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ISSN: 1331-677X (Print) 1848-9664 (Online) Journal homepage: https://www.tandfonline.com/loi/rero20

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To cite this article: Eva Gatarik (2019) The value of knowledge sharing in decision-making and organisational development: a model-theoretic systemic analysis of an intervention in an Austrian S.M.E., Economic Research-Ekonomska Istraživanja, 32:1, 148-167, DOI: 10.1080/1331677X.2018.1552175

To link to this article: https://doi.org/10.1080/1331677X.2018.1552175

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Published online: 22 Feb 2019.

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ECONOMIC RESEARCH-EKONOMSKA ISTRAŽIVANJA
2019, VOL. 32, NO. 1, 148–167
https://doi.org/10.1080/1331677X.2018.1552175

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The value of knowledge sharing in decision-making and organisational development: a model-theoretic systemic analysis of an intervention in an Austrian S.M.E.

Eva Gatarik

Department of Corporate Economy, University of Economics and Administration, Brno, Czech Republic

ABSTRACT

This paper addresses the question of how to cultivate organisational development to support organisations towards a sustainable future. Seeking to identify, systematise and elucidate the process of redevelopment in an Austrian small/medium enterprise by means of Language-Information-Reality, a multidimensional system of semantics, it is argued that sustainable organisational development can be explained by the enactment and management of four well-selected knowledge components: expertise, competence and capabilities in their operational influence upon organisational action, as well as explanatory meta-theoretical reflection. This paper contributes to the theory on organisational development by demonstrating the value of knowledge sharing by individual employees from different domains of expertise, and acknowledges the research leading to the paradigm of sense-making in organisations.

ARTICLE HISTORY
Received 27 March 2017
Accepted 4 June 2018

KEYWORDS
Knowledge; meaning; sustainability; organisational development; business continuity management; the L.I.R. (Language-Information-Reality) model-theoretic systemic framework of analysis

1. Introduction

Classical 'socio-economic', approaches, i.e., committed to the *methodological behaviourism*, to organisational development are often influenced by the metaphorical use of an evolutionary perspective (Aldrich, 1999). Generally, these approaches hold that organisational development results from an emergent, evolutionary process that starts with variation (the generation of opportunities) followed by positive selection and subsequent retention of certain practices, routines and competencies (McKelvey & Aldrich, 1983; Weick, 1979). Thus, in the application of an evolutionary framework, organisations are described in terms of bundles of practices, routines and competencies that evolve historically along smooth trajectories (Nelson & Winter, 1982). It is assumed that these practices, routines and competencies depend on the capabilities, i.e., mental models, cognitions, behavioural patterns, norms, and values (e.g., Helfat

CONTACT Eva Gatarik eva.gatarik@econ.muni.cz

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et al. 2007) that are intrinsic to a given organisation (Winter, 2000; Bettis & Prahalad, 1995).

However, while this practice of 'blind' evolution dominates in highly dynamic environments, it is often negatively associated with performance (Augier & Teece, 2008; Teece, 2007; Winter, 2003; Eisenhardt & Martin, 2000; Leonard-Barton, 1992). The tendency of organisations to stick stubbornly to strategic orientations that have proved successful in the past is seen as limiting their potential to be receptive towards innovative and fresh perspectives that differ in any significant way from the current ones (Amason & Mooney, 2008; Bettis & Wong 2003; Bettis & Prahalad, 1995; Leonard-Barton, 1992; Miller & Chen, 1996; Burgelman, 2002). Moreover, the increasing simplification of formal organisational practices and routines, as a frequently observed phenomenon, potentially leads to self-referential blockage of options, and path-dependence (Miller, 1993; Schreyögg, Sydow & Koch, 2003). Equally, it has often been observed that a tendency towards exploitation steadily reduces the internal versatility of established organisations, limiting their ability to cope with environmental changes (Cyert & March, 1963; March, 1991; Levinthal & March, 1993).

In applying the evolutionary perspective on organisational development, the classical socio-economic approach, as presented so far, aims to show the impact of practice, routine and competence rigidities as structural inertia on organisational sustainability (Gilbert, 2005) and aids understanding of why and how decisions taken in the past can influence current practices: typically, initial internal evaluation and decision events that have led to successful outcomes in the first instance are stored as 'capabilities' in the form of mental models, routines, practices and structures within the organisation, which in turn often create a base for subsequent evaluation and decision-making: hence Henderson and Stern (2004: 47) refer to 'path-dependence' of internal evaluation and decision practices.

From this methodological perspective, historically evolved internal evaluation and decision practices therefore have the potential increasingly to limit the absorptive capacity of organisations (Cohen & Levinthal, 1990) since they operate as 'self-reinforcing routines': as firms accumulate experience with internal evaluation and decision, which is particularly the case with incumbent firms, the inherent beliefs, norms and values (capabilities) guiding the decision become reinforced. Garud and Rappa (1994) refer to the notion of evaluation routines to stress the patterned, deeply embedded, normative and repetitive character of internal evaluation and decision practices. Because of the pattern-based repetition of once-successful evaluation routines, organisations risk limiting their potential since they are unable to evaluate newly generated knowledge when employing their traditional evaluation routines (Dosi, 1982; Garud & Rappa, 1994).

