

■ Research Paper

Towards a Practice of Systemic Change — Acknowledging Social Complexity in Project Management

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The Anthropocene calls for systemic change which requires much more than good ideas, stakeholder activism and self-organization. Successful change is managed in the form of a project. However, project management itself needs to learn to cope with the systemic complexity of the real world, especially with social complexity. Hence, this paper explores the paradox of reintroducing complexity within a discipline that has professionalized the reduction of complexity. Acknowledging the inevitability of the social aspects in human activity systems, this paper suggests decomposing social complexity along a political and a cultural perspective. This has methodological implications and practical consequences. First, the political stakeholder analysis is enriched with a systemic and ecological view. Second, cultures are interpreted along the lines of meaning-creation and sensemaking, exploring the stories which are the world to us. Thus, navigating systemic change finally embarks on the concept of *next practice*, promoting a path forward, step by step. Copyright © 2016 John Wiley & Sons, Ltd.

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INTRODUCTION

Governing in the Anthropocene requires more than stakeholder activism. While systemic change may be called for, there is a lack of understanding of what this actually means and how it is carried out. It seems as if our human desire to make the world a better place would—in the end—turn out to be nothing more than yet another heroic fantasy, the hubris of the glorified

individual bequeathed to us by the Enlightenment. Did we fall once again for the magic of self-organization, the seemingly benevolent invisible hand of an almighty god? This paper intends to reintroduce some sobering thoughts about change, project management and the conditions for its potential.

Change and its management usually come in the form of a project. So any attempts to meet 21st century challenges—be they climate change, poverty or migration to name but a few—need to rely on robust change project management. However, this is not a given. Project management is a

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cultural technique, a social practice and a professional discipline. As such, project management is challenged in many ways. It is a success story when it comes to technical issues, yet fails when it meets complexity and real people. The aim of this paper is to shift the focus to possibilities to improve project management in order to make it fit for systemic change. It is better to challenge the tools and techniques at hand before going on about saving the world. Otherwise, it might be troublesome, if not dangerous, for us and the world.

The key is to acknowledge social complexity, its political and cultural facets, especially but not only in project management. The Anthropocene acknowledges humankind's impact on the planet. What we see around us and do not like is predominantly the outcome of human activity. It is the outcome of a self-organized process of generic becoming. We can interfere and change the course of action, the unfolding outcome. However, if we want to see systemic change, we need to know more about systems and change and how both are managed—in a project, for example.

The following is an exploration of the existing possibilities for meeting the challenges of social complexity in project management. It looks into existing strategies, reintroduces complexity and explores our social being as the real source of complexity. It ventures into the political and the cultural realms of projects and change, concluding with the idea of *next practice* as a key for change and project management.

THE CHALLENGES OF COMPLEX PROJECT MANAGEMENT

Projects fail. The average success rate of projects is quantified as 30%. Conversely, 70% of all projects fail. It was different when project management began in engineering and related disciplines. There, the success rate of projects is still relatively high. Projects rarely fail due to technical challenges. Yet, once political concerns and cultural differences come into play, certainties

lose ground, and so does the entire project. Being successful becomes a stroke of luck.

Increasing global cooperation illustrates what seems to be the key problem for project management, for example, engineering services from Europe implemented in production sites in China, and aimed at realizing projects, which are then to be approved by authorities in South Africa. Global projects run faster, are more cost-effective and are of higher quality, the closer the involved parties work together. And in the realms of cross-cultural cooperation, it is not so much the national character that spoils the game; it is the differences of professions and disciplines which generate the relevant cultural differences. Hence, exploring worldviews carefully lies at the very heart of negotiating any meaningful professional practice.

And beyond the political and cultural challenges at a basic level of cooperation, complex project management is challenged at the aggregate level of expectations with a phenomenon called *conspiracy of optimism* (Hirt, 1996; Chapman and Ward, 2003; Chapman *et al.*, 2006). The conspiracy of optimism can be described as an accumulation of optimistic assumptions in a web of expectations. This means that every party interested in the realization of a specific project makes the most favourable or optimistic assumptions about budget, schedule and quality in order to introduce the most attractive and distinctive option into those arenas in which negotiations over limited resources (time, money, people, etc.) are handled. As a result, the conspiracy of optimism leads to the optimal case being assigned with the same degree of probability as the normal case. Once, however, reality enters into this over-optimistic project, budget and schedule get out of hand and are often compensated for by compromising quality or leading to the project's failure.

