be seen in its apparent incapability of capturing the firm in easily comprehensible, unequivocal terms. Especially theorists trained into the cognitive frameworks of either container space or relational space might accuse it of needless obfuscation and woolly thinking. However, again we suggest conceiving such ‘incapability’ not as a weakness, but as strength. While it is true that our notion of *ba* defies the Coasian or the Knightian standards of being ‘efficient’ or ‘manageable,’ it does so because it seeks to capture an essential element of the living, dynamic reality of firms that lies outside of the metric used by both of those frameworks. There is, it turns out, a price to pay for the abstraction that is employed by economists or management scholars to divide reality into defined snippets that can be captured by a hierarchy of categories and rules. This price lies in the fact that the initial condition that makes this abstraction possible is not accounted for or justified; instead, it is dealt with by being assumed away through the use of an axiomatic set of definitions and postulates. “‘To reduce’ means not only to simplify, schematize, dogmatize and classify. It means also to arrest and to fix, to change the total into the partial while laying claim to the totality through extrapolation; it means to transform totality into a closed circle.”<sup>86</sup> Thus the absence of dynamic change is turned into a boundary condition; a problem that cannot be overcome by the respective theory itself, but only by introducing a theory of ‘higher order.’<sup>87</sup> In other words, only when we master new cognitive frameworks, and the new set of both theoretical and practical tools associated with them, are we to enhance our understanding of the dynamic reality of firms. In Coase, or in any other theory rooted in the cognitive framework of space as a container, all resources, production technology, inputs and outputs are treated as givens. Any change in the fundamental economic data remains thus inconceivable because its absence is presupposed a priori. It remains impossible to inquire into the process of their formation or creation.<sup>88</sup> When, however, the economic system reaches an inflection point, a crisis, signifying a major change, we find ourselves in need of adopting an entirely different cognitive framework. In the West, the one to hand is namely that of relational space as it underlies, as we have shown, the Knightian view

84 Georg von Krogh, Kazuo Ichijo and Ikujiro Enabling Knowledge Creation pp 45–68

85 A more detailed account such managerial implications can be found in: Ikujiro Nonaka, Ryoko Toyama and Toru Hirata Managing Flow pp 53–69. In the following we focus on an issue of more fundamental, methodological importance.

86 Lefebvre quoted in Robert Cooper ‘The Open Field’ Human Relations 28 (1976) pp 99–1016, p 1010

87 Michael Polanyi The Tacit Dimension New York, Doubleday 1966

88 Jay B. Barney and Delwyn N. Clark Resource-Based Theory. Creating ad Sustaining Competitive Advantage Oxford, Oxford University Press p 257

of the firm. Here, change in objective data or information becomes explicable against the given background of individual consciousness. In this way, the human mind comes to be understood as the underlying 'source' of all changes in organisational structures. Still, an important aspect of the dynamic and living reality of firms is yet missing. This is because individual consciousness is perceived as fixed and given; its internal dynamic and changing character remains obliterated. Knightian theory, in as much as methodological individualism as a whole, falls thus prey to the so-called "fundamental attribution error" pervading much of Western thought.<sup>89</sup> This error consists in attributing behaviour to presumed dispositions or characteristics of individuals by inventing strong dispositional explanations for behaviour while entirely ignoring important situational factors arising in social contexts. As a result, the dynamic reality of acting and productive human beings is left unaccounted for. Our suggestion of a cognitive framework of topological space is meant to overcome the inherent limitations in the choice between these two space frameworks, going beyond Coasian determinism and Knightian subjectivism to explain the dynamics of enterprise by an appeal to pure processual thinking. Grounding itself in process, the knowledge creation theory of the firm is concerned with generating a whole new set of managerial tools out of this fearless sense of the indeterminacies at play.

## Conclusion

In the preceding sections we introduced three different spatial cognitive frameworks and explored their decisive influence on the Coasian, Knightian and Nonakaian views of the firm. We hoped to show, through this comparative approach, the unique and innovative features of the knowledge creation theory of the firm, which uses the Japanese notion of *ba* to understand the firm's dynamic reality. More specifically, we showed how the Coasian and Knightian views fundamentally, albeit implicitly, rely on two conceptions of space central to Western thought: the concept of space as a container and the concept of relational space. Also, we explored the very different mental map of topological space developed in the Japanese context and explained the meaning and importance of *ba* against this methodological background. In concluding our paper we wish to briefly outline the question of how those three views of the firm interrelate. At first sight it might seem as if they were mutually exclusive. In fact, as we have shown in the preceding section, the Knightian view attempts to capture part of the dynamic reality of firms that cannot be possibly thematised by Coase, while the Nonakaian view seeks to explain other aspects of this dynamic reality that can become an object of investigation neither within Coase's nor Knight's theory. In other words, from the standpoint of either Coase or Knight, a true understanding of the firm as *ba* cannot possibly arise; it remains systematically excluded from theoretical investigation.