The model-theoretic systemic approach offered in this paper instead sees organisations as systems of multidimensional semantics, which includes the sense-making perspective (Weick, 1995; Sandberg & Tsoukas, 2014), but goes beyond because in the context of studying sustainable organisational development it appears essential to extend the classical socio-economic approach (not only in applying the evolutionary perspective on organisational development) by re-introducing semantics or meaning

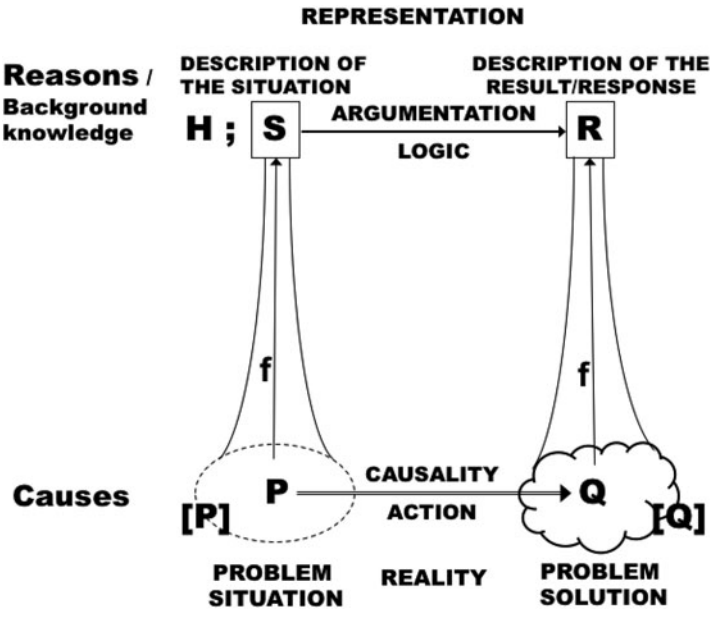

Figure 1. The L.I.R. (Language-Information-Reality) model-theoretic systemic framework of analysis, connecting the bottom level of real-life processes guided by causal connections/causal necessity with the top level of language, i.e., reasons or rather logical necessity. *Source:* Author.

(Bruner, 1990), and even semantic engines (Haugeland, 1981), into the game of research. The aim is to get meaning or rather the mind 'back into the human sciences after a long cold winter of objectivism' (Bruner, 1990), especially due to methodological behaviourism (assuming controlled reproduction of a result as indicator of objectivity).

This paper is organised as follows. In the next section, the Language-Information-Reality (L.I.R.) approach, a 'sense-sensitive' multidimensional system of semantics (Born & Gatarik, 2013, 2014; Gatarik & Born, 2015), is introduced. L.I.R. is then employed as the primary conceptual and methodological framework in the identification, systematisation and elucidation of the business continuity management practice supporting sustainable organisational development in an Austrian small/medium enterprise (S.M.E.). The investigation and analysis of the enterprise includes tracking the mode of decision-making prevailing prior to the application of the new business continuity management practice; the new business continuity management practice and subsequent business development; and the actual development of the enterprise. In addition to this, the new business continuity management practice is addressed in terms of monetary incentives and consideration of the size of an organisation.

2. Framing organisations as systems of multidimensional semantics: the L.I.R. approach

This section explores some links between knowledge/meaning, linguistically codified representations, and human action within a multidimensional system of semantics by means of the L.I.R. framework (Born & Gatarik, 2013, 2014; Gatarik & Born, 2015).

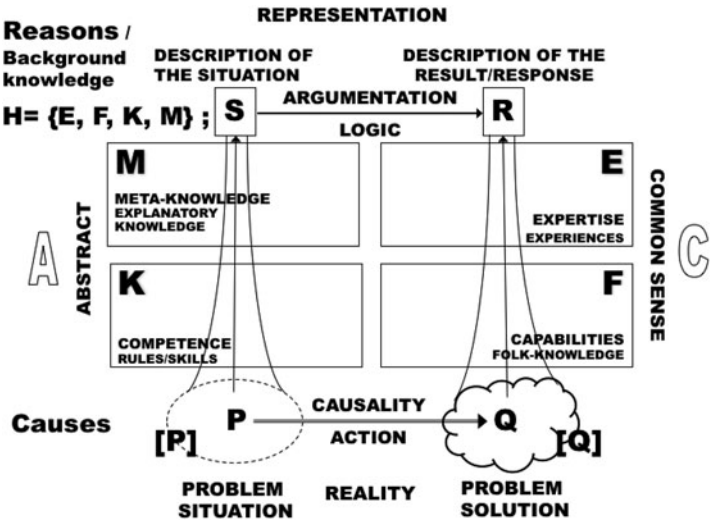

Figure 2. The L.I.R. model-theoretic systemic framework of analysis, showing knowledge components. *Source:* Author.

This approach has implications for institutionalised social contexts – that is to say, for formal organisations or organised contexts (the two terms are used interchangeably here). In general, the L.I.R. framework concerns the epistemological and logical foundations of sense-making (Weick, 1995) and can help to analyse and furthermore to identify limitations, open questions and select with sense-making associated research directions. The basic components of the L.I.R. framework appear in Figure 1.

In Figure 1, P designates a given, constructed or assumed problem, or any kind of starting situation, within selected parts of reality, that is eligible for transformation, causally or by the application of systematic means of production (organisational routines), into a result (Q, quest) or a solution, as yet not clearly defined (therefore depicted within a cloud in Figure 1). If the problem is then abstracted to the level of representation (thinking/argumentation, formal logic), then the value S represents the specific problem, established largely by means of specific background knowledge (H, hypotheses). One and the same representative value (sign/characteristic description) may work via feedback for the creation of a set of quasi-equivalent problem cases (represented as the ellipse [P]). The relationship between elements of reality and their representation in the model is therefore many-to-one (as are all theories, models and maps that aim to reduce the complexity of a real situation by means of more-or-less conscious 'shortcuts' or simplifications, depicted as f in Figure 1, whereby f designates the mapping from the lower level of causes to the top level of argumentations/reasons in the L.I.R. scheme). Similarly, primarily 'constructed' solutions or results/responses (R) may have several quasi-equivalent actualisations in practice (represented as the ellipse [Q]), so the relationship between representation in the model (top level in Figure 1) and reality (bottom level) is one-to-many. It is also possible to describe the transition from P to Q as causally determined processes (Q follows in time upon P), while the transition from S to R is logical and in this sense timeless ('if S, then R' or 'R follows from S'), based on the assumptions about the structure of the world intrinsic in specific background knowledge (H, hypotheses) (Bruner, 1990; Bruner, 1986: 11; Tsoukas, 2005: 233–234).

