# WHAT TRIGGERS MANAGEMENT INNOVATION?

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## ABSTRACT

There is a popular tendency in management science towards what could be called "theory denial": the denial of the significance of theory for the development of management thought and action. We contend that this theory denial is just wrong, in the light of empirical evidence, and that is a damaging idea, because it diverts the attention of the scholarly community away from the core issues of the field. In this paper, we consider two variants of this theory denial, purporting to reveal the serious problems in their justification.

First, the approach stressing the importance of studying how ideas are translated into solutions by organizations is considered. It is shown that there two unsubstantiated assumptions, first about the relative lack of importance of the (solution) idea, and second about the prior existence of such ideas.

Second, a recent influential view on management innovation and the process through which it emerges is examined. This view focuses on the individuals (from inside and outside the organisation) who drive the innovation process and on the phases of the innovation process itself. The motivation for change is represented as coming solely from a perceived shortfall between the organization's current and potential performance. Ideas, it would seem, arise spontaneously to fill this gap. We present historical examples to argue that the genesis of innovative management thinking can be much more closely accounted for and that ideas can themselves have a role in motivating change. Through exemplary cases, we contend that new concepts of production have operated in a way resembling the role of a scientific paradigm, as defined by Kuhn. A leading aspect of such a paradigm is that it defines criteria for choosing problems. The concept precedes and drives the innovation, functioning as a paradigm which guides the development of detailed solutions to problems which otherwise would not be visible. Indeed, the developments of new concepts of production seem to have triggered a long-standing stream of interrelated management innovations. Thus, rather than arising spontaneously in response to organisational need, "management ideas" have arisen in the context of an emerging theory of production.

Thus, we contend that the role of management scholars is not only to come up with creative ideas or to address the translation of ideas, as held in the mainstream view, but rather they should develop new concepts and theories on phenomena relevant for management (such as production), based also on a critical scrutiny of present ones, clarify and make explicit concepts in use that are implicit, and co-develop new methods based on proven or promising concepts.

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## INTRODUCTION

The last two sentences in the paper by Morris and Lancaster (2006), titled "Translating management ideas" and addressing the introduction of lean management into the construction industry, are as follows:

> Or, as policy makers pursue other management ideas, lean will become outdated and its attractiveness decline. Such is the nature of fashion.

To those, who have tried to promote lean construction as a theory-based innovation, this allusion to lean as a management fashion is certainly disappointing, if not disturbing. However, that paper is not an outlier in the research literature. Rather, it exemplifies a popular tendency in management science towards what could be called "theory denial": the denial of the significance of theory for the development of management thought and action.

We contend that this theory denial is wrong, in the light of empirical evidence, and that it is a damaging idea, because it diverts the attention of the scholarly community away from the core issues of the field. In this paper, we consider two variants of this theory denial, purporting to reveal the serious problems in their justification. Thus, first, the underlying ideas of "idea translation" (which have provided the intellectual basis for the mentioned paper by Morris and Lancaster) are critically considered. Second, we examine the framework of management innovation, as recently introduced by Birkinshaw, Hamel and Mol. The paper finishes with concluding remarks.

## TRAVELING OF IDEAS

In the influential writing of Czarniawska & Joerges (1996), the importance of studying how ideas are translated into solutions by organizations is promulgated as follows:

> With some exaggeration, one can claim that most ideas can be proven to fit most problems, assuming good will, creativity and a tendency to consensus. It is therefore the process of translation that should become the concern, not the properties of ideas.

It is thus implied that management ideas as such, although necessary as ingredients, do not play a major role; it is not important how good they are, as it is the implementation process that makes them to work (or not) in a particular situation. But where do the ideas, so necessary but as such insufficient, come? Czarniawska and Joerges (1996) have the following answer:

> Most ideas always float in between time/space; it is the repetitive touch downs in local places/moments which make the difference.

Where does this lead us? The implication is that the community of management scholars should not invest time and energy into developing and testing theories to stimulate new managerial solutions, as the management ideas needed exist already and their properties, anyway, are not the concern.

Let us more closely examine the claims of Czarniawska and Joerges. First: "that most ideas can be proven to fit most problems, assuming good will, creativity and a tendency to consensus." However, as the wording indicates, they do not provide that proof. In our opinion, no such proof can be given to this vaguely formulated claim.

Different parties will namely disagree on how "to fit" and "most" should be defined, and what were the finite groups of ideas and problems, from which we take the "most" into consideration. However, common sense says that there are a myriad of management ideas and likewise a myriad of problems, and only by extremely stretching the meaning of "to fit", there could be any hope of most ideas fitting to most problems. But there is an even more significant argument in play here. The value of a management idea does not lie in our ability to make it fit reality, or even in its availability for describing, or explaining reality. Surely, for management research, the only question can be 'does it help improve performance?' This is a much tougher test – and this is where many ideas can be expected to fail[3].

