Research Article

Practopoietic Lens to Conceptualize Temporary Organizing

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Abstract

The purpose of this paper is to conceptualize temporary organizing as a practopoietic system. We critically review the current conceptualizations of projects; from the traditional project management perspective, and the temporary organization perspective using a systems approach. By juxtaposing the characteristics of the project with a system, we argue that traditional project management is akin to an autopoietic system while temporary organizations may be conceptualized as an allopoietic system. However, these conceptualizations are inadequate to explain the dynamics of the project- the internal workings and its interaction with the environment, as well as the complexity associated in such dynamics. Hence, we reiterate the need to consider the emerging conceptualization of projects as temporary organizing. We position temporary organizing as a practopoietic system that sufficiently explains the dynamics of project within itself, and with the environment while considering the complexity associated with such arrangements.

Keywords: Temporary Organizing, System Perspective, Project Management, Practopoietic System

Introduction

Project management research has extensively focused on the nature of projects. Projects were traditionally understood as isolated social units that had no interaction with the environment (Engwall, 2003). Later research brought forward the debate on the temporal aspects of project; questioning the temporary-permanent nature of projects (especially from the Scandinavian school of thought, *c.f.* Lundin, & Söderholm, 2013). This led to the notion of project as a temporary organization. Complimentary studies in this direction were largely based on the institutional perspective (Giddens, 1984) to show the relation between the projects, and their institutional contexts (*c.f.* Arvidsson, 2009; Grabher, & Thiel, 2015). However, the structuration perspective demonstrates a major limitation to the understanding of projects. It assumes that the context in which the project operates has widely shared beliefs and practices (Scott,2001). The actors working in a project constantly enact these beliefs and practices when they perform various project activities (*c.f.* Bjerregaard, & Jonasson, 2014). This seems to suggest an 'inward-oriented' impact of the context over the project. However, these notions of the nature of embeddedness of projects within stable contexts has been challenged by the conceptualization of project as a temporary organization (Turner, & Müller, 2003). Using principal agency theory as a lens, they propose that a project as a temporary organization is used as an agent for change. While traditional (permanent) organizations may have a certain inertia, projects set up as temporary organizations can be more flexible, and can better respond to uncertainties in their context. It is however, still bound by a larger set of objectives and the temporary organization will cease to exist once the objectives are achieved. This notion of projects then seems to suggest an 'outward- influence' of the temporary organization (project) on the context. Jacobsson, Burström, and Wilson (2013) further advance the dialog on conceptualization of projects as temporary organizations. However, while supporting the existing constructs of temporary organization- time, task, team, and transition (Lundin, & Söderholm, 1995), the call into question the distinction between the permanent and the temporary organization (Cova, & Salle, 2005; Dietrich, & Lehtonen, 2005). These studies seem to suggest that organizations maintain

projects as fixed entities, and creation of boundaries within the larger permanent organization to form temporary organization lead to overall infectiveness of the organizations. Similar tensions between the permanent and temporary organizations, and proposing future research agenda to enrich the theory of temporary organizations has been suggested by Burke and Morley (2016). Specifically, they highlighted the high level of task, and environmental uncertainty in which temporary organizations operate, complexity of the tasks-especially when a variety of human, and non-human actors interact in multi-project setting that spans across any one organization's boundaries, leading to conceptualizing projects as *temporary organizing*.

Thus, we posit that there may be two limitations with respect to conceptualization of projects. First, the nature of interaction between the project, and its environment, and among the various elements within the project itself may have to be explained. Second, a holistic theoretical perspective that underpins traditional project management, temporary organization, and temporary organizing may have to be developed.

Thus, the purpose of our paper is to propose a 'systems perspective' to conceptualize projects. Specifically, we use practopoietic lens to explain temporary organizing.

Organization of the Paper

We have organized the paper thus. In section, 1, we juxtapose traditional project management with the characteristics of an autopoietic system. In section 2, we compare the characteristics of temporary organization with allopoietic system. In section 3, we present the literature that focuses on the movement of discourse from temporary organization to temporary organizing. In section 4, we juxtapose the characteristics of a practopoietic system with temporary organizing. In the subsequent sections 5, 6, and 7, we present the contribution of our study, future research, and concluding comments.

