A theory framework for balancing vertical and horizontal leadership in projects

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Abstract

This paper develops a framework for understanding the interaction between person-centered leadership by project managers (a.k.a. vertical leadership (VLS)) and team-centered leadership by individuals in the project team (a.k.a. horizontal leadership (HSL)). It builds on Archer's Realist Social Theory and its morphogenetic cycle, which describes the interaction of structure with agency for task fulfillment and the resulting reshaping (morphogenesis) or continuation (morphostasis) of structure for subsequent iterations of the cycle. Data were collected globally in 33 case studies with 166 interviews and analyzed using Alvesson's Constructing Mystery technique. A theory about the cycles and events that shape the interaction between VLS and HLS is developed, which includes events such as nomination,

identification, selection, execution and governance, as well as transitioning. Managerial and theoretical implications are discussed.

Executive summary

Leadership in projects has traditionally been investigated as either the vertical leadership from a formally appointed project manager, or the horizontal leadership emerging from the project team and its members. Recent studies have shown a contingency between project situation and the choice of vertical or horizontal leadership applied in projects. Thus, the two types of leadership alternate across the project life-cycle, depending on the circumstances of and within the project.

To investigate the nature and the dynamics of the transition between vertical and horizontal leadership, the authors have launched a series of empirical studies. The present paper develops the theoretical perspective and framework for these studies, using Archer's (1995, 2000) Social Realist Theory as theoretical lens towards the phenomenon.

We conducted 33 case studies in nine countries. Data were collected through 166 interviews and corporate publications, like policies and reports. Analysis was done using a non-traditional technique, known as Constructing Mystery (Alvesson & Kärreman, 2007), which uses reflexive and abductive "sensemaking" of the data in light of the a) the theoretical lens, b) the inductive interpretation of the data, and c) the researchers' own experiences. Aim is to

identify one possible explanation of a phenomenon, while other explanations might also be possible.

The analysis identified five events that characterize the transition between vertical and horizontal leadership. Within these events the vertical and horizontal leader perform a series of actions. This is shown in Figure 2. They are:

- *Nomination:* this is the event of appointing project team members to a project. Here the vertical leader aims for influencing the choice of team members in order to build a pool of most suitable resources and potential horizontal leaders for the project.

- *Identification*: This is the identification of possible horizontal leaders. Here vertical leaders evaluate team members, while team members try to identify a role for themselves in the team.

- *Selection*: This refers to the empowerment of one or several team members as a horizontal leader. It marks the vertical leader's transition of leadership authority to the horizontal leader, and the receiver's acceptance of this authority and its related responsibility.

- *Horizontal leadership and governance:* This describes the execution of horizontal leadership by a team member, and its governance through the vertical leader.

- *Transition*: This event marks the end of the horizontal leadership and the elaboration of possible changes to the conditions for future appointments of horizontal leaders.

These five events collectively serve as a scheme for setting up future studies on balanced leadership and linking together their individual results. Hence, the framework serves as a central repository for studies on balanced leadership which allows for the development of a coherent theory in terms of the nature, context conditions, and situational contingencies for balanced leadership to happen.

A first study derived from this framework is published on the identification event and shows the context variables, processes, and evaluation criteria that take place during this event, that is, prior to empowerment by a vertical leader (Müller, Zhu, Sun, Wang, & Yu, 2017). Studies on the other events are ongoing.

To that end, the present paper contributes to the ongoing debate on more theory in project management (Jugdev, 2004) by providing a structured approach and framework that allows for developing robust theories about project reality.

Introduction

Studies on leadership in projects have traditionally either focused on the personality and leadership style of the project manager or the leadership processes emerging from the team (Müller, Packendorff, & Sankaran, 2017). The former is known as vertical or person-centered leadership (VLS), *which is the interpersonal process through which the project manager influences the team and other stakeholders to carry the project forward.* The latter is known as horizontal or team-centered leadership (HLS), which is *the social process through which one or several members of the project team influence the project manager and the rest of the team (and potentially other stakeholders) to carry the project forward in a particular way* (Müller, Packendorff, & Sankaran, 2017).

Individually, the different VLS and HLS approaches to leadership are well described in the existing literature. Examples include the wide body of knowledge on leadership styles, leaders personalities, relationships of leadership with performance (for an overview see Avolio & Yammarino, 2013; or Tyssen, Wald, & Spieth, 2013). As well as the literature on shared, distributed or relational leadership for HLS (e.g. Bolden, 2011; Pearce & Conger, 2003). However, little has been published on the interface between the two main streams of

leadership (VLS and HLS) and the contingencies and processes which make them interact. Recent studies in the realm of project management questioned this divide and started to investigate the interaction between the leadership exercised by the project manager (VLS) and the leadership exercised by the project team or some of its members (HLS). This led to the notion of "balanced leadership", which describes the dynamics for temporary back and forth transitions between VLS and HLS for the accomplishment of desired states in, for example, a task, outcome or the entire project (Müller et al., 2016). Publications in this space have focused so far on the shared cognitive processes between project managers and team members (Müller, Vaagaasar, Nikolova, Sankaran, & Drouin, 2015) and the criteria that trigger transitions from VLS to HLS (Müller et al., 2016). Thus, studies on balanced leadership in projects are rare and not linked into an overall framework which would allow academics to theorize and practitioners to deliberately use it for the benefits of their projects. This is addressed in the present paper through the question:

What is an appropriate framework for conducting studies on balanced leadership in projects?