Project management is a social practice shaped by a disciplinary matrix (Klein, 2012b). Of course, project management works constantly on finding more and more applications for these old patterns of success and wants to repeat these achievements. But according to Thomas Kuhn, the spread of success models marginalizes the benefit of those particular practices until they

are applied to problems and enter fields where their outcomes topple into the negative (Kuhn, 1962). The projects fail. We wonder why. It can be fairly beneficial for the solution economy to move on from the matrix of the known—the matrix that makes the discipline—to new ideas and practices. And instead of improving the already known over and over again, increasingly marginalizing the outcomes, it can lead to solution innovation, take on new perspectives and new paths. Innovation in project management means leaving the well-known engineering framework behind and embarking on disciplines, sciences and professions which offer alternatives for understanding the embedding of project management into social systems and their epistemology.

REINTRODUCING COMPLEXITY

The purpose of the organization is to reduce complexity. Organizations reduce the complexity of social systems by channelling the contingency of human activity systems through organizing (Luhmann, 1984). This creates stability and a sense of safety. It manages expectations. And it creates a paradox. Ruling out complexity is not managing complexity. What applies to the organization and management in general applies to project management as well. So, the idea of complex project management creates another paradox. It reintroduces complexity into the practice of reducing complexity. That is surely a bit confusing. So, in order to understand complexity, it is helpful to leave the field of project management behind for a moment.

Complexity describes a quality beyond that of complicatedness and size. Reflexivity and emergence cater for a more thorough and inevitably systemic and cybernetic understanding of complexity. Reflexivity means that linearity is bent and feeds back on itself. Reflexivity is the basic characteristic of the cybernetic control loop (Foerster, 2002). In a field with a regulator, a control variable and the possibility of intervention or an intervention mechanism, the outcome of reflexivity is a homeostatic equilibrium. As soon as more components, controllers, control variables and possibilities for intervention are

added, effect chains are no longer operable. Inevitably, the field tumbles into the chaos of feedback loops and causal networks. And while the limited success of traditional project management lies in the reduction of complexity, reflexivity encourages the opposite.

Emergence is the description of a process that is rooted in chaos. Research in chaos (Gleick, 1987) teaches us that reflexivity is not the end, but rather the beginning of everything. There is order in chaos, or as Heinz von Foerster would put it, order from noise (1993, 2002). The dynamic interplay of elements creates qualities and entities that cannot be reduced to a sum of their parts or traced back. This happens on all levels of inorganic and organic matter up to the autopoiesis of life (Maturana and Varela, 1972; Luhmann, 1984; Klein, 2012a), the stabilization of the psyche and the establishment of social systems. Despite appearing stable and predictable, our environment is very much the product of chaos and reflexive causal networks. In essence, chaos and complexity are the rule, not the exception.

Complexity serves as a token, a placeholder for the messiness of emergence. Our impulse is to answer this with strategies of complexity reduction. Yet, a closer look at the cybernetics of the topic shows very quickly that complexity reduction within the system is not a viable solution. On the contrary, dealing successfully with complexity is possible only to the extent that the possibilities of action can be increased in the context of a relevant environment.

A strategic analysis of the issue moves Ross Ashby's law of requisite variety (Ashby, 1965) to the centre of the calculus and identifies three approaches within the equation: first, inherent complexity, that is, increasing one's own variety; second, focus, that is, reducing the scope of the relevant environment; and finally, the therapeutic approach, that is, a combination of both the previous strategies (Figure 1).