Traditional Project Management as an Autopoetic System

Initial work to apply Systems view to organizations (or broadly to import the ideas into social sciences from Biology) has been produced by Luhmann (2000). He conceptualized organization as an 'autopoeitic system' (Maturana , Varela,1980; other recent studies include Vasquez, & Benavante, 2016; Czarniawska, 2017). An autopoietic system is that where different elements of the system interact in a way to reproduce elements of the system. Furthermore, all processes in the autopoietic system are produced within the system itself. It does however suggest that autopoietic systems are closed. The processes are internalized so that they cannot exit the system nor can external processes enter the system. This is being operatively closed. There is however an interaction between the system and its environment. The system determines the nature of interaction (elements to be imported into the system or exported out of the system), demonstrating interactional openness. A key element of the autopoietic system is *cognition*. Cognition is a self-referential process. This implies that all ideas (cognitions) are constructs of the system and do not reflect the external reality. This is explained by the limited influence of environment over the system. The environment at best can only trigger internal processes within the system. It does not influence or determine the nature of those processes. The cognitive processes within the system in turn gives rise to the structure of the system. The structure of the system determines the specific elements which are to be produced within the system. This characteristic is called self-organization.

Luhmann (2000) extended these ideas of autopoietic system from living systems to non-living systems such as the psychic systems and the social systems. Psychic systems are those which are built by the individual's consciousness. Social systems are those which are typified through societies, organizations, and interactions. These are maintained using communication. In his attempt to distinguish the abstraction of autopoietic systems in living versus the social systems, Luhmann (2000) brought forward the *temporal aspects of elements* in autopoietic systems. Maturna and Varela (1980) conceptualized the elements within the living systems to be relatively stable. On the contrary, Luhmann conceptualized elements within the system as 'momentary events'. Events have no duration but vanish soon after they come into existence (Luhmann, 2000). Because, events are momentary, there is a necessity for the system to produce new events (elements) constantly through autopoiesis. A second aspect to such elements is that they can only be defined in relation to the other elements in the system if being defined within a context (such as that of belonging to a system; i.e.; even though discrete events may occur in the system, their unity is only created in the system through their connectivity. This connectivity between the events in the system is brought about through communication.

On the psychic system, Luhmann explains them in the context of 'person'. He puts forward the view that a person is a combination of the organic (biological) system and the psychic (thoughts) system. The psychic system also produces Events which are interconnected through one's consciousness. There is however, interaction between the social and the psychic systems. Individuals work in societies and organizations. The communications that occur in the social system can trigger the thoughts in the psychic system of the individuals.

Taken within the context of organizations, the interaction between the social and the psychic systems is abstracted as decisions made in the organization-taking specific information (communication from the social system) and cognitively evaluating the alternatives (psychic system of the individual).

However, it is also to be acknowledged that decisions in organizations are taken under conditions of uncertainty. Organizations attempt to reduce this uncertainty by using one decision as a premise for the next decision. Often, this is characterized by use of specific plan of action, or achieving a specific goal in the organization. While Luhmann (2000) does acknowledge that these techniques do not completely eliminate uncertainty, it does however suggest a normative approach to the workings of the (autopoietic) system.

This conceptualization of autopoietic system closely resonates with the characteristics of traditional project management. Alluding to arguments put forward by Luhmann (2000), Zeleny (2005) states that all autopoietic systems are social systems. They are characterized by actors engaged in communication, and coordination with each other while processing information, undertake actions directed at achieving specific goals. This notion of a social (autopoietic) system is reflected in traditional project management, especially as is explained in the optimization, and modelling schools of project management thought (Turner, Huemann, Anbari, & Bredillet, 2010).