We take a timely-flow perspective, with the interaction of VLS and HLS as the Unit of Analysis. This allows developing an understanding of the cyclical nature of this interaction, which means, the flow, the events that mark transition points, and the related context contingencies. For that we take a Critical Realist perspective in the sense of Archer, Bhaskar, Collier, Lawson, and Norrie (1998) to develop one possible, but not necessarily fully generalizable, explanation of this social phenomenon (Bhaskar, 2016). The study is grounded in Archer's (1995) Realist Social Theory and its morphogenetic approach of structural conditioning, social interaction, and structural elaboration. This allows to view the interaction of VLS and HLS as a continuous flow of human's exposure to structures, their agency (i.e. the action of the agent) executed in social interaction, and the possible change of existing

structures as a result of this agency, which provides the new structure for the next iteration in the cyclic flow of the morphogenetic sequence. Hence, the way actors and structures *emerge, intertwine and redefine one another* (Archer, 2010, p275). Moreover, we continue by describing the nature of the interaction between vertical leaders and horizontal leaders as a tangling in terms of the approximation of their individual epistemologies in respect of the leadership task at hand. We do this by using Cook and Brown's (1999) allegory of the *generative dance* to describe how the vertical and horizontal leaders might be stepping on each other's toes in the beginning, but as they continue to work together the leadership looks smoother and the project moves on well or they decide not to dance together at all.

Empirically the study is based on 166 interviews, collected in 33 case studies in eight countries from four continents. These were analyzed following Alvesson and Kärreman's (2007) suggestion for abductive analysis and their Constructing Mystery technique for theory building.

For academics, this study provides a first theory on the dynamics of VLS and HLS interaction in projects, as well as a framework for further studies to develop this theory further. Practitioners will benefit from the understanding of the events and cycles for VLS-HLS transition in order to use them deliberately in their projects.

The paper continues with reviewing the most relevant literature and introducing the theoretical lens. This is followed by the methodology, analysis and discussion sections. The paper finishes with a conclusions section, where, among others, the research question is answered.

Literature review and theoretical lens

This section introduces the main characteristics of VLS and HLS found in the project management literature, but will not review the broad stream of leadership styles, as this is of lesser relevance for this study. It is followed by the theoretical lens, that is, the morphogenetic approach of the underlying Realist Social Theory.

Project managers as vertical leaders

Project managers are both managers and leaders. They are *assigned by the performing organization to lead the team that is responsible for achieving the project objectives* (PMI, 2013, p.554). As managers they have the responsibility to conduct and accomplish project objectives and as leaders they influence, guide, and give direction to the team members (Bennis & Nanus, 1985). This implies both authority and accountability for project managers to provide VLS for the project team. In this role they tend to use transactional leadership styles in simpler and transformational styles in more complex projects (Keegan & Den Hartog, 2004; Turner & Müller, 2006). Transactional styles reward followers contingent on meeting their performance targets, whereas transformational styles consider the individual follower by paying personal attention, showing respect, providing intellectual stimulation and challenges (Bass, 1990). A project manager's choice of leadership style is often traced back to the characteristics of the person's personality. Related studies investigated especially the emotional intelligence (EQ) (Clarke & Howel, 2009) or the combination of intellectual, emotional and managerial leadership competences (IQ, EQ and MQ) and their relationship with different leadership styles (e.g. Dulewicz & Higgs, 2005; Müller & Turner, 2010; Turner, Müller, & Dulewicz, 2009; Wren & Dulewicz, 2005). Here the transactional styles are preferred in low complexity projects with managers high on IQ and medium to high on EQ and MQ. Transformational styles are often found in medium complexity projects with

managers high on EQ and medium levels of IQ and MQ. Projects of highest complexity are often led by mangers high on EQ and MQ, and medium on IQ, that is, a style termed *engaging*, which "focus[ses] on facilitating others in achieving the nature of direction and means of achieving the necessary goals" (Dulewicz & Higgs, 2005, p108). Most recently the focus shifted towards the role of teams in leadership. For example, Aga, Noorderhaven and Vallejo (2016) showed that teams have a significant mediating role in the relationship between transformational leadership by project managers and project success. This supports the importance of further investigations of the relationship between VLS and HLS.