Ashby suggested variety as a measure of complexity. Here, variety relates primarily to contingency and tallies possible different system states; that is, the more different system states, the greater the complexity and the greater the contingency, the greater the variety. Ashby

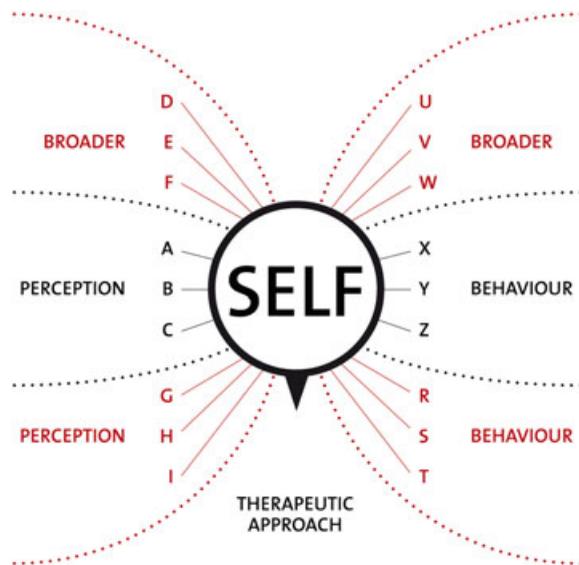


Figure 1 Therapeutic approach

argues in his law of requisite variety that only complexity can absorb complexity. According to the cybernetic concept of regulation, in order to control a system, a regulating system must have more variety than the system being controlled.

Strategic management, or what Stafford Beer described as *system four* in the viable system model (Beer, 1972, 1979), provides a good illustration of the structure of organizational or managerial variety. Thus, it is management's strategic task to equip the organization with maps and models of the relevant environment and opportunities for its own operation. The focus is on the then and there. A relevant environment is identified as appropriate to a possible future and, using scenario planning as an example, the variety of possible futures is mapped. On this basis, management can make strategies available to the organization in order to meet different scenarios adequately in terms of its own goals and the primary self-assertion of the organization.

The environment is inherently always more complex than a system contained within it. Considering this, how is regulation possible at all? The solution is called focus. In neuroscience, focus is described as the ability of the brain to address a certain section of the environment as a relevant environment (Roth, 1994). On this basis,

the brain is able to relate available variety to a slice of the environment, so that the variety in this slice is smaller than the brain's available variety. The brain provides requisite variety in relation to this relevant slice of the environment and enables itself to steer and influence this particular section.

This relatively simple relationship serves as a basis for the so-called therapeutic approach (Simon, 1995, 1997a, 1997b). On the basis of the distinction between perception and action, it is possible in strategic management on the one hand to further differentiate between options of perception and thus build up a larger residual variety. And in operational management, on the other hand, the possibilities of behaviour and the range of behaviours can be extended. This can be compared to therapy, where the aim is to expand the possibilities of perception and the behavioural repertoire of a patient, so that a pathological or at least dysfunctional shortening of perception and/or shortening of action can be overcome. From this perspective, the actual potent leverage effect is based on the situation that not only the repertoires of perception and behaviour are expanded, but that it also results in an equally multiplying ratio of adaptation between the two sides—perception and action.

A person can store a relevant behaviour or behavioural repertoire scenario to apply in a particular perception or a relevant scenario. A one-to-one relationship turns into a much-to-many relationship, which multiplies a person's own capabilities in terms of residual variety. Hence, the repertoire of strategies for dealing with complexity available is significantly larger and more sophisticated than what can be imagined intuitively.

THE INEVITABILITY OF THE SOCIAL ASPECT

At the core of the social aspect is the inevitability of the social other (Figure 2). With the inevitability of social others, one of the three central challenges people face is addressed: first, the inevitability of the living body; second, the inevitability of the conscious self; and finally, the inevitability of social others (Klein, 2012a). This

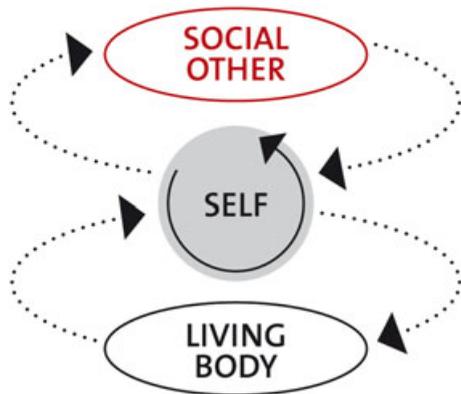


Figure 2 The inevitability of the social aspect

covers the three basic questions of human existence. We know that religion and philosophy seem to work through these three basic questions and try to make answers available, converting contingency into certainty.