 The optimization school of project management largely draws from the operations research field. The school proposes that projects are managed through use of specific tools, and methods such as gantt charts, crashing, and simulations. The raison d'être of the organization is to 'optimize' this project system (Cleland, & King, 1983). Kerzner (2017) made further contributions by applying a 'systems approach' to managing projects. However, the optimization school considered projects of limited complexity where only one or two objectives need to be optimized. A progressive extension to the optimization school is the modeling school of project management (Williams, 2002). He acknowledged the growing complexity of projects, products being developed, as also the tight timescales. He proposed system dynamics modelling that employed both 'hard systems'- methods, processes, techniques and 'soft systems'; encompassing organizational, behavioral, and political factors to achieve the complex project objectives (Checkland, 1972). In the same vein, Alderman et al. (2005) argued for considering vagueness in projects which require more sophisticated tools to manage such constraints, and understanding the relationship between the project actors through communication, and power relationships (Pollack, 2007).

Bredillet (2004) summarizes the discussion on modelling school by positing that modelling school needs to integrate both the soft and hard systems to managing projects. This can be brought about by application of concepts such as 'sense-making ' (Alderman et al., 2005) which makes it possible for optimization of multiple project objectives operating under multiple project constraints, consideration of forces internal and external to the project, and adoption of lessons learnt from the previous projects.

Thus, a clear analogy can be established between the characteristics of an 'autopoietic system' and a project as being conceptualized according to the optimization and modelling school of project management. A project operates within an organization or a larger business environment. The factors in the external environment such as customer requests, market demand, general state of economy influence the (internal) processes in the project. This includes organizing resources, people, and establishing project plans. These project management processes are akin to 'self organization' that occurs in autopoietic systems. On the psychic system, actors cognitively evaluate the project objectives, consider the project constraints through constant communication and interaction among themselves and make decisions. An interesting aspect to decision making within the social-autopoetic systems seems to be reduction of uncertainty. In the context of projects, such approach is typified in the optimization and modelling schools of project management research.

Limitations of traditional project management concept

Zeleny (2005) when drawing the characteristics of an autopoietic system states that it is a self-sustainable system. The elements of the system are coordinated such that the process of their interaction arises 'within' the system' in response to

the external environment (interactional openness). The nature of such interactions reproduces similar systems, therefore, making the system sustainable.

While this conceptualization of autopoietic system will suffice to explain a simple project operating in a stable environment, the reality of projects and project management field is different. Extant literature suggests that projects are increasing their level of complexity, and therefore, theoretical considerations to explain such complex management of projects is required. A more emergent view was conceptualization of project as a temporary organization. Hence, in order to explain temporary organization from a system perspective, we argue that temporary organization is an 'allopoietic system'.

Temporary Organization as an Allopoietic System

In contrast to an autopoietic system where the system 'replicates' itself, allopoietic system produces a system which is different from itself. It is best explained using the car manufacturing process as an example. The individual components of a car are assembled to produce a whole vehicle which is different from the individual components. Furthermore, as opposed to the autopoietic system, allopoietic system constantly interacts with its environment, and is construed to be operationally open. This interaction between the (allopoietic) system and its environment is materialized by establishing channels for information exchange. Examples for such information exchange can be consumer research, identifying client requirements, estimating availability of resources etc.

Taken in the context of organizations, even while the larger organization remains the same, the components of the organization such as the individuals working in the organization are replaced, new knowledge is infused into the organization (such as technical know-how, or methodology), and is consumed within the organization as a resource to produce a product or a service.

Growing complexity in the management of projects has been initially acknowledged in the optimization and the modelling schools. However, it was fully captured through the now established research emanating from the Scandinavian school of thought (Lundin, & Söderholm (2013) and UK based *rethinking project management* research (Cicmil, Williams, Thomas, & Hodgson, 2006). The major motivation for these research studies was to expand the scope of project studies beyond individual projects, and understanding of time to clarify what is a permanent vis-à-vis a temporary organization ((Lundin, & Söderholm (2013). The outcome of these research studies was to acknowledge the increasing complexity in managing projects (as opposed to the traditional lifecycle models, and viewing the projects as a social process, bringing forward the interaction between the project artefacts (such as methods, techniques, plans, information), and the project actors (project workers) (Cicmil et al, 2006). The essence of these studies is reflected in the conceptualization of *temporary organizations*. This is a departure from the traditional notion of project management that assumes a normative stance- project being bound by constraints of time, scope, cost, and quality, and producing unique deliverables (Cleland, & King, 1983).