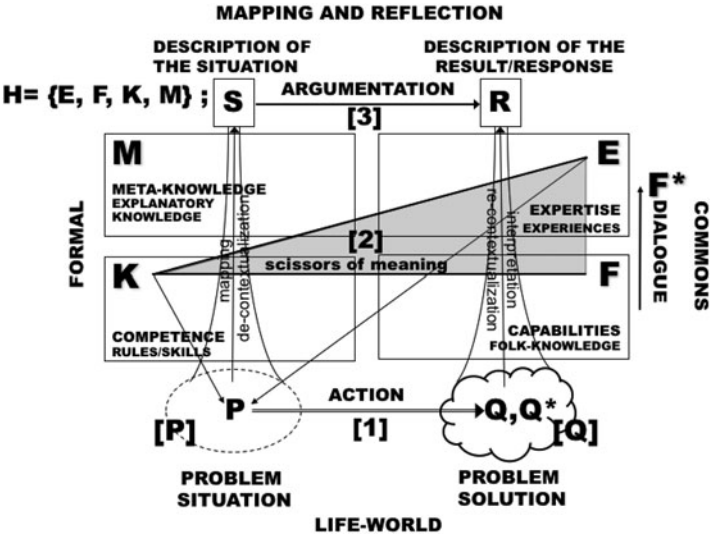

Figure 3. The L.I.R. model-theoretic systemic framework of analysis, showing the 'scissors of meaning' and levels of reflection. *Source:* Author.

However, in order to reach the desired target state, problem solution, or produced items Q as described in R, the problem has first to be analysed and appropriate decisions have to be made. The processing of information corresponds only in the middle realm of experience to our causal experiences, expressed by the formula f(P==>Q) ≅ f(P) ➞ f(Q) or f(P==>Q) = S ➞ R to capture a locally and approximately valid homomorphism (i.e., a structure-preserving mapping).[1] Therefore, further knowledge components, in Figure 2 depicted as E (expertise), F (folk knowledge, capabilities), K (calculi, competence/skills, rules/routines) and M (structural meta-knowledge), can be, indeed should be, involved in the analysis of the problem in the area of representation and in the decision-making processes that follow, to enhance the potential for sustainable solutions (Tsoukas, 2009; Shotter & Tsoukas, 2014a, 2014b).

The four knowledge components E, F, K and M also instantiate knowledge roles that may be enacted in the process of addressing a real-life situation (Tsoukas, 2005: ch. 3). The right side of the framework comprises experiential knowledge E (first-person knowledge) and cultural background knowledge/capabilities F (second-person knowledge), together as common-sense knowledge C. The left side of the framework comprises rules/practices exhibiting competences and skills K (third-person knowledge) and explanations M, and involves abstract knowledge A. In more detail, E represents the 'expert knowledge', or experiential knowledge, of individuals or groups of attuned individuals who, in relation to a given problem, may exercise particular expertise and therefore have the potential to act effectively. Enacting F can contribute primarily lay knowledge or capabilities in applying rules. However, it cannot be stated too strongly that this contribution should not be underestimated or held in contempt; the addition of everyday social and cultural knowledge/capabilities may well prove important. Since it relates to real-life situations, this knowledge may be described as material or concrete. In contrast, K comprises the 'computational' knowledge that contains all the appropriate 'algorithms', rules and routines appertaining to a given

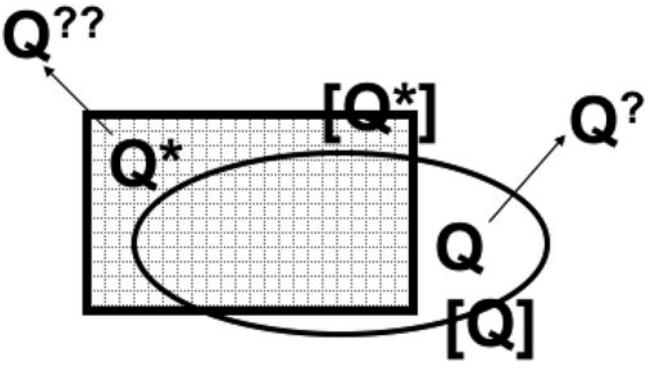

Figure 4. The L.I.R. model-theoretic systemic framework of analysis, showing details of application of the 'scissors of meaning'. *Source:* Author.

system of competences or skills. It operates formally. Meta-knowledge M expresses comprehension and emergence of basic or underlying structural knowledge, models and principles.

In addressing the links between expertise, competence and capabilities in their operational influence upon organisational action and, further, explanatory meta-theoretical reflection, we subsume these concepts loosely into their knowledge roles E, K, F, M explicated in the L.I.R. scheme. Here, the term 'loosely' correlates to the idea of Wittgenstein's 'family resemblance' (Wittgenstein, 1953), which, in broad terms, means that the concepts in use overlap, i.e., they are not identical in the sense that there is one single thread making up the 'rope' (of argument) as such, to use a well-known Wittgenstein metaphor. They overlap, but there does not necessarily exist a common core (in set-theoretical language: the intersection can be empty).[2]

The idea of the 'scissors of meaning' indicated in Figure 3 involves the differences between knowledge components E and F, in terms of their effects upon the acceptance of the solutions produced as Q, since when applying either expertise E or user knowledge F to certain rules/routines installed at K, different solutions Q, Q* may emerge (Tsoukas, 2005: ch. 13), in symbolic terms: <K|E> (P) ==> Q in contradistinction to < K|F> (P) ==> Q*.[3]