Project team members as horizontal leaders

Hackman (1987) defines teams as social systems of three or more people. Their members perceive themselves as a team and are perceived as such by others. When team members take on the lead in a project, for example, through problem solving and decision making on behalf of the project manager, they engage in HLS. A number of theories and perspectives that emphasize the dynamics in the interaction between individual team members and their contributions have emerged. Most prominent is probably the notion of shared leadership, which emphasizes the need for leadership by different specialists at different stages of the project to ensure dynamic problem solving for the project. Project managers act hereby as social architects who understand and leverage the people–organization interaction (Cox, Pearce, & Perry, 2003). HLS is enabled through empowerment by the project manager and executed through self-management by the team to chart its way forward (Cox et al., 2003).

The related concept of distributed leadership also views leadership as collective phenomenon, but distributed over several actors (Bolden, 2011). In a project context, it refers to leadership emerging through social interaction within the project team, including encouraging team members to contribute their views, with the goal to generate a multitude of differing

perspectives of the issue at hand. These studies focus on the practices (Blomquist, Hällgren, Nilsson, & Söderholm, 2010) and the interaction processes therein (Lindgren & Packendorff, 2009).

Both streams of leadership literature investigate their particular VLS and HLS perspectives, but ignore the dynamics of possible interaction between them when required within projects.

The interaction of VLS and HLS

Among the first to introduce the interaction of VLS and HLS for improved performance was Pearce (2004). Using the example of knowledge workers, he pointed out that horizontal leadership works best in situations characterized by interdependence in the team, creativity and complexity. These situations require intensive interaction among team members, for example in solving conflicts and finding agreeable solutions. Leadership hereby emerges in form of shared leadership, where the team-internal leadership can emerge in form of directive, transactional, transformational and empowerment leadership. Enabler for this type of HLS is the vertical leader, who influences team design and manages the team boundaries. Moreover, it is the vertical leader who continuously maintains HLS by keeping the overall vision and direction, triggering the transition of leadership from VLS to HLS by asking the team for solutions, and managing the fairness in the leadership assignments (Pearce, 2004).

Recent conceptual work on the situational contingency of VLS and HLS effectiveness in virtual teams proposed that HLS is more effective in settings with high task interdependence and task complexity, as well as situations requiring high levels of team member collaboration and knowledge sharing. VLS is proposed to be more effective in teams with higher levels of structural complexity, such as virtuality or national diversity (Eisenberg, Gibbs, & Erhardt, 2016). This is complemented by Hoch and Kozlowski's (2014) empirical study, which

showed that team virtuality has an inhibiting effect on the relationship between VLS and team performance.

Thylefors and Persson (2014) investigated the relative impact of VLS and HLS on team effectiveness in the healthcare sector in Sweden. Their results support the notion of complementarity of both approaches, but the need for strong leadership when either of the two approaches is called for. Along with other studies they found that both VLS and HLS impact team effectiveness, whereby team effectiveness increases when the team is responsible for their own processes and decreases when controlled for team climate. Hence, team climate impacts the relationship between HLS and effectiveness.

A common characteristic of the above mentioned studies is that they are performed on relatively stable teams, such those in New Product Development or Healthcare settings. This only partially reflects the dynamics of projects, such as customer delivery projects in the Information Technology (IT) or construction industry. These projects are characterized by a steady change in personnel, such as in IT projects, where industry consultants develop the requirements, while IT consultants develop the system architecture, which gets reviewed by a separate review team, and then software and hardware engineers begin their work, etc. This continuous in-flow and out-flow of personnel is a characteristic that questions the appropriateness of existing general leadership theories to project settings. Examples include the popular Tuckman (1965) model with its team development stages of form, storm, norm and perform, or the Hersey and Blanchard (1988) model of directive, selling, participating, and delegating leadership. According to both these theories a project with the above mentioned dynamic change in resources would not develop further than the first stage in each of these models. Hence, project teams would only operate at the lowest level of team integration, maturity, and effectiveness. Thus, turning project work into highly inefficient

attempts to accomplish project objectives. This is in conflict with the popularity and often stated benefits of managing business by projects (Dan, 2017; Lundin et al., 2015).

Theories applicable to project environment should therefore take these dynamics into account, such as done in the present study, where special emphasis is given to situations when particular specialists join the team and lead the team temporarily.

Very few studies addressed this in the past. A first conceptualization of the transition between VLS and HLS in projects was done by Müller et al. (2015), who used the concept of socio-cognitive space as the common mental space between teams and project managers to identify situations for and synchronization of the transfer between VLS and HLS. This socio-cognitive space consists of three elements:

- E*mpowerment*: the transfer of leadership authority to individuals in the team to lead horizontally. This is granted by the vertical leader and a result of the identification process described later in this article
- *Self-management* capabilities of the empowered individuals. Proper self-management is an antecedent for being accepted as leader by the team. Self-management capabilities are supported by and develop from self-efficacy, which is, the horizontal leader's belief in being able to master a given task
- *Shared mental models* in the team, which include knowledge about the particular areas of competence of the team members, knowledge on who is empowered to exercise horizontal leadership, and a judgment on the quality of self-management of the empowered individual.

The different constellations of these three concepts allow enabling HLS by the project manager, and the execution of HLS by team members. The concept was empirically tested

and validated through case studies in Australia and China (Müller et al., 2016), showing that in an enabling context and the empowerment by the vertical leader fosters the self-management of the empowered and, in parallel, updates the shared mental models of the other team members about the new role and authority of the empowered horizontal leader. They identified antecedents for HLS, such as the *nature of the leadership situation*, which is mostly confined to solving technical issues, the *trust by the vertical leader* in the team members' capabilities to solve the issue at hand, and the *vertical leader's attitude towards HLS*, as some vertical leaders do not allow HLS to happen in their projects. These studies gave a first glimpse of the dynamics in the interaction. However, they also show a knowledge gap in the understanding of the nature and the flow of the transitions between VLS and HLS. This is done in the present study.

The morphogenetic cycle as theoretical lens

The morphogenetic cycle is at the center of Realist Social Theory, which is a sociological theory that builds on Critical Realism as underlying ontology. It assumes societies as open-systems, which are always shaped and re-shaped through the innovativeness by the people therein. Morphogenetics describes the process for social structuring and consist of 'morphogenesis', which refers to the *processes which tend to elaborate or change a system's form, state or structure*, and its complement 'morphostasis', which are the processes that *tend to preserve or maintain a system's given form, organization, or state* (Archer, 1995, p166). Either one of these two results is accomplished through the morphogenetic cycle of conditioning, interaction and elaboration (see Figure 1). This cycle takes place at each of the levels of culture, structure, and agency. For the purpose of the present study we focus on structure and agency only, recognizing that we are *always dealing with the double*

morphogenesis/stasis – of structure and of agency as part and parcel of the self-same process (Archer, 1995, p190). Structure refers hereby to the human and non-human parts of the system, such as institutions, material resources, or project managers and their expectations, and agency refers to the actions of people (such as horizontal leaders). All structural influences *are mediated to people by shaping the situations in which they find themselves (Archer 1995, p196).* The morphogenetic cycle in Figure 1 applies to both structure and agency.
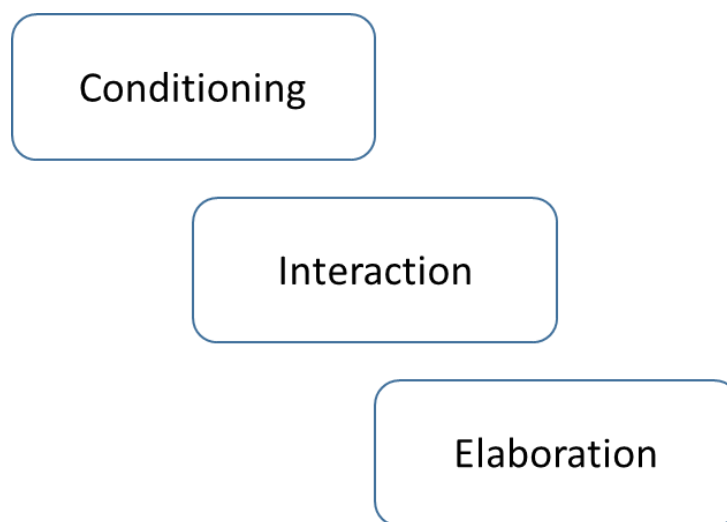
Conditioning

Interaction

Elaboration

Figure 1: The morphogenetic cycle (after Archer, 1995)

In the morphogenetic cycle*, Conditioning* refers to the structural and human influences and expectations preceding agency. This includes, for example, institutional policies, role descriptions etc. as well as individual expectations of a corporate agent on the actions of an appointed agent. In the context of projects, this may refer to the policy to respect a specific step in the project methodology and the expectation of the project manager (i.e. corporate agent) on how the appointed horizontal leader (i.e. the agent) goes about temporarily leading the project by solving a specific technical problem in his or her area of specialization.

Building on the notion of mediation described above, it cannot be assumed that the agent will completely behave in accordance with all conditioning influences. Reasons are manifold and include the agent's vested and personal interests, intentions, and possible epistemological or ethical differences with the corporate agent who appointed him or her.

Agency leads to the *interaction* of the agent with the conditioning influences. This results in complementarities and incompatibilities between them, which fall into four categories, each with is own situational logic (Archer, 2000):

1. *Necessary complementarities*: the agent and the conditional influences are in sync and tend to *protect* their current status quo and relationship

2. *Necessary incompatibilities*: these are caused by systemic differences between the agent's part and the part of the institutions providing the conditional influences. This typically leads to a *compromise* between the parties

3. *Contingent incompatibilities*: This is the case of extreme differences between agent and institutions, leading to preparation for *elimination* of the other.

4. *Contingent compatibilities*: these are the cases where compatibilities are constructed to exploit situations that bear potential for gains, hence pure *opportunism*.

The four situational logics of protection, compromise, elimination, and opportunism and the possible combinations thereof provide for the elaboration of structure and agency as an antecedent for the next round of the morphogenetic cycle.

Elaboration refers to the changes resulting from the interaction and its derived situational logics. It refers to the extent structures will be changed (e.g. the type of project methodology to be used) and/or the expectations by the corporate agent will be altered for the next iteration. Here category 1 and potentially 4 tend to lead to morphostasis, with little or no changes to the

system (e.g. a project). However, categories 2 and 3 lead to morphogenesis and potentially change a system's form, state or structure.

The result of the Elaboration becomes the start of the Conditioning for the next iteration of the cycle.

Hence, Realist Social Theory proposes that structure and agency cannot be conflated, because each of them represents a different ontology, which interact, but do not dominate each other (Porpora, 2013) This qualifies it above related theories, such as Gidden's Structuration Theory, which proposes that ultimately structure dominates over agency, a conjecture that was not supported by the interviews we did. Social Realist Theory is especially suitable for the study as it takes into account the context and the human action as parallel events. Such as in the case of projects, where existing roles, stakeholders and expectation prior to HSL mark the first event in the morphogenetic cycle (Conditioning) and the human task of HLS the second event (Interaction), while the dynamics stemming from frequent changes, such as in personnel as well as in project requirements are represented by the third event (Elaboration). Together the tree events resemble much of project reality.

This describes the cyclical approach to the interaction between VLS and HLS using the morphogenetic cycle. We showed how a newly appointed temporary horizontal leader, is initially conditioned by the structures and the expectations of the project manager as corporate agent. The horizontal leader mediates these influences through his or her actions and their compatibility with the conditioning influences. This, in turn, leads to elaboration of possible maintenance or change in form, state or structure of the project, which becomes the input for the Conditioning in the next appointment of a horizontal leader.

Methodology

The research was designed following the process from Saunders, Lewis and Thornhill (2007), which requires to determine the underlying philosophy at the outset, before approaches, strategy and data collection methods are determined. As this study identifies the interaction of vertical and horizontal leaders and their leadership, an ontology that allows for sensemaking of subjective human behavior was chosen, that of Critical Realism. This fits well to the theoretical lens described above, which is developed from the same ontological perspective (Archer, 1995), and aims for one possible, but not necessarily the only possible explanation of a phenomenon (Bhaskar, 2016). Alvesson and Kärreman (2000; 2007) emphasize the risk that in interviews on sensitive subjects (such as appointments to leadership positions) informants may provide merely institutionalized standard talk or politically correct statements. They suggest filtering this out by choosing a critical and reflective methodology for data analysis. Moreover, we aimed for re-construction of the informants' life-worlds, which does not lend itself to traditional coding techniques when done over a large number of interviews, such the 166 in this study. Therefore we used the Mystery Construction technique, a non-traditional, reflexive and abductive approach to data analysis and theory building (Alvesson & Kärreman, 2007; Alvesson & Sköldberg, 2009). This technique recognizes the socially constructed nature of the collected material. The method became popular in recent years, also in project management research (e.g. Jacobsson & Lundin, 2011; Müller et al., 2013).

The method provides for understanding of phenomena through a two-step process, which first aims for discovery of mysteries (i.e. phenomena not adequately explained through existing theory), and then using reflexive reasoning to develop a solution of the mystery. This provides for a double reflection, which they term 'reflexion', whereby the first step requires the researchers to reflect on the interviews and data they collected, and in the second step to

reflect on their reflection from the first step. The second step is the main distinguishing factor to other qualitative methods, which typically require only one level of reflection, such as grounded approaches suggest by, for example, Van de Ven (2007).

The Mystery Construction method embraces subjectivity and use of existing theoretical frameworks on the side of the researchers, so that they can reconstruct the life-world of the interviewees. For that the technique suggest a specific abductive approach which combines three elements: application of existing theories, analysis of the collected material in light of this theory, and the researcher's own experience. Together this is used to develop an imaginative understanding of the phenomenon under investigation. By way of that, the analysis goes further than passively mirroring reality, such as through traditional data collection, coding and processing techniques, which try to "discover" the facts and meanings directly from the data collected (Alvesson & Kärreman, 2007). To that end, the use of this technique is supported by Wittgensteinian thinking that "the abductive step provides non-testable narrative hypotheses. Deductive and inductive reasoning then develop them into testable propositions, to validate the story, not as a 'true representation of the world', but as a viable way to rebuild experience" (Lorino, Tricard, & Clot, 2011).

The method encourages the use of several theoretical perspectives and subjective experiences to enrich reflexivity, for example by using diverse teams of researchers. This was done in the present study through a team of six academics and practitioners from six different countries and four different continents, who work in academia, public consulting and education organizations, as well as in industry projects. Using groups, reflexivity and self-critique serve several purposes, such as, mitigating the risk of insufficient grounding in existing theory, and facilitating the "interplay among theory, researcher subjectivity, and empirical options that

can encourage theoretical development through problematizing exiting theory" (Alvesson & Kärreman, 2007, p1272).

In the first step of the technique the researchers worked in small groups of two people to present and reflect on the material collected by themselves in order to derive at a first order level of reflection.. In the second step, the larger team got together and each researcher presented the reflection from the first round and the whole group reflected on the sum of all reflections, in order to derive at second order level of reflection. Both steps used a discourse that actively sought for alternative explanations of the phenomena identified. The second step provided for a convergence on a jointly agreeable explanation of the phenomenon, covering the empirical material and assessed cases (Alvesson & Sköldberg, 2009).

Data collection

Data were collected through eight country teams, collectively employing 14 researchers for data collection in 33 case studies and 166 interviews (see Appendix for details). The sampling approach aimed for maximizing variety, in order to capture the broadest possible set of data as basis for theory development. Aim was to identify the general characteristics of the phenomenon and not the particularities of sectors, nations or project types. This can be pursued later on, when the general characteristics of the phenomenon are understood. Data were collected through semi-structured, face-to-face interviews which lasted between 60 and 90 minutes each. The interviews were recorded and subsequently transcribed. Teams of two to four researchers conducted the interviews, where one led the discussion whereas the other(s) took notes.

A case study protocol was developed upfront to synchronize activities across teams and provide for reliability of the collected data (Yin, 2009). It outlined the aims and research

questions, interview questions, as well as introduction letters for organizations and interviewees. Validity was ensured through search for multiple sources of evidence, key persons as informants, as well as workshop sessions for the comparison of results across teams. Reliability was assured through pattern matching and replication logic in the sense of Yin (2009).

Interviews were based on informed consent and started with general questions about the interviewee and organization, which was followed by a block of questions on real-life examples for balanced leadership in their projects (both VLS and HLS and their transitions), criteria that triggered it and processes that were followed. The last part of the interviews addressed questions of possible enablers for balanced leadership to happen.

Data analysis and results

Data analysis was done first at the country level (for country teams' respective publications) and then at the global level. The present paper addresses the latter. Six representatives for the eight country teams (some of them working in several country teams) analyzed the global set of data in an analysis workshop. They followed the two-step process outlined above.. The interview data were interpreted in light of the morphological cycle outlined above, and in terms of context and role, as opposed to literal codes (Alvesson & Karreman, 2000). This reflective approach does not lend itself to provision of quotations for each finding. Instead, we describe the findings at a conceptual level, that is, as understood and agreed by the team of researchers, based on the reflexion on the 166 interviews.

A cycle of five events was identified, namely nomination, identification, selection, horizontal leadership and its governance, and transition (Figure 2):

1. **Nomination**: The nomination of resources to join the project team is the first event in the cycle. This takes place in many different ways and at almost any point in time, as project members phase in and out frequently in projects. Dependent on the governance structure and circumstance, project managers may be allowed to influence the choice of candidates. In this case, the project manager may already foresee some of the technical or other areas of specialization that will later require HLS by a team member. In these cases, the past experience with potential candidates and the anticipated needs for HLS will influence the nomination of the "right" project team members.

2. **Identification of possible horizontal leaders**: The identification of possible candidates is done by both project manager and team member. Overall goal of both is to identify one or more persons for an optimum "fit" between a situational requirement (such as solving a particular technical problem), the project as such, and the person(s) per se. Three processes make up this event:

   a) Team members interested in becoming horizontal leaders are looking for the particularities that makes them "fit" to the project and the anticipated situations requiring HLS, hence, their particular role in filling a need for the organization.

   b) Project managers approach the identification by looking at team members' competences for the task at hand, their performance in similar situations in the past, the personality and motivation of the candidates, and their indication of willingness to take on a HLS role.

   c) Project managers establish an individual level of trust for each of the team members and HLS candidates, as a starting point for the governance of a potential horizontal leader in event 4 below.

This event is marked through subtle interaction between the project manager as vertical leader and the candidates for horizontal leader roles. Their interaction is influential on the decision to empower a candidate, hence often very carefully executed. We elaborate on this interaction in the discussion section in reference to the concept of a generative dance. Goal of each party is to position itself in a particular way that is most beneficial for the individual, given the circumstances of the project.
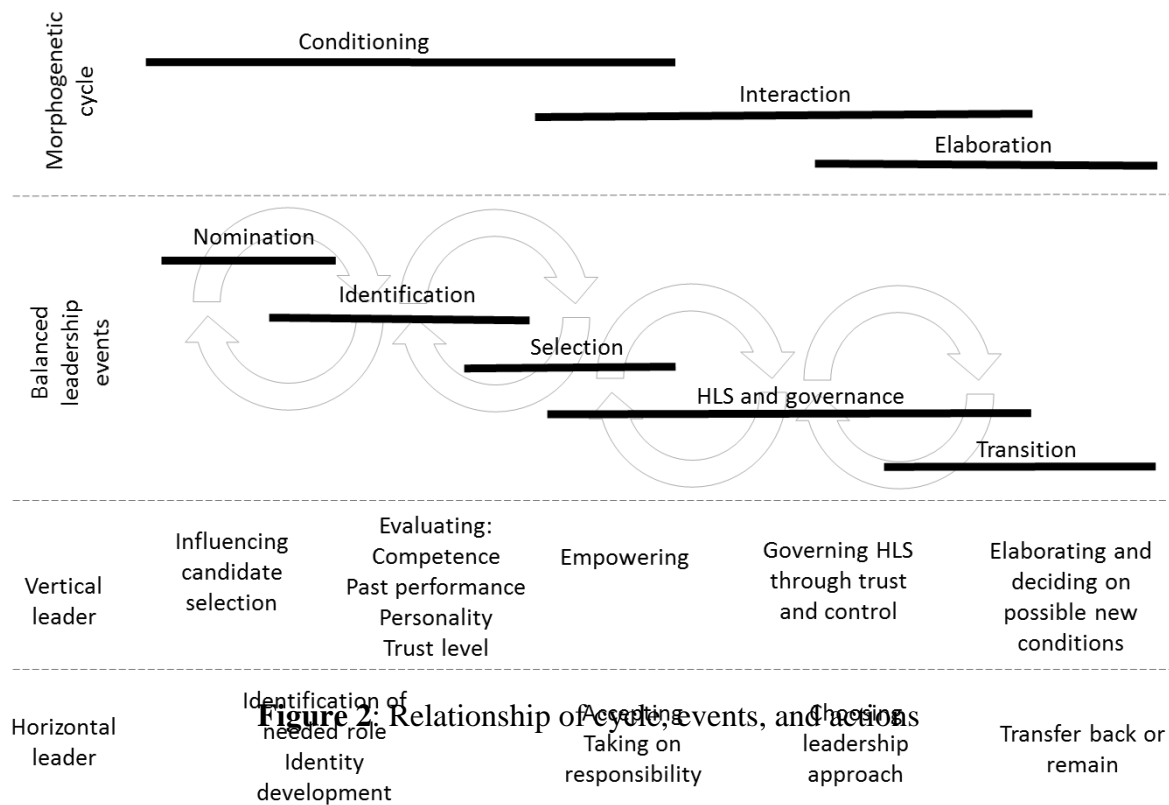
3. **Selection of horizontal leaders**: At this event, the project manager uses empowerment to select one or several specific team member(s) on a temporary basis as horizontal leader(s). This is described by Müller et al. (2016, 2015) as a function of the socio-cognitive space, that is, the shared cognitive understanding of its three constituting elements and their interaction.

4. **Horizontal leadership and its governance**: This marks the event when the selected person has accepted the role as horizontal leader and HLS happens. It manifests itself in many different ways, depending on the leadership style of the horizontal leader and the governance of it, exercised by the vertical leader together with the already established governance structure (such as steering committee, project management office etc.). A variety of different approaches to horizontal leadership were seen, such as group meetings for consensus finding, one-on-one meetings, use of task forces, delegation of leadership and decision making authority, or formalization of new roles. The approaches are partly influenced by national culture, such as in cases of Asian cultures, where horizontal leaders acted as informal consultants (sometimes in private) to the vertical leaders. This indirect form of HLS prevents the vertical leader from face-loss in front of the team. This event is governed by the vertical leader, who uses the level of trust established at event 2 to govern the actions of the horizontal leader. The vertical leader uses control or trust (or

a mix of both) as governance mechanisms to steer, but not determinate the actions of the horizontal leader. Describing the use of trust and control as governance mechanisms in projects would compromise the page limitations of this article. We therefore refer to the work by Zwikael and Smyrk (2015) and Müller (2017) for more details.

5. **Transition:** This marks the end of the temporary assignment of the horizontal leader and the time of elaboration of the conditions for future repetitions of the cycle. This is when the decisions for either morphostasis, that is, no change in the design and form of the conditions for future appointments of horizontal leaders, or morphogenesis, a new design of it, is made. As in the event before, a number of possible outcomes are possible. Morphogenetic outcomes may include an extension of the horizontal leader's appointment because of a change in the technical issues or the high performance of the horizontal leader which gives way for more authority and scope of the person's leadership task. Alternatively, a premature termination of HLS may occurs because of an intervention by the vertical leader (e.g. through a clash of styles between VLS and HLS). Morphostatic outcomes may include finishing the HLS appointment as planned and handing back leadership authority to the vertical leader or over to another horizontal leader. The exact conditions that trigger these decisions are suggested as future research. After this event the next cycle is possible to be started.

Figure 2 shows the relationship between the morphogenetic cycle and the tasks in the balanced leadership cycle. The five events are not to be understood as phases or a process of consecutive steps. As shown in Figure 2, the relationships between the events are circular, allowing for going back and forth to adjust the events to the needs of the project. The lower part of Figure 2 shows the main tasks identified for the vertical and horizontal leader at the five events.

The above cycle of events provides a cohesive structure for linking existing and future studies on balanced leadership into a common framework of five events, and supports the development of a coordinated research agenda for the future.

Figure 2: Relationship of cycle, events, and actions

Discussion

This is the first study to develop a theory framework for research on balanced leadership in projects. The nature of leadership in projects as a human activity, executed in the social context of temporary organizations, made us select a sociological perspective and apply Margret Archer's Social Realist Theory. This theory builds on a morphogenetic approach of structure and agency's mutual influence and shaping, which advanced from systems theory and cybernetics, and provides for an open-system view of societies. The morphogenetic approach shares major underlying assumptions with Giddens' Structuration Theory, such as the inextricable link between structure and action. However, there are also major differences,

as Archer (2010, p229) states: *Although the 'duality of structure' spans both images, it provides no analytical grip on which is likely to prevail under what conditions or circumstances. The theory of 'structuration' remains fundamentally non-propositional.* To that end, the morphogenetic cycle leans more heavily towards *newer linguistic structuralism, semiotic studies, and hermeneutics* (Archer, 2010, p226). At the same time, it allows for a more structured understanding than the more interpretive sociological perspectives (King, 1999). This positions it well for the philosophical underpinning of the present study, which is Roy Bhaskar's Critical Realism (2016), the same ontological perspective that the morphogenetic theory was developed from.

The investigation indicates a major congruency of the three elements of the morphogenetic approach and the five events through which balanced leadership unfolds in projects.

Conditioning

The morphogenetic approach defines Conditioning as the start of a re-occurring cycle, where the given structure in a society (such as an organization) and a human agent (such as a project manager) identify and select humans as agents for particular roles (such as a temporary horizontal leader in a project). The empirical data collected through the study indicate that this involves three events, namely

a) *Nomination* of people for the project team makes them enter the pool of potential horizontal leaders, which is sometimes influenced by the project manager;

b) *Identification*, which is executed through the interaction of team members with project manager, where the first positions itself by showing motivation to take on HLS in a potential role or situation, where as the project manager develops an understanding of a possible fit between the leadership requirements in anticipated situations that require

HLS, and the members in the pool of candidates. This results in different levels of trust in different individuals to lead in different situations, which leads to

c) *Empowerment* of a team member to become a temporary horizontal leader, and the acceptance by the candidate.

These three events are iterative in their relationship (as indicated in Figure 2) and provide for the generative dance described below.

Interaction

This is the agency exercised by the appointed agent. Agency implies actions that are influenced by the conditioning described above, but also by the vested interests, personality factors of the agent and situational requirements. The four possible complementarities and incompatibilities described above apply here. The way they develop are often project specific, as is the way the project manager governs the leadership by the horizontal leader.

Earlier we used the allegory of the Generative Dance for the interaction of project manager and horizontal leader. This is based on the American pragmatist Ortega's notion that people invent their action "in light of circumstances"(Ortega y Gasset, 1961, p202) and by doing that, individuals encounter "facilities" and "frustrations" stemming from the interaction they have with the world. Cook and Brown (1999) take his notion forward by describing this as a Generative Dance, which synchronizes different epistemologies, like a *choreographer teaches through demonstrations while a dance group follows. The group acquires tacit knowledge in practice as they develop a useful understanding, for example of the moves employed in the piece through interacting with the demonstrations of the instructor* (1999, p393). Through this interaction, together with the troupe's new knowledge, and their performing of the dance, the dance is generated (literally a *generative dance*). Taken into the

realm of projects, this perspective describes the horizontal leader's learning from the situational context, especially from the vertical leader, then employing