Lundin and Söderholm (1995) in their seminal paper described the nature of temporary organizations. They use the four characteristics- time, task, team, and transition to describe the nature of temporary organizations. A temporary organization has a starting and termination point. Within this 'time frame', activities are carried out in phazes (such as initiation, planning, implementation, monitor & control, closure). Specific actions such as creation of project management plan, managing risk across the (project) cycle, formal closure and disbanding of temporary organization are performed within this time frame.

Temporary organizations are characterized by tasks which may be unique or repetitive. These tasks focus on completion of a certain action. Thus, the nature of work will vary depending on the unique or the repetitive nature of the tasks to be performed. While the goals may be specific for repetitive tasks, they are abstract for unique tasks. The ownership of repetitive tasks may lie with the middle level management, unique tasks may be owned by senior managers.

The third characteristic of the temporary organization is 'team'. Teams in temporary organization are structured around tasks for a finite time. The team members with their own set of expectations, knowledge, or skills interact with each other, and with the team environment to produce project work.

The final characteristic is Transition. By the virtue of its existence, a temporary organization's purpose is to bring about a change in the organization from a current state to a desired state or an expected desired state.

This conceptualization of projects as temporary organizations is also reflected in the governance school of project management (Lundin and Soderholm 1995; Midler 1995; Turner and Müller 2003) where projects were first considered as temporary organizations. This school of thought brought forward the relation between projects and the larger organizations within which they were embedded. Specifically, research in this stream focused on the role of time to define the temporary nature of projects. Calling for a renewal of theoretical stance to study temporary organizations, Lundin and Soderholm (1995) posit that projects as temporary organizations operate within the more permanent organizations. Furthermore, they focus on explaining the internal operations of a temporary organization. They argue that as opposed to the popular decision-making perspective which concludes that decisions in the organization leads to action (*c.f.* Kreiner, 1992; March,& Olsen, 1972), in the case of temporary organizations, there may be no causal relationship between decisions, and actions. There may be actions taken within the temporary organization, and subsequent decisions taken to legitimize the action taken (Lundin and Soderholm (1995)). Parallels can be drawn between the characteristics of an allopoietic system and that of the internal operations of the temporary organization, where the temporary organization is demonstrating a certain degree of interactional openness with its context. Although it is drawing information from the environment, the actions or the interaction between the non-human actors (such as information, resources, methods), and the actors is shaping the temporary organization.

Limitations of the temporary organization concept

We argue that there may be two limitations in conceptualizing project as a temporary organization. First, this perspective on temporary organizations seems to suggest an 'outward-influence' of the internal operations of the temporary organization on the external context. At the heart of this stance, is the assumption that the internal operation of temporary organization-actions are effected to bring about a beneficial change to the larger organization. This is to say that the temporary organization transits from a current state to a desired state. This notion on the workings of the temporary organization has a certain limitation where it is possibly assuming a normative approach (albeit less as compared to the traditional project management techniques) to explain the workings of the organization. Under conditions of greater complexity, and more uncertainty either in the environment, or within the temporary organization system, this approach may be insufficient to explain the dynamics of such projects. Hence, temporary organizing has been proposed as a more relevant concept to explain the internal workings of a project, and its relation with the context. This limitation has been highlighted by Miterev, Engwall, & Jerbrant (2017) where an ethnographic study that included 30 onsite observations of projects, 38 semi structured interviews with project actors, and project document analysis revealed that temporary organization structures rarely differ from each other and mostly mimic each other. This suggests a normative approach to temporary organizations even in practice.