For illustrative purposes and visualisation, the rectangle in Figure 4 designates the set of all accepted solutions Q* produced by applying weak or standard background knowledge F to the formally given rules/routines K. In equivalent fashion, the ellipse designates the set of all accepted solutions Q generated via expert knowledge situated at E applied to the same rules/routines K. Further, $Q^{??}$ designates possible solutions that may arise out of applying weak background knowledge F to a set of rules and points out that these solutions are admissible according to the given and weakly reflected formal system K, but not according to the corrective, experience-developed background knowledge inherent in E. Possible solutions that may emerge by applying expertise E to a set of rules appear at $Q^{?}$, which means that these solutions cannot be accepted and understood as solutions according to background knowledge F (e.g., of managers); however, they may still be meaningful innovations. Thus, the scissors of meaning symbolise the problem of influencing and correcting sense/meaning,

acceptance, approval and application of solutions via the relevant components of background knowledge in the L.I.R. scheme.

The L.I.R. approach to analysis highlights that effective knowledge management requires more than just a consideration of the relationship between formalised and personal knowledge as a two-way street, i.e., formalised knowledge fed to people to be operationalised, and personal knowledge formalised to be made available within an organisation (Tsoukas & Vladimirou, 2001; Tsoukas, 2005: ch. 5). Consideration of the interplay between expertise/experience E and cultural knowledge/capabilities F as 'commons' (Hess & Ostrom, 2007; von Krogh, 2003) (see Figure 3) enables people to engage their thinking and action in continuous dialogue (Schön, 1983) between experts instantiating the knowledge role E and quasi-lay people exerting knowledge role F. This interplay changes the relation between them in terms of knowledge – lay people may well be experts in other areas, while knowledge roles are considered to be dynamic, not just static, which is one of the factors facilitating the 'coming about' of innovation in both an explanatory as well as a descriptive sense. Applying the enhanced background knowledge of quasi-lay people extended to F* via dialogue and the sharing of experience/expertise with people enacting knowledge role E may produce new problem solutions Q (Tsoukas, 2009; Weick, 1979), which are open to additional acceptance by quasi-lay people at F (e.g., the managerial elite may enact the knowledge role of lay people, as already mentioned). In other words, the consideration of organisational knowledge as a commons may exert pressure towards the necessary dialogue and the sharing of experience/expertise between experts at E and users at F and, in this way, positively influence the success of an organisation in terms of supporting innovation in the realm of routines, rules, and/or competences/skills K, improving competitive advantage as well as general stability not only for a specific organisation, but also for an entire given habitat (Gatarik & Born, 2015).

Finally, the L.I.R. approach as a means of 'reflective correction' acts as a decision support device for selecting and delimiting a set of solutions as acceptable. It actualises three levels of reflection (see Figure 3). At the first level [1], the proposed or produced 'solutions' Q, Q* via expertise E and user knowledge F are evaluated. At the second level [2], we evaluate/reflect upon the means – here, the rules, structures, expertise, etc., that produce solutions Q analysed as results R. Level [3] is the process of reflection of the justifications for what is proposed by the decision-makers and their selection of the measures to be taken to generate sustainable results.

The L.I.R. approach also provides a foundation for the investigation of organisations as knowledge systems (Tsoukas, 2005: ch. 4; Tsoukas & Mylonopoulos, 2004), since the know-how concerning the interplay between the knowledge components and knowledge roles in the L.I.R. scheme is essential, especially in the case of lay knowledge F and experiential knowledge E. The interplay between common-sense knowledge C as a constructive recombination of knowledge components or knowledge roles E and F on the one hand, and abstract knowledge A, consisting of, and building upon, the structural explanatory meta-knowledge M and formal rules or heuristics K on the other, allows the generation of new insights, and thus contributes to expanding the possibilities for thought and action. This is demonstrated by the single case that follows, though the underlying structure can be found elsewhere, for

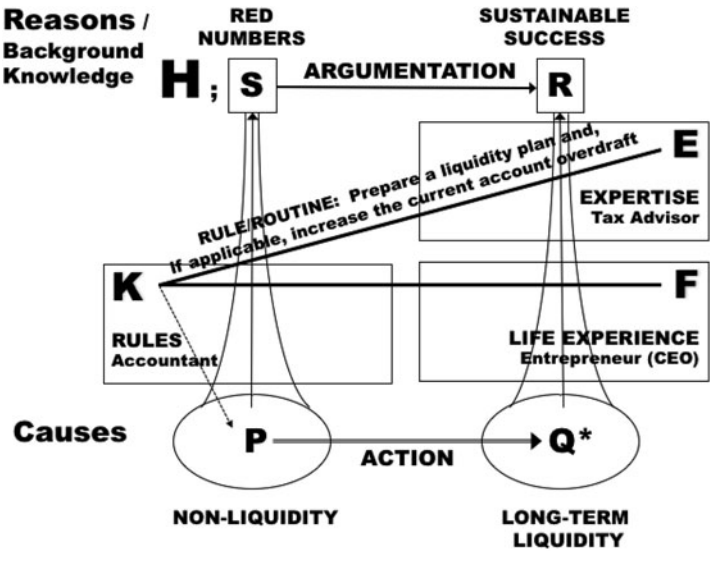

Figure 5. Embedding of the old decision-making model at Beham into the L.I.R. framework, with S defined as a description of the situation, R as the description of the solution/result, and Q* as the real-life result. *Source:* Author.

instance, in *Hilti AG* or *W.L. Gore & Associates, Inc.*, explaining their success (cf. Hamel, 2012).

3. A case for explanatory meta-knowledge

In this section, the L.I.R. framework is employed to identify, systematise and elucidate the redevelopment and business continuity practice at Beham GmbH, an Upper Austrian S.M.E. specialising in the trading of technical products (e.g., ball bearings and chain drives) for more than 60 years. Beham currently has about 50 employees in five directly owned premises, and two franchise partners.