Second: "Most ideas always float in between time/space…" We think that this, implicitly, refers to the principle of plenitude, as named by Lovejoy (1936). According to this principle, all generic possibilities will be actualized. Lovejoy contends that this principle has existed throughout history. Hintikka (1976) pinpoints one specific variant of this principle, related to scientific and practical knowledge, as voiced by Aristotle in Metaphysics:

> But if one were to separate the first point from these additions […]one must […] reflect that, while probably each art and each science has often been developed as far as possible and has again perished, these opinions, with others, have been preserved until the present like relics of the ancient treasure. Only thus far, then, is the opinion of our ancestors and of our earliest predecessors clear to us.

According to Hintikka, in Aristotle's intentions, the principle can be formulated: No unqualified possibility remains unactualized through an infinity of time. Thus, in the infinite past, every idea must have been invented[4].

Paradoxically, although we found here that the underlying idea of Czarniawska and Joerges itself, the principle of plenitude, can be traced to the beginning of known philosophy, and has thus indeed "always floated", we cannot accept the general claim that most ideas have always existed. Namely, the corollary to this principle is that there are never or at least few new ideas. It would not be too difficult to falsify this, by listing historically new organizational forms, technologies or basic scientific ideas.

The conclusion thus is, that the ideas of Czarniawska and Joerges lie on shaky and unsubstantiated grounds – it would be imprudent to stop searching for new ideas or evaluating ideas, based on their advice.

## MANAGEMENT INNOVATION

Birkinshaw, Hamel and Mol (2008) present a tightly argued view on management innovation and the process through which it emerges. They distinguish between management ideas, on the one hand, and management practices, processes and techniques, together with organizational structures, on the other. Their focus is on the individuals (from inside and outside the organisation) who drive the innovation process and on the phases of the innovation process itself. However, the relationship between ideas and change at the operational level is not made explicit. This omission impoverishes their conception of how such ideas arise and drive innovation. Thus, the

[3] The force of the ideas to be considered later in this paper, in relation to management innovation, is that they are shown to have passed this test.

[4] Interestingly, this had an influence to the method of Aristotle (Hintikka 1976). He believed to be able to solve each problem just by critically comparing the teachings of his predecessors.

motivation for change is represented as coming solely from a perceived shortfall between the organization's current and potential performance; ideas, it would seem, arising spontaneously to fill this gap.

In what follows, we present historical examples to argue that the genesis of innovative management thinking can be much more closely accounted for and that ideas can themselves have a role in motivating change. We take three examples: the Modern assembly line; total quality management (TQM); and the Toyota production system (TPS). Each of these is identified by Birkinshaw et al as a management innovation, though only for the purposes of definition: they make no attempt to examine the specific circumstances in which any of these advances occurred.

## MODERN ASSEMBLY LINE

First, consider the modern assembly line. For most of us, the concept of mass production brings to mind the moving belt conveyor. This concrete and ubiquitous manifestation of Ford's innovative thinking seems to do more than symbolize his revolutionary influence on manufacturing; often, it masks the generic nature of that thinking. Thus:

> The thing is to keep everything in motion and take the work to the man and not the man to the work. That is the real principle of production, and conveyors are only one of many means to an end. (Ford 1926)

Arguably, it was the conception of production as a flow of materials and product that provided the inspiration for the assembly line (Koskela 2000).

## TOTAL QUALITY MANAGEMENT

A similar observation can be made with regard to Total Quality Management. This is characterized by Birkinshaw et al as both an idea and an innovation, thus leaving some doubt as to how the two levels are to be distinguished in this case. In fact, the seminal idea of Total Quality Management can precisely be pinpointed. Shewhart, the father of the quality movement, states (1939):

> Looked at broadly there are at a given time certain human wants to be fulfilled through the fabrication of raw materials into finished products of different kinds.
>
> These wants are statistical in nature in that the quality of a product in terms of physical characteristics wanted by one individual are not the same for all individuals. The first step of the engineer in trying to satisfy these wants is therefore that of translating as nearly as possible these wants into the physical characteristics of the thing manufactured to satisfy these wants. In taking this step intuition and judgement play an important role as well as the broad knowledge of the human element involved in the wants of individuals. The second step of the engineer is to set up ways and means of obtaining a product which will differ from the arbitrarily set standards for these quality characteristics by no more than may be left to chance.

Thus, the underlying idea is that the focus of production management should be the satisfaction of customer wants. This idea is so widely accepted today that it is easy to forget that it was once new; we need to remind ourselves of the contrast between this view and the mass production conception which stressed the reduction in unit cost through the increase in production volume. Shewhart's idea, of course, led to the innovation of statistical quality control, further developed by Deming, Feigenbaum and Juran. There is clear evidence here for the historical precedence of the ideas, which existed in a clearly worked out form prior to their adoption first, to an extent, in

the US war effort and then, more dramatically, in the Japanese post-war recovery. The development of TQM relied on a further distinction between 'q', the consistent achievement of product specifications and 'Q', the value delivered to the customer. Gradually, TQM emerged in Japan and diffused to the West. The recently popular Six Sigma approach is little more than a revised and renamed version of statistical quality control, rather than a different approach merely positioned as a successor to TQM for the sake of acceptance, as Birkinshaw & al. imply.