A second limitation of the temporary organization is that its conceptualization as a form or a structure. While this conceptualization is sufficient to explain the nature of dynamics between a temporary organization, or a group of temporary organizations with the environment, it may not adequately explain cases where independent actors or networks of temporary organizations are engaged with each other and with the environment. Often, the complexity of such arrangements is high, and so is the uncertainty of the outcomes. Hence, it is important to consider a more emergent view of projects- *temporary organizing*

From temporary organization to temporary organizing

The call to consider projects as being 'temporary organizing' units rather than temporary organizations has been led by Jacobsson, Burström, and Wilson (2013). They focused on one important characteristic of temporary organizations- Transition to build the case for temporary organizing. They argued that 'transition' is an encompassing characteristic of a temporary organization that affects change in the other three characteristics (of temporary organization) as well. For example, in terms of 'team', there can be a change/ transition when the actors are sourced from the permanent organization to the temporary organization. The leadership for such a temporary organization might be voluntary or imposed which is different from the nature of leadership in the permanent organization. From the 'task' point of view, permanent organization may have an influence over temporary organization in terms of sponsorship (increase or decrease of funding), and controlling the pace of project execution (through prioritization, selection, or elimination of objectives). From the 'time' perspective, changes may occur to the start and end dates of the project, or the project may be terminated before its completion.

Thus, there seem to be two clear themes emerging from this discussion on transition. First, transition is the raison raison d'être of the organizations. The project as a temporary organization might be linked to the strategic goals of the permanent organization (Turner, 2009). Projects as temporary organizations may be embedded within the permanent organization (Dietrich and Lehtonen, 2005). In doing this, new interfaces for communication, exchange of resources, and managing conflicts must be built between the temporary (project) organization and the permanent organization. In the same direction, the role of (external) suppliers ,and the permanent organization's capabilities such as strategy, marketing, finance, and sales (Kujala et al, 2010) have been studied for their integration with the temporary organization and thus increasing their effectiveness.

Thus, as opposed to an autopoietic system that is somewhat insulated from the external environment, the processes within the allopoietic temporary organization are significantly affected by its environment-the permanent organization.

The second theme that seems to emerge is decision-making in the temporary organization. The processes which happen within the temporary organization or at the interface between the permanent and the temporary organization requires exercising decision-making by the actors. For example, a decision to source the actors from the permanent organization to work on the temporary organization is made at the interface between the temporary and permanent organization (Meredith and Mantel, 2009). Adjusting the project schedule (through use of techniques such as crashing or resource levelling) is a decision that occurs within the temporary organization. Thus, the role of actor interacting with non-human elements such as project resources to make decisions and produce project work is brought to the fore.

The more emergent understanding of projects (with the influence of organization studies) is that of an organized activities that develop over time, are influenced by environmental issues and lead to learning among stakeholders (Jacobbson, Lundin, & Söderholm, 2015). While Lundin, and Soderholm (1995) called for understanding projects as being more than form of work, but as a temporary organization. to execute a set of tasks that will eventually result in a unique, envisaged outcome. However, this conceptualization is inadequate to explain the workings of a temporary organization in a turbulent environment characterized by constantly changing goals, and turbulent restructuring (Gustavvson, & Hallin, 2015). Similar arguments were presented by Lundin, and Söderholm (2013) where they point of that the characteristics of temporary organization- time, task, team, and transition is normative in nature and fail to completely capture the workings of the project within a context.

Limiting the context to a mere 'organization' is not justifiable since there are different types of projects- projects which are performed in one organization solely to advance the objectives of that organization, inter-organizational projects which are interconnected as a network, and where individual organizations can be stakeholders, and network of projects where not all actors of the stakeholder organizations are a part of the project (Bakker, 2010). Therefore, to explain the workings of an organization of that complexity, we consider 'temporary organizing' as a unit of our analysis, and argue that temporary organizing is a 'practopoietic system'.