Depending on whether we board a crowded bus or have to carry heavy boxes across the yard, the social other sometimes seems a burden, other times, a help. One person on their own, excluded from a group, family and society, cannot survive (Gehlen, 1940). This does not mean that inclusion will provide an answer in itself. Sociality, described by evolutionary biologist and physiologist Jared Diamond, secures benefits for survival (Diamond, 1999, 2005).

Niklas Luhmann sums up this phenomenon in his theory of social systems (Luhmann, 1984, 1997a, 1997b). Luhmann distinguishes between three levels of social systems: first, interactions, that is, communication among those present; second, organizations which justify and establish social networks for the long run by means of clear inclusion and exclusion mechanisms; and third, society, as the sum of all communication and stocks of social control. The social aspect is thus an emergent process of negotiations within which the various social systems are established and stabilized. The exciting possibility based on Luhmann's view is the evaluation of social technologies or social design in regard to their impact on the practices of social systems. Different social designs and different cultural tools have different consequences and implications which, depending on the choice of the criteria, are denoted as

more efficient and desirable and can be propagated (Klein, 2009). This perspective provides a practical approach for dealing with social complexity in project management (Linger and Owen, 2012). Political and cultural regulatory systems domesticate the individual's contingency within the social fabric and open up new emergent properties of social systems. Historian, philosopher and sociologist Norbert Elias describes this reciprocal conditional impact relationship as a process of civilization (Elias, 1936b, 1936a).

Noel Tichy, an organizational development and transformation consultant, presents an instrumentally useful differentiation with his TPC model (Figure 3; Tichy, 1983). The TPC model differentiates among and distinguishes three observational perspectives: T stands for technological; P stands for political; and C stands for cultural. Tichy emphasizes a balanced awareness of these three perspectives which, within the modern Western industrial model, show a definite leaning towards technological aspects. Political and cultural aspects remain unilluminated and are assigned to the soft factors. However, precisely these two perspectives, the political and the cultural, can be identified as the foundation and drivers of social complexity.

THE PRACTICE OF THE POLITICAL-SYSTEMIC STAKEHOLDER MANAGEMENT

Politics thrive on the diversity of interests. Different people carry different intentions and foster different ambitions. Hence, stakeholder analysis

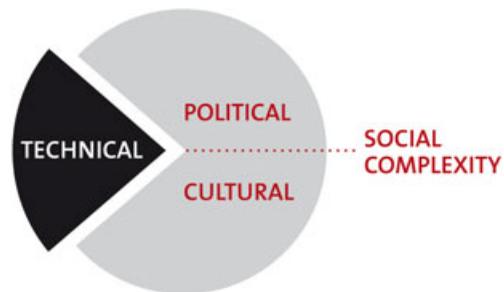


Figure 3 Technological, political and cultural model of social complexity

cannot be overestimated as the basic tool for the political realm. This makes it even more surprising how little and superficially it is applied in project management practice. At the foundation of stakeholder analysis lie questions about the stakeholders of a project and their various interests: Who has which interest, and how do we deal with it? The distinctions made between participants and stakeholders identify great differences in project management practice, especially with respect to public projects. There is also a significant difference in the quality of stakeholder analysis. Current mega-projects prominently illustrate the extent to which stakeholder interests, when they are not dealt with or taken into account insufficiently, can force ongoing projects to take notice of them in the form of stakeholder activism (Wright *et al.*, 2004; Kluyver, 2009; Larcker and Tayan, 2015). A project management routine of stakeholder interest exploration and explication, particularly with respect to all of those concerned with, or affected by the project, allows this cardinal critical success factor to be handled with confidence. Consensus may be reached at an early stage. From a political perspective, the exploration and explication of stakeholder interests alone become a relatively trivial way of dealing with the political perspective. In practice, stakeholder analyses do not go beyond an ultimately unilateral approach. In an ideal case, they provide a comprehensive snapshot of the underlying political structure of a project. However, interests change over time.

Stakeholder analysis requires continuous contact. In the project management mainstream, such as in the Project Management Excellence Model of the International Project Management Association, this is currently state-of-the-art in dealing with the political perspective of projects (Szalajko *et al.*, 2016). In practical terms, this means getting a feel for the changes in stakeholder interests by staying in continuous contact with stakeholders over the course of the project. This makes it possible, over time, to adapt to changing stakeholder interests and to deal with them actively. It also facilitates the identification of different degrees of contention with stakeholder interests along the scale of reactive, active and pro-active engagement. It opens up a

spectrum that ranges from perception and response to stakeholder interests to proactive negotiation processes relating to the differing interests of the project and its stakeholders. A comprehensive practice of pro-actively negotiating stakeholder interests in project management would lower the rate of failing projects significantly.