The L.I.R. framework serves in the sequel particularly in matters of reflection, evaluation and explanation, rather than description alone, at three levels: At the first level [1] – the solutions Q proposed or selected (at the bottom level: P ➞ Q) by management; at the second level [2] – the means, i.e., power structures, practices, implicit criteria, values etc. (in E, F, K, M) that produced or selected these solutions; and at the third level [3] – the managerial evaluations and justifications (at the top level: H; S ➞ R) for selected solutions and/or actions proposed to generate and select these solutions.

3.1. Initial situation

Some years ago, Beham GmbH encountered massive financial difficulties. Their budget was simply unable to cover future payments (problem situation P represented in S as 'red numbers' in Figure 5). This liquidity problem (P) was verbalised by an accountant of the firm (competence/knowledge of rules shown at K) and also by the head of the accounts department. On the basis of his own experience, the CEO,

himself a layman (F) to the special issues of tax law and business economics, thought (in symbols, H = {F}; S ➜ R) that his tax adviser could contribute to solving the liquidity problem with his special expert knowledge (E). It should therefore have been possible to reach the target state (R response/result), i.e., the capacity to settle all payments, by developing a liquidity plan that involved increasing the credit limit on the current account to accommodate immediate requirements. Moreover, this solution Q* (Q* indicates the specific implementation of rules/routines K to a real-life situation P under the condition of weak or primarily lay-background knowledge F) was to have been endorsed as a future routine or 'rule' K (determining the transition from P to Q), thus: 'If you are no longer able to service current debts, a liquidity plan will be prepared and, if necessary, the credit limit of your current account will be increased.'

The 'old' model of thinking/argumentation, decision-making and acting at Beham before its redevelopment can (as shown in Figure 3) be reflected and embedded into the L.I.R. scheme in the way integrated into Figure 5.

Figure 5 thus describes how the reproduction of a successful redevelopment P ==> Q could be achieved by formulating a routine procedure K (by and for persons with expertise E). This routine would have been applied within the organisation by persons who had primary user knowledge within this context.[4]

Unfortunately, the firm lacked sufficient credit guarantees to increase the limit of the current account to meet immediate needs. An external economic management consultant was therefore commissioned to suggest a new liquidity plan that would go beyond the existing solution. To make this possible, the cause and origin of the lack of liquidity was sought in areas such as cash flow from business activities that did not belong to the ordinary course of business, cash flow from extraordinary processes, and cash flow from unprofitable branches.

The solution now appeared to be 'calculable', and therefore to be realised quite simply – to close the sections not belonging to the ordinary course of business, to close unprofitable branches, and to avoid extraordinary processes. These highly plausible solutions may have encouraged the credit institution to finance a short-term 'rush-hour of liquidity'.

However, such calculable steps and their actualisation would have achieved, at best, short-term, perhaps medium-term, chances of survival, but no permanent further development would be guaranteed, and the continued existence of the enterprise would be far from assured. Therefore, some new approach to a long-term solution had to be found.

Analysis of strengths and weaknesses has shown that decisive competitive advantage often lies with the employees of the enterprise themselves, many of them individualists with high technical know-how and considerable work engagement. The fact that most employees are not simple delivery systems for orders but are also problem-solvers for clients essentially means that they could very well be unique selling propositions for the enterprise. From the employee point of view, it is more important to decide collectively and act independently than to contribute financially to the enterprise. Put differently, they want to be part of the decision process and refuse to be lured into action by mere monetary incentives. They possess an inherent desire to

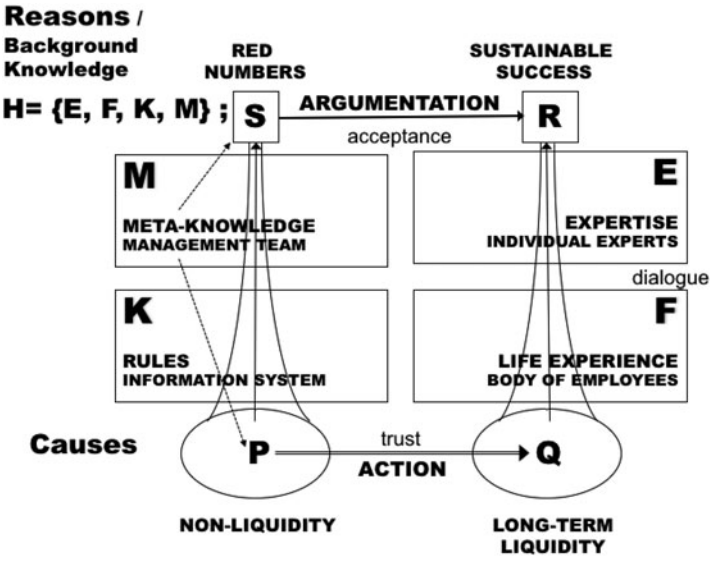

Figure 6. The new decision-making model for innovative and sustainable solutions at Beham GmbH, within the L.I.R. framework. *Source:* Author.

help solve problems and moreover to address customer needs. Both technical ability and a sense of duty motivating action as problem-solvers appear essential prerequisites for such performance-motivated behaviour (McClelland & Winter, 1969).

3.2. Shifting foundations for organisational sustainability

To ensure steady development for the enterprise, the entrepreneur and adviser created a management team of eight workers. The team members were to be supplied with all available information. Everyone was to present their ideas unreservedly, collectively to determine reorganisation steps in advance, and have the capacity to realise all managerially relevant decisions. The team included the entrepreneur/C.E.O., who reserved the right of veto when making decisions, although he has never used the veto; the entrepreneur's wife, who works in customer care and organisation and liaises with the work-force; the director of a subsidiary city branch with years of experience in the industry; and the head of accounting, who had been in the enterprise for 25 years and knows the products well. The team further included an employee charged with the care of key clients, who had been in the enterprise for 25 years, has high technical know-how, and serves as a liaison for customers and suppliers; an employee from a department for which an extension of a specific product group is planned; an IT specialist familiar with the products and business economics; and an adviser with more than 20 years of consulting experience in over 370 companies.