Temporary Organizing as a Practopoietic System

Desai (2010) posits that informal and interdependent social networks are established in the organization through which interaction among the actors occurs. These informal networks facilitate co-creation of emergent learning and creativity. Under appropriate conditions, it leads to emergence of systems that live or die concurrently in the larger autopoietic organization system

Practopoietic system is a concept that has been developed in the field of neuro-sciences to explain the thinking process in the human brain. The classic theory of thinking proposes that the brain learns by navigating through an error landscape and learns to optimize its performance. However, practopoiesis proposes that brain optimizes its thinking process by categorizing, deciding, and understanding the stimulus.

Translating this to the organization context, Practopoietic systems interact with the environment, and learn to become a new system. The key to this learning and adaptation is where components at the lower end of the system interact with each other to enable creation of mechanisms at higher level.

Then the questions on whether the behavior of such systems can be predicted will arise. The answer lies in the concept of emergent behavior of complex adaptive systems (Nikolic, 2015, Maier, 1998, Asby, 1956). A complex adaptive system is

that which has large number of components called as agents that interact with each other, adapt, and learn (Holland, 2006). This then leads to the question on understanding the behavior of such systems.

Ashby (1956) proposed the idea of emergent behavior in his work on cybernetics to explain the behavior of complex adaptive systems. He posits that in case of complex adaptive systems, the knowledge of parts of the system when incomplete, it becomes challenging to predict the behavior of the entire system. Furthermore, a new component of the system may emerge with its own properties. Such a behavior demonstrated by a complex adaptive system is termed as an emergent behavior. The behavior demonstrated by such system is not a consequence of any one component of the system but is essentially a macro-level behavior. An example of such emergent behavior has been presented by Curtis, Dennis, and McNamara (2017) in their study of communication patterns in virtual project teams. By demonstrating a specific (emergent) behavior called collective mindfulness (where the team members pay better heed to each other, are able to better synthesize information to make decisions, disseminate information better, and vote on the relevance of information to the overall performance of the team). Such an emergent behavior is brought about by the inclusion of both synchronous and asynchronous communication tools in the virtual teams.

Rainey, and Tolk (2015) further classified the emergent behavior by drawing on the concepts of deterministic and stochastic systems. They identified four types emergent behaviors that fall under deterministic or stochastic systems- Simple emergence, weak emergence, strong emergence, and spooky emergence. Simple, Weak, and Strong emergent behaviors are exhibited by deterministic systems. Simple emergent behavior can be consistently predicted in the simulation models while weak emergent behaviors can be predicted under conditions of reduced complexity (of the system) but not consistently. Strong emergent behavior and spooky emergent behaviors are demonstrated by stochastic systems. The behavior is consistent with that of the system but cannot be predicted consistently even under conditions of reduced complexity. Spooky emergent behavior is exhibited in cases when the behavior is inconsistent with all the characteristics of the system or its components. The behavior is not reproduced even when all the characteristics of the system are simulated. Typically in such systems, new knowledge and new structures will emerge within the system. New behaviors may be generated by the agents (actors) engaging with the system, and new feedback loops will emerge because of new knowledge and new structures being created.

These characteristics of a Practopoietic system are consistent with the notion of Temporary Organizing.

Project as Temporary Organizing

Perhaps the initial considerations to position projects as temporary organizing can be found in the works of DeClerck et al (1983 cited in Bredillet ,2004) where a project has been defined as 'whole of actions limited in time and space, inserted in, and in interaction with a politico-socio-economic environment, aimed at and tended towards a goal progressively redefined by the dialectic between the thought (the project plan) and the reality'. Such an arrangement resonates with the concept of a system that is constantly interacting with its environment and is a state of constant flux.

As opposed to the notion of temporary organization, which is organized around a set of goals, bound by constraints and achieving an end-state, temporary organizing brings forward the concepts of 'goal seeking' and 'goal oriented' processes. Goal seeking is a case when projects are characterized by unclear goals, and can not specify activities or resources to achieve these goals. On the other hand, goal orientation is when projects have specific goals, is aware of constraints, and is able to work towards achieving these goals. Depending on the context, space, and time, projects shift from goal seeking state to goal orientation state or vice-versa.