The project is not the centre of the universe. From a systemic perspective, an outline of proactive negotiations with project stakeholders also falls well short of what is systemically possible and desirable. The shift to a systemic perspective suggests abandoning the centralized, self-referential perspective of projects and opening them up to a plurality of perspectives which could be described in three attributes as interdependent, multi-causal and polycentric.

Interdependence relates to stakeholder dynamics. The interests of stakeholders react on each other and change over time. This can and will be enhanced by reflexivity and interaction between the positions of the project and the stakeholders. This addresses the dynamics of a two-variable problem in which the two degrees of freedom—the freedom of the project and the freedom of the stakeholder—are oriented towards each other. It should be a dynamic relationship.

Multi-causality fits further variables and degrees of freedom into the picture just described, so that the perspective of a network of reflexivity and interaction may be created. A stakeholder does not just react to what the project is doing but is also tied in interests and political positions, to what other stakeholders do and how these—in turn—react to what the project is doing and to what other stakeholders do. The stakeholder landscape grows in complexity.

Polycentricity opens up a third systemic perspective, in which the different compression points of the reflexiveness and interaction networks can be identified. Polycentricity highlights the fact that the main reference point for specific stakeholders or a cluster of stakeholders is not the project but something else, beyond the reach of the project, in the same way that the Earth is not the centre of our solar system and the sun is not the centre of the universe. Within the underlying political structure of a project, it may seem obvious to develop policies by using the project

as the central reference point, but the project is not the centre of its universe and project management needs to account for this.

The world is volatile, uncertain, complex and ambiguous (Hicks Stiehm, 2002; Johansen, 2007). In terms of stakeholder analysis, it is perhaps time to move the image of the stakeholder landscape one step further towards a stakeholder system or, even better, a stakeholder ecology. Here, the concept of ecology refers to an understanding of ecology as the science of simultaneity and coexistence along with the implications of those concepts (Klein, 2013). From an ecological perspective, the entire spectrum from competition to symbiosis can be described within a framework of the reflexivity and interaction of stakeholder interests, knowing that not competition, but symbiosis, is the engine of evolutionary progress (Allen and Hoekstra, 1992).

The project manager becomes a facilitator and moderator. Taking a systemic perspective on the political dimensions of stakeholder analysis significantly expands the spectrum of roles for the project manager. Apart from the requirement as a decision maker needed to take sides in a purely legal sense, it becomes increasingly necessary to moderate in stakeholder exploration and explication processes and to play the role of mediator in bilateral and multilateral negotiation processes again and again.

THE PRACTICE OF THE CULTURAL-CRITICAL NARRATIVE INQUIRY

Understanding culture has come a long way. Initially, the theory of culture was struggling to bring together two substantially different interpretations of culture: the indicative and the appellative (Williams, 1958). The indicative perspective on culture reflects the empirically observable. Culture accordingly describes the manner in which something is carried out. Where philosophical pragmatism serves as a reference, this reading of culture is widespread. The appellative concept of culture refers to values and morality. This interpretation of the appellative concept describes culture as what is desirable or should be. The terms of sophistication and

civility are also defined here, albeit very narrowly. Change management operates with both cultural terms.

Culture accounts for diversity. Unfortunately, the reference to culture is often accentuated in an undifferentiated or unilateral way. Only in recent years has an integrated and balanced handling of different cultural aspects been utilized in change and project management. Exploratory organizational studies go a significant step further and describe culture as the paradigmatic reference of a community of practice (Klein, 2013). This introduces another distinctive axis into the concept of culture. It looks at the reality of a shared practice—and this could be a religious community or a project team—and embeds it into a practice-referencing paradigmatic context. With this idea, degrees of freedom are identified in the analysis of culture, which strikingly detach the cultural from major religious, philosophical and national cultural superstructures and also address the tension between a practice and related practices of sensemaking (Weick, 1995) or meaning-creation (Luhmann, 1984).