How this step could be used to develop creative, innovative solutions and maximum flexibility appears in Figure 6.

By means of the introduction of the management team, which meets regularly and whose members exchange their expert opinions as reflective meta-knowledge M, the

fourth knowledge component of the L.I.R. scheme has been actualised in the company.

However, the quality and innovativeness of the Beham solutions depends on more than just the implementation of the knowledge component M. Extended involvement of the content of the other three knowledge components of the L.I.R. scheme allows comprehensive knowledge available within the enterprise to be taken into account by means of the management team at M. The precise selection of the members of the management team has ensured that they also convey the particular perspectives and challenges introduced by their various departments (in terms of expertise E) into the decision-making process. Furthermore, these experts have provided an excellent interface with other employees, whose aspirations and opinions (knowledge component F) could thus be said to have been present and represented at team meetings. Finally, through the special use of a sophisticated formal information system K and the extensive experience of an IT specialist as one of the eight members of the management team, still more significant information has been shared.

Further, the members of the management team may also perform and even adjust the various knowledge roles that form the essential theoretical backbone of the L.I.R. scheme. When addressing the topic discussed and the situation, they play a number of roles: they may be specialists – experts; they can provide general knowledge and life experience; they may think and argue in both procedural and regulatory (i.e., explanatory) terms; and they may provide certain reflective external perspectives. However, providing such a range of knowledge conduits requires an unusual degree of deliberate open-mindedness and certainly courage on the part of management. The chief executive himself has to admit that knowledge in general, rather than just his interpretation of the knowledge of people other than himself, may be involved at even the highest organisational levels.

Thus, to enable the members of the management team to work efficiently, several sets of circumstances must prevail, or be consciously promoted. First, a common background knowledge, interpreted in the terms suggested by Charlotte Hess and Elinor Ostrom (2007), has to exist, or such a base has to be actively established over time, in order to enable effective cooperation. Second, there should be a common interest in 'good' solutions to the problems addressed. Third, there must be some consciousness of active listening, which presupposes that it is sometimes possible, at least temporarily, to suppress or suspend one's own opinions in the interests of understanding the opinions of others and checking the accuracy of this understanding with one's own words, or within one's own world-view. Another necessary circumstance is the existence of dialogue, interpreted in the sense suggested by David Bohm (2004), which must take place in an atmosphere of mutual respect, which also implies a certain openness to the views of others. Finally, the highest priority must be accorded to positions of trust in others and their intentions. Such trust may foster the emergence of a 'good' corporate culture and thus acts beyond the decisions of the management team, since the underlying results are well respected by other employees.

In addition to these basic socio-emotional and awareness-based (cognitive) conditions, which have already had a positive effect on the whole enterprise, the overall

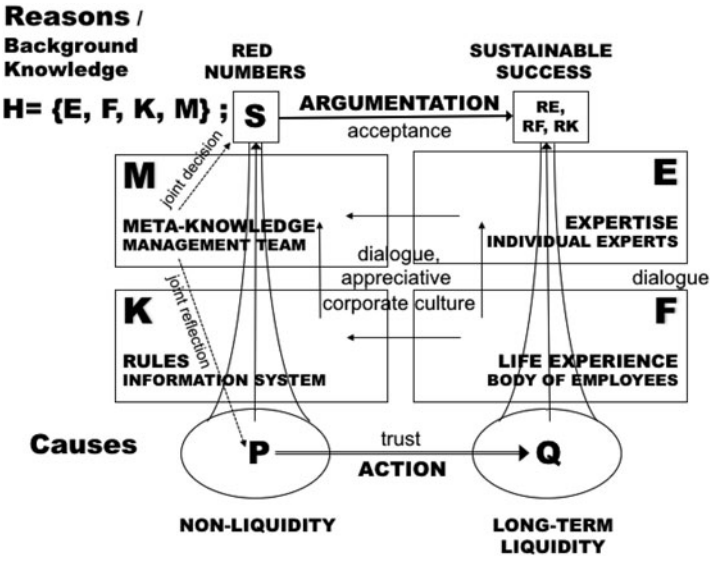

Figure 7. The general conditions of the new decision-making model at Beham GmbH. *Source:* Author.

knowledge-dependent, cognitive objectives of the introduction of the management team have been to enrich meaning/semantics (in the sense of the here-adopted semantic approach to studying organisations in contradistinction to the usual socio-economic approaches) in order to strengthen knowledge communication and interconnection between departments and among employees, achieve better context visibility and knowledge transfer, and to create a setting for a knowledge-based acceptance of jointly reached decisions.

This allows all those concerned with real-life matters, i.e., members of the team as well as the work-force, to understand and properly disseminate the implementation of decisions made. This has also been discussed and proposed elsewhere as 'sense-making in the organisation' (Weick, 1995; Senge, 1999; Sandberg & Tsoukas, 2014).

Using the emergent knowledge arising out of the sum of the points of view of the members of the management team, taking into account their individual experience both of life and professional matters, the management team may use the process of explanation and interpretation of data, information and experience to draw and justify conclusions. These sometimes lead to new proposals for a solution (via S to R and, to varying degrees of intensity effected by a certain knowledge component shown in the representation of the resulting target states expertise RE, rules/competencies RK and capabilities/folk knowledge RF, see Figure 7). These proposals are aligned and associated through dialogue and developed communication, and through specific actions translated into reality Q.

Within the enterprise, the members of the management team are directly involved in the decision-making process and are therefore aware of its implicit rules of reasoning and persuasion, and familiar with them, and know how to implement them. There is common factual background knowledge that lends sense to the rules and consequently allows them to be handled flexibly, keeping options for correction open.