<sup>89</sup> Richard E. Nisbett *The Geography of Thought How Asians and Westerners Think Differently ... and Why* New York, The Free Press 2003, p 123–27

Glancing to the theory of science, it becomes obvious that this has to be necessarily so. This is because it is logically impossible to reduce a richer, more dynamic view of reality to a more simple, abstract one while preserving all the features that make the former dynamic. The simpler one cannot be constructed from the richer view.<sup>90</sup> As we have tried to show in the preceding section, the dynamics of change in fundamental variables or data cannot be understood by a theory that is designed in principle not to recognise those changes.

This does not mean, of course, that we cannot state any meaningful relationship between abstract, static theories based on substance on the one hand and more concrete, dynamic theories based on process on the other. While it is true that we can never construct the latter from the former, the former can be conceived as special cases or instances of the latter so as to become meaningfully included within it. We suggest conceiving of the three cognitive frameworks of space central to our argument not as mutually exclusive pictures of reality, but as constituting collectively a common multi-layered framework in which the static, more abstract understandings of space appear, under stipulated conditions, as important special instances of the more dynamic and concrete one. More specifically, we propose to view the Knightian theory of the firm to be a special case of the Nonakaian one. This is because the complex cognitive framework of topological space can be effectively reduced to that of relational space as soon as it can be safely assumed that no alteration of the underlying, mediating place of interaction occurs. This is apparently true for all cases, in which *ba* represents a constant, robust background, against which each member of the firm can develop stable individual characteristics. This would be the case whenever interaction among individuals can be reduced to mere routine or habitual performances directed at ends or goals commonly accepted across the whole organisation structure.<sup>91</sup> Contrariwise, the presence of 'creative routines' or *kata* will make the Nonakaian view of the firm preferable to the Knightian for explanatory purposes. *Kata* differ from a simple routine in that they contain continuous self-renewal processes so as to change patterns of mutual interaction.<sup>92</sup> As continuous processes of self-renewal, they destabilise and affect the boundary conditions of the Knightian view of the firm and, as such, cannot be meaningfully accounted by this view. Accordingly, strategic management aiming at changing business routines will have to adopt the ambiguous, metaphorical language and approaches of intuitive understanding such as the knowledge creation theory of the firm aims at developing. In those instances, however, in which organisations efficiently function as a routine, it might prove more practical to reduce the potential sources of change to the decision making processes occurring in individual's heads, such as that of the Knightian entrepreneur, thus in effect

90 Robert E. Carter 'The Nothingness Beyond God. An Introduction to the Philosophy of Nishida Kitarō' St. Paul (Minn.), Paragon House 1998 pp 28–30

91 Richard R. Nelson and Sidney G. Winter 'A Evolutionary Theory of Economic Change' Cambridge (Mass), Belknap Press of Harvard University Press 1982

92 Ikujiro Nonaka and Ryoko Toyama 'The Theory of the Knowledge-Creating Firm: Subjectivity, Objectivity and Synthesis' 430

reducing topological space to relational space. Here, the role of strategic management becomes limited to explaining uncertainty arising out of individual managerial decisions that bring about uncertain change in fundamental, objective data, for example by deciding what kind of products to produce.<sup>93</sup> Such change, in turn, cannot be meaningfully accounted for in the Coasian framework because the latter simply assumes its fundamental characteristics away by presupposing objective data (in the sense of inputs, outputs, resources and capabilities) as its single most important boundary condition. Said differently, Knightian uncertainty can never be explained by Coase's theory. Conversely, however, Coase's view of the firm can be understood as a special case of the Knightian theory of the firm (and thus of the Nonakaian as well). Once we can treat objective data to be finally decided upon by individuals, the dynamic reality of firms can effectively be reduced to instances of Coasian risk only: change can be conceived of as occurring uniformly only, being 'constant' in its operation so as to be captured by precise mathematical language.<sup>94</sup>

For too long, economics and management have been implicitly caught in a single way of looking at the world only, using mental maps that only work given certain conditions and assumptions. Today, we need to consciously overcome this situation by acknowledging the plurality of cognitive frameworks in intercultural and cross-cultural perspectives and use them comparatively in order to recognise our conceptual blind spots. In doing so, we will avoid the danger taking any framework for a map to the whole of reality. There is no such map.

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93 Donald J. Boudreax and Randall G. Holcombe, op cit

94 Frank H. Knight Risk, Uncertainty and Profit pp 313-18

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