Thus, insofar, we have understood the characteristics of temporary organizing. Using a practopoietic system perspective, we know temporary organizing may include a network of projects that constantly interact with each other, and with the environment. The temporary organizing arrangement may include both human, and the non-human actors within itself. This interaction between the human, and the non-human actors produces outcomes that can transform the system itself, or its context.

Table 1 summarizes the discussion on the Systems view of traditional project management, temporary organization, and temporary organizing

Table 1. Differences between Traditional Project Management, Temporary Organization, and Temporary Organizing

Criteria	Traditional Project Management	Temporary Organization	Temporary Organizing
System View	Autopoietic System: • Elements within the system interact to reproduce elements of the system • Operationally closed System as there is no "stasis" of elements between the system and the environment • Interactional openness of the system with the environment triggers processes within the system through self-organization • Boundaries being defined by the system itself	Allopoietic System: • Elements within the system interact to produce a new system • Operationally open system with constant "stasis" between the elements of the system and the environment • Interactional openness of the system following the 'input-process-output-feedback' loop when engaging with the environment • Boundaries being defined by the observer	Practopoietic System: • Elements within the system constantly interact with a dynamic environment to develop processes based on categorization, decision, and comprehension of stimulus • System undergoes transformation and adapts to the environment where the elements at the lower end of the system enable mechanisms of the system at the higher end
Nature of Interaction	• Organizations characterized by Uncertainty • Decision making under conditions of uncertainty with the actors cognitively evaluating the alternatives to reduce uncertainty	• Temporary organizations characterized in terms of time (having a fixed start and finish date and the temporary organization going through phazes), task (performance of non-routine tasks which are different from routine), team (employing actors with complementary skills who cognitively evaluate the constraints , and interact with each other to achieve complex project objectives), and transition (producing a change in the organization from the current state to a desired state) • Events created when actors as an entity (team) interact with resources (entity) to produce milestones, deliverables, and	• The system being existent in two states- goal seeking (unclear objectives, lack of information about resources), and goal orientation (system has specific goals, aware of constraints). • The elements of the system- human, and the non-human actors through constant interaction with each other take actions to move between goal orientation and goal seeking states, adapting to the environment • Adaptation of the system to the environment abstracted by emergent behavior ranging from simple predictable behavior to extremely complex (spooky) behavior

		other such project work (task), in different phazes (time), bringing about a change in the organization (transition)	