How should we interpret the emergence and evolution of Total Quality Management and related approaches? It would seem that the understanding of production as fulfilment of human wants – or 'customer needs', in modern parlance – has operated in a way resembling the role of a scientific paradigm, as defined by Kuhn (1970). A leading aspect of such a paradigm is that it defines criteria for choosing problems. Thus, the leading problem of production becomes the problem of satisfying customer needs (rather than, say, the problem of delivering work to the worker). The terms in which the problem is conceived and stated determine the outlines of the solution that will be arrived at.

## TOYOTA PRODUCTION SYSTEM

A similar point may be made with regard to the TPS. It is generally agreed that the elimination of waste is the hallmark of this system, but how did waste become such a visible and fruitful focus for attention? Shingo (1988), a long-standing consultant to Toyota and a chief architect of the system, is explicit about the theoretical development that led to this visibility:

> Production is a network formed by intersecting axes of process (y axis) and operation (x axis). The two phenomena lie on different axes and their flows are, by nature, dissimilar.
>
> [...]
>
> Process refers to the flow of products from one worker to another, that is, the stages through which raw materials gradually move to become finished products.
>
> Operation refers to the discrete stage at which a worker may work on different products, i.e. a human temporal and spatial flow that consistently centers around the worker.

He criticises his Western interpreters for failing to properly make this distinction:

> The West, therefore, ended up imagining that processes and operations are nothing more than overlapping phenomena lying on a single axis. [...] We can see where this led. Some people thought that production as a whole would improve once you improved operations, the smallest units.

Unfortunately, only the waste of underutilized resources can immediately be found by looking within operations. When production is seen instead as the flow of materials, it is possible to readily see such important wastes as rework, inspection, transfer and waiting, which led more or less directly to the basic JIT methods of elimination of separate inspection, cell production and pull production control, and later to many more related methods. It is noticeable that Shingo is here using a time-based flow concept similar to that used by Ford, but using it in a new way. Thus, again, the concept precedes and drives the innovation, functioning as a paradigm which guides the development of detailed solutions to problems which otherwise would not be visible.

A second key aspect of the TPS is often said to be the company's approach to learning, a popular source for discussion being Spear and Bowen (1999), who draw on sustained participant observation to suggest that the 'Toyota DNA' consists in the

use of scientific method as a facilitator to learning and improvement. Thus, whenever Toyota initiates an improvement it is establishing a clearly specified hypothesis which is then tested in a rigorous manner. Though they find the system to be well established and unambiguous in practice, yet Toyota workers are unable to state in explicit terms what it is they are doing. This leads Spear and Bowen (1999) to assume that: "The system grew naturally out of the workings of the company over five decades."

However, the scientific method described by Spear and Bowen can be seen as a systematic use of the Plan, Do, Check, Act (PDCA) cycle which was devised by Shewhart in the 1930's and introduced into Japan by Deming as part of the post-war construction effort. The foundational ideas are clearly visible in Shewhart's (1931) original presentation:

> It may be helpful to think of the three steps in the mass production process as steps in scientific method. In this sense, specification, production, and inspection correspond respectively to making a hypothesis, carrying out an experiment, and testing the hypothesis. The three steps constitute a dynamic scientific process of acquiring knowledge. […] Mass production viewed in this way constitutes a continuing and self corrective method for making the most efficient use of raw and fabricated materials.

This method has been widely taught in Japan since 1950, as stated by Deming (Walton 1986):

> The Shewhart cycle was on the blackboard for top management for every conference beginning in 1950 in Japan. I taught it to engineers - hundreds of them - that first hot summer. More the next summer, six months later, and more six months after that. And the year after that, again and again.

Thus, the true significance of Spear and Bowen's finding would appear to be that Toyota has taken the teachings of Deming seriously.

### CONCLUSIONS

In conclusion, the landscape of management innovation illustrated through these examples looks starkly different from that portrayed by Birkinshaw et al. The development of new concepts of production seems to have triggered a long-standing stream of interrelated management innovations. Thus, rather than arising spontaneously in response to organisational need, "management ideas" have arisen in the context of an emerging theory of production in which key concepts such as 'flow' and 'learning cycle' figure strongly. These theoretical concepts function as 'mother lodes' which can be mined for decades for innovations.

## CONCLUDING REMARKS

Thus, the results of our analyses support a different and more precisely defined role for management scholars than is suggested by Czarniawska and Joerges, who call for management scholars to address the translation of pre-existing ideas, or Birkinshaw and his co-authors, who call only for management scholars to be more creative in the development of new ideas. We suggest a much more focused and systematic task to: (1) develop and test new concepts and theories on phenomena relevant for management (such as production, largely neglected by management scholars), based also on a critical scrutiny of present ones; (2) clarify and make explicit those concepts in use that are implicit; and (3) co-develop new methods based on proven or promising concepts. In this way, management theorising should be focused, not only

on problems in management practice but also, crucially, on creating conceptual and theoretical understanding of the phenomena involved in management. Thus, problems in management practice can be solved and opportunities utilized through the innovation inspired by management theory. We suggest this as a way to assure the relevance of developments in management science, and its sub domains, such as operations management and construction management.

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