Acceptance of decisions and proposed actions that arise on the part of employees under this special kind of management is crucial. In the studied enterprise, such management relies on the fact that the members of the management team can always contribute their thematically specific information, often determined by their own tastes and consider the various professionally specific impacts of possible solutions in parallel, within the dialogue, providing internal and external perspectives. Moreover, the employees are encouraged to contribute to the decision-making process and trust each other and try something as yet 'untested', significantly facilitating and enhancing the success of the implementation of the decisions at the operational level.

Within the collaboration of the management team it is important that new background knowledge sufficient to allow for mutual and fruitful exchange be created among those members contributing knowledge components F, i.e., those who bring in general knowledge derived from their previous life experiences to certain topics. Existing knowledge within the information system component K needs to be enriched by the life of the system, and when specialist knowledge E merges with the general knowledge pool, it needs to add substantial value and assists in the development of reflective knowledge M within the team.

The example of the studied enterprise demonstrates that management need not necessarily be run under the dogma of 'knowledge is power', but that, in practice, co-entrepreneurship may be pursued actively, knowledge may be shared, in the sense that everyone makes it available, and that mutual cooperation is based on trust (each employee may obtain, without reservation, all available information, and he/she can make mistakes and bring themes into the discussion without censure or lasting disapproval).

This platform not only enables the management team, as already mentioned, to recognise previously undiscovered connections, but it also serves for collective critical reflection upon what has happened, or a vision of what is new. On this basis, it is possible to make decisions at system level. Thus, a new kind of management system is enabled (see Figure7).

3.3. Development and current status of the enterprise

3.3.1. Decisions of the management team

To address the liquidity problems, the following solutions were developed by the management team: one, all the business activities that did not belong to the core business of the enterprise ceased; they were sold or leased. Two, a franchise system was developed for the loss-making branches. The people who had previously run these became independent entrepreneurs. Framework conditions were agreed together with franchisees that ensured a win-win situation.[5] Three, a 'silent participation' was established with a private equity partner for a period of seven years, providing sufficient capital for the enterprise to develop (enabling, for example, an expansion of sales territory).

The crucial nature of information and data to the business was quick to emerge within the team, which met every fortnight to start with, later every six weeks. The IT specialist position, where all the information converges, thus assumed special importance. Further, the nature of the discourse, in which people from different fields

addressed upcoming and potential problems and opportunities arose for cross-specialist learning, was highly appreciated by all participants.

Achievement motivation has increased enormously in the management team (and subsequently throughout the enterprise). Members now maintain that the opportunity to contribute to the shaping of the enterprise is more important to them than holding shares in it, previously considered basic to continued loyalty and enthusiasm.

Interviews with the management team established that, for a large number of employees, the rapid availability of information relevant to changing conditions in purchases and sales had taken on new importance. In response, a purchase and sales team was set up, again composed of those directly concerned with buying and selling. The entrepreneur, his wife responsible for customer care, the IT specialist and the adviser supported them, adding a practical dimension to what was basically an inexperienced team, thus integrating the culture of enterprise development.

3.3.2. Collaboration with the work-force

In general, all the employees work independently. Thus, the employee who picks up the phone addresses customer needs and problems insofar as they lie within his/her fields of competence.

At present, the business managers are aged between 50 and 60. There exists, however, the intention to construct the broadest base possible of workers who possess comprehensive knowledge, particularly including the younger generation. These are considered capital assets. For example, the enterprise announced a tender for the position of 'carer for key clients'. Five people applied, including two from the warehouse section. A decision was made to support all of them, to build on their existing knowledge and supplement any lack of knowledge individually.

In addition to this, new emphasis is now placed on personal contact with all employees, and the level of social interaction between work-force and management has been enhanced, both in and beyond the work-place.

3.3.3. Development in terms of business economics

From the corporate-financial point of view, the positive effects of the re-modelling at Beham GmbH may be selectively summarised after eight years. The company turnover has increased threefold; Beham has been listed as the most successful enterprise of those in which the participating private equity fund has ever invested (proportional to size); and the capital invested by outside parties has been superseded by internal equity capital generated over the eight years. Moreover, after the re-modelling Beham has been the recipient of several business awards, among them the international Best Business Award for Sustainable Management, Europaregion Donau-Moldau, in 2014. The rating criteria were economic success, uniqueness, employee status, innovative power, sustainability and social responsibility.

3.4. Monetary incentives

In retrospect, it was not possible to achieve the desired success in the studied enterprise by means of the old model of thinking, decision-making, and acting – in brief,

the existential liquidity problem proved intractable because previously applied 'formulae' could not function in the long term.[6] Creative, implicit knowledge, supporting flexibility and innovation to be used in a corrective manner sustainable into the future, had to be built up. In terms of creativity, the aim was to support genuine creativity by becoming aware of a new context rather than manipulating existing ones.[7] In the studied enterprise, the employees refused the monetary incentives offered (equity participation) but insisted on being part of decision procedures.

In this light, would it not be desirable to organise work and payment in such a way that would intrinsically satisfy, drafting the extrinsic incentives further to increase willingness to perform, through a system of bonuses or commissions for example? There do exist situations in which such a system may be applicable, sales in particular, but caution is indicated since monetary incentives, as is well known, often act as hygiene factors – elements of perceived 'force' that may even be resented (Herzberg, 1987). Wherever possible, work should be organised in such a way as to provide a degree of happiness and fulfilment, the 'flow experience' (Csikszentmihalyi, 1990). This is the 'better' form of motivation, operating in a longer-term, satisfying manner. Further, where it already exists, it should not be threatened by any attempt to reinforce it with extrinsic incentives.