Figure 1 summarizes the discussion on theoretical lenses underpinning traditional project management, temporary organization, and temporary organizing.
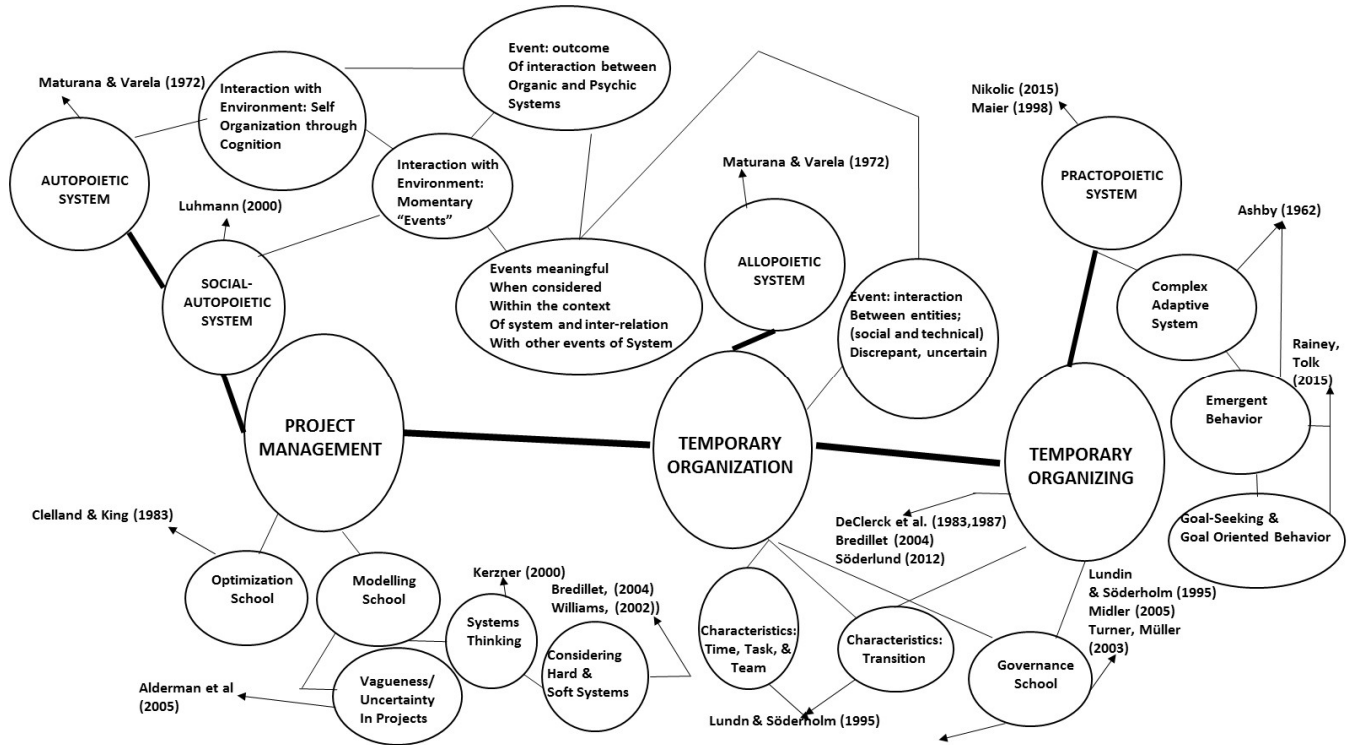

Figure 1. Theoretical Lenses-Project Management, Temporary Organization, and Temporary Organizing

Contribution

Contribution to Temporary Organizing Literature and Project Management. There is an ongoing dialog in project management research to refine the theory on temporary organizing (Bakker et al, 2016). At the heart of this discussion is positioning temporary organizing as a 'process' (Sydow et al, 2004) and as a 'form' (Lundin, & Söderholm, 1995). Temporary organizing is a 'process' when the actors are temporarily engaged or employed and interact with temporary structures such as tasks or resources. The actors will reflect on the nature of interactions. However, the actors may not completely control the process, and the outcomes of this interaction may lead to some other unintended sequence of processes. On the other hand, temporary organizing as a 'form' creates temporary structures such as inter-organizational projects, temporary alliances or project networks that will be disbanded after a certain time or completion of certain objectives. Such temporary structures may also exist in a more permanent structure. By conceptualizing temporary organizing as a practopoietic system, we capture the complexity of such a system, clearly distinguishing it from traditional project management and temporary organization (*c.f.* Tukianen, & Granquist, 2017; Garcia-Lorenzo, & Kourti, 2017).

Future Directions

The current paper is a part of the larger study where we investigate work motivation in the temporary organizing context. We will extend our discussion on practopoietic lens on temporary organization to a more specific systems theories- Event

Systems theory (Morgeson, Mitchell, & Liu, 2015), and the job design theories (drawn from the socio-technical perspective; Kanfer & Chen, 2016) to explain specifically how the nature of interaction between the human, and the non-human actors is a determinant of work motivation in a temporary organizing setting.

Conclusion

In this paper, we have reiterated the call to conceptualize projects using a more emerging stance- temporary organizing. We believe we offer a novel *systems* perspective to first highlight the differences between the traditional project management, temporary organization, and temporary organizing. In doing this, we were able to offer some insights into the workings of the project, both internally within its elements, and externally-with its environment. We were also able to reconcile some of the differences in the conceptualization of temporary organization, both as a form, and as a process. Using the practopoietic lens also aids us to factor in the internal and external complexities associated with such organizing arrangements. While this is an ongoing dialog, we believe that it will encourage project management researchers to draw from allied disciplines such as Systems thinking to enrich our understanding of project - *a posse ad esse!*

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