Cultural stereotypes are not helpful. The mainstream of intercultural training, based on statistical population research (Hofstede and Hofstede, 1991; Trompenaars and Hampden-Turner, 1993), has rather led change and project management practice in this area to a dead end. The definition of stereotypes leads to frustration in concrete, real-world situations. Assuming that these people are Americans or Chinese or Arabs is out of touch with cultural reality. What exist are people who significantly deposit their personal way of life and professional practice into a portfolio of various meaningful provisions of reference.

Culture can be found in the stories social systems tell to describe themselves. A useful and highly developed approach in this context is a combination of the practice of organizational research and narrative theory (Boje, 2001, 2007; Jorgensen and Largacha-Martinez, 2014). The starting point is basically legitimate unknowing used as an entry. Legitimate unknowing provides the advantage that, in a practice of self-assurance, what is actually commonly shared is recognized as such, sometimes even in contrast to what is assumed to be commonly shared. It is expressed

and stabilized in its function for all that follows. In the same way as the political perspective, the cultural perspective is about the exploratory identification of actual practices and realms of possibility, which support and foster specific practices.

A rich toolkit of ethnographic, ethno-methodological and micro-anthropological instruments supports cultural exploration. The most promising approaches are currently provided by the connection of critical management theory with the use of ethnography and auto-ethnography (Alvesson and Deetz, 2000; Ezzamel *et al.*, 2001). As in the analysis of discourse practice, it is concerned with the difference between 'espoused theory' and 'theory in use', between what is said and what is done. This can be conscious or unconscious. In any case, it is worth a closer look, because both theories are powerful, like the tension that creates the difference (Klein and Weiland, 2014). The concept of culture moves very close to Luhmann's radicalism, relating social systems exclusively back to communication. It also resonates with the perspective of the Cluetrain Manifesto (Levine *et al.*, 2000), which promoted the understanding of markets as conversations. Accordingly, the project can be described as a conversation and project management as a convention.

Culture is sensemaking and meaning-creation in communication in the form of stories and narratives that explain and create the world at the same time. This is especially true for the individual perspective. In the way in which the project manager talks about the project, in the stories shared, the project becomes a specific project and takes shape. Viewed systemically, the individual story is a contribution to communication, to the conversation about the project, and only in the negotiation processes with the stories of the other parties involved—the managers, employees, clients, etc.—does the variety of the stories condense to a convention about what the project is. Reacting by critique to Bourdieu's first praxeological approaches (1972), recent French institutional economics, also known as French convention theory, provides promising approaches for deepening the discourse on the practical aspects of management (Boyer and

Orléan, 1993; Boltanski and Thévenot, 1999; Thévenot, 2001; Favereau and Lazega, 2003). Conventions are key to culture. They are conceived as compressed agreements about what counts as a normative reference for a particular practice. So, for project management research, the focus shifts on epistemological practice and studies projects as conversations (Bredillet, 2010).

Culture creates and thrives on attention. In the exploration of the cultural dimension of projects, it is particularly instructive to observe how the different narratives of the relevant stakeholders condense to foci of attention (Klein, 2005). Beyond the great narratives, beyond change and project management, there are points, historical facets carrying relevance and significance, which are attached and measured with particular attention. In this sense, the project is a collage of individual stories that come together in meaningful foci of attention. In addition to the story level, it is particularly valuable, especially for the external observer, to observe language and semantics. In the shifting of terms to everyday language use—the shifting of word meaning and word use—signal points are set that refer to the individual cultural character of a social system. What can—at the level of semantics—still be described as a particular connotation of a word may be analysed further at the level of generic or guiding distinctions (Luhmann, 1984). These are, in the sense of information theory, distinctions that produce a difference that makes a difference (Bateson, 1972). That sounds very theoretical at this point—and it is. In practice, it provides a powerful way to illuminate everyday experiences. We know from conversations that processes of mutual irritation arise because two people use one and the same word but attach fundamentally different significance and meaning to it. We are accustomed to acknowledge the irritation within the context of a conversation to briefly find an understanding of the difference, and then, in principle, carry on as before. We have then walked past an analytical door that opened for a moment and granted us access to the processes with which we create our world.