3.5. Size of the enterprise

The studied enterprise is a typical Austrian S.M.E., with a work-force of 50 employees. However, 'small' constituted an advantage for the described model. A special kind of organisation and management was required, unencumbered by the interpersonal and interdepartmental baggage that so often accumulates in larger companies. Such a form of organisation and management has the capacity to question itself and its own decisions and to implement the products of such reflection relatively swiftly, and with a high probability of acceptance by the work-force (cf. the structuring of *W.L.Gore & Associates, Inc.* in Hamel, 2012, the most innovative firm in its field of industry).

3.6. Epilogue

Although not covered specifically in this investigation, the results make clear that the new business continuity management practice requires outstanding attitudes[8] on the part of entrepreneurs/management and employees. The essential one, the sustainable success of Beham GmbH, is certainly based upon what can be described as 'co-thinking' at the level of the relations within the enterprise but also in relation to it. Given this, the next step is the delineation of the application borders of the business continuity management practice described, or, at the very least, a close look at its personnel and business-cultural baseline situation.

4. Conclusions

The purpose of this paper was threefold: one, to show some of the limitations inherent in the known classical approaches to organisational (re-) development

(e.g., Teece, 2007; Gupta, Tesluk & Taylor, 2007; Puranam, Singh & Zollo, 2006; O'Reilly & Tushman, 2004; Benner & Tushman, 2002; Burgelman, 2002, 1983; Tripsas & Gavetti, 2000; Garud & Rappa, 1994); two, to put forward the L.I.R. approach as a co-option based on the notion of sense-making in organisations and an extension of classical knowledge management by means of model-theoretical structures; and three, to illustrate possibilities how to identify, systematise, assess and develop business continuity management practices and measures of an enterprise with the help of L.I.R.

The L.I.R. approach presented herein exposes epistemological and methodological issues that have important implications for dealing with innovation and the understanding of it, and far more. It seeks to employ the idea that the interplay between *experience/expertise*, practices/routines/competences and capabilities on the one hand, and knowledge built upon *explanatory meta-theoretical reflection* on the other, facilitates 'open' and innovative approaches to organisational problems and their solutions, yields a better understanding of disruptive, open or other forms of innovation (Chesbrough, 2006), and thus has the potential to help overcome internal barriers and resistance to innovation.

The practical and explanatory value of the L.I.R. approach was illustrated through a reconstructive analysis of the successful redevelopment and business continuity management in an Austrian S.M.E.: many of the new practices and measures in this enterprise are based on an essential extension and enhancement of the knowledge-management approach introduced by Nonaka and Takeuchi (1995).[9] Furthermore, they acknowledge the research leading to the paradigm of sense-making in organisations by Weick (1995) and the summarising reflection of this concept by Sandberg and Tsoukas (2014). The economic success of the new practices and measures established in the investigated enterprise could not be immediately foreseen and explained on the usual basis of progressive cost reductions through 're-dimensioning', 'restructuring' or 'reorganising', i.e., the traditional economic ideation in terms of calculable responses. The explanation of the success is better seen in the light of a more modern shift in focus towards developments of knowledge management, considering the coming about, sharing and justification of knowledge within and across organisations, analysed and reconstructed as knowledge systems (Tsoukas, 2005; Tsoukas & Mylonopoulos, 2004) or – as shown in this paper – systems of multidimensional semantics.

The authors of this paper are aware of the methodological limits associated with their argument. However, they are sure that the case presented herein has its value in demonstrating the practical use of the L.I.R. approach in organisation and management practice. Furthermore, the L.I.R. approach provides an alternative explanation of success or failure of business continuity management endeavours, alternatively to classical socio-economic approaches.

The authors suggest that further research should use the L.I.R. scheme as a means of analysis on successful and less successful or even failed organisational development endeavours, and in this way further prove its practical value in the area of organisation and management practice.

Notes

1. These formulae mean that the picture/mapping of the causal process, the transition from P to Q (in well-selected parts of reality), corresponds approximately to the logical transition from the picture f(P) to the picture f(Q), i.e., the logical derivation of R from S (in language).
2. Just like a stone and a hammer, both can function to drive a nail into a wall but do not have a common shape as a characteristic intersection.
3. These formulae mean that applying routines K under the condition of available background knowledge E to problem P yields solution Q and applying routines K under the condition of available background knowledge F to problem P yields solution Q*.
4. The difference between expertise E and user knowledge F in their effects on the application of rules K to a real-life situation P is characterised, as already mentioned, as the 'scissors of meaning', resulting in most, although not all, cases in the semantically different solutions Q and Q*.
5. The franchisor was able to remove a branch in which directly attributable costs were higher than the achieved contribution margins. This created conditions for interesting market penetration in terms of entrepreneurship, reducing the franchisee's fixed costs (only possible thanks to the franchise system).
6. Taking into consideration the dynamic and complex business environment of Beham as well as the overall current social, economic and environmental situation.
7. In which combinations of knowledge pretend to creativity but leave user background knowledge the same: nobody learns anything new.
8. The results of the implementation of these attitudes are worth the effort and perceptual abilities represent the conduct within the meaning of the outward forms of expression of attitudes (Moravcsik, 2004).
9. Insofar as the coming about of knowledge in Nonaka and Takeuchis' terms is understood as an explication of implicit knowledge (inherent in expertise, competence/skills, capabilities) by means of model-theoretical structures, and not merely in simply descriptive fashion. The identification of model-theoretical structures allows innovative operationalisations and applications supporting the creation of new knowledge, as well as corrective knowledge-sharing between experts and users within and across organisational boundaries.

Acknowledgements

This contribution owes a great debt to Rainer Born, Masaryk University, Brno, Czech Republic, and Johannes Kepler University, Linz, Austria, and Christian Hochrainer, Beham GmbH, Ried im Innkreis, Austria, in terms of both inspiration and execution.

ORCID

Eva Gatarik http://orcid.org/0000-0003-2242-0105

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