THE NEXT PRACTICE OF CHANGE

The preferred format for change is the project. There is, and always has been, a close relationship between change management and project management. The significance of social complexity for lasting project success was discovered and recognized much earlier in change management than in project management (Collen, 2003; Schein, 2004; Lissack and Gunz, 1999). Distinctions introduced between *hard* and *soft* approaches founded on a diffuse, residual amount of people-based methods highlighted the problem but did little to resolve it.

What does this mean for social complexity in project management? Both change management and project management should ally themselves with social complexity. Just to focus on complexity reduction remains defensive and reactive. The aim should be to develop ways of dealing with social complexity that traverse the span from the reactive to the active on to proactive. Luhmann's theory of social systems (1984) provides a powerful theoretical framework. Luhmann describes social systems as systems that process meaning. And he defines meaning as the unity of the distinction between actuality and possibility. Accordingly, this means that it is essential to be able to distinguish between what is and what could be. Social systems enable their own autopoiesis on the basis of this distinction. This, in what could be called an epistemological turn in social systems research (Klein, 2016), opens up the option within political and cultural dimensions for project management practice to distinguish between what is and what could be. This is not trivial. These two distinctions generate a third, namely a negation beyond the unity of the distinction between what is and what could be. This justifies what sounds tautological in everyday language: What is not considered as being possible is not possible. In this respect, meaning also always denotes what remains inaccessible. For example, steering towards best practice always leads to frustration if it is not envisioned as a possible practice on the horizons of the actors. It is much more sensible to refer to a better practice within one's own space of possibility. The next practice is the next possible and

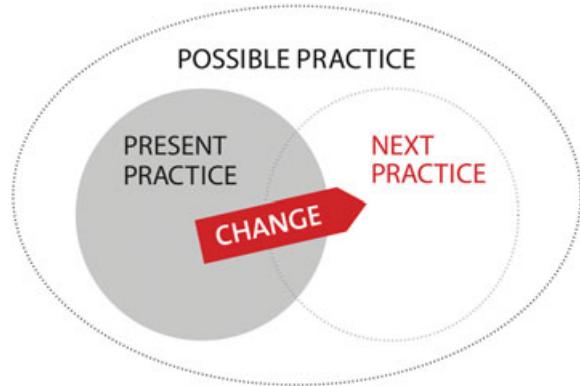


Figure 4 A conceptual model of 'next practice'

better practice (Figure 4). When established as a possibility, it can actually be achieved.

Possibilities for a social system are only what is possible in all three dimensions: the technical, the political and the cultural. In essence, this marks the epistemological turn in project management as well as in change management. We need to know what we consider to be meaningful. Culture comes first and provides the epistemological framework for any further consideration of politics and technology. For this, the stakeholder analysis not only explores interests but also allows for the identification of a relevant actor network for meaning-creation, sensemaking and eventually creating its own realm of possibilities.

CONCLUSION

Complex project management is project management in the context of the real world. Adding the term complexity to project management serves as a token, a placeholder for those fields neglected by the idea of technical rationality. The success story of project management ends where it meets real people and social complexity. The breaking down of the observation of social systems into the three perspectives of the TPC matrix—identifying a technical, a political and a cultural perspective—allows the identification of the importance of political interests and cultural assumptions. It can only be realized technologically in a scenario that serves the interests of

stakeholders and matches what makes sense in their world.

Successful change comes in the form of a project. For project management, especially in change management, the distinction between actuality and possibility should not only lead the processes of sensemaking and meaning-creation but should also serve as a pragmatic guideline to explore the epistemological limitations of social systems. If actors cannot think it, then they cannot do it. Change has a praxeological foundation, or it will not be.

Identifying social complexity as the decisive element of project management and change leads to acknowledging social systems as both the problem and the solution of any attempt to governing the Anthropocene. This is to say that the problem is not so much to understand the impact humankind has on nature, as to understand humankind and its social systems, which—especially in its political and cultural characteristics—determine any possible future. As initially assumed, this might be regarded as a sobering thought or simply as a different epistemological position that might enable alternative action by its departure from cause-and-effect relationships. It can, however, be read as a charge to science, an accusation of neglecting, according to the TPC matrix, two thirds of the relevant perspectives. While there is a massive research backlog, not only for the systems community, this may, however, be the right community to lead the necessary transdisciplinary research efforts. Who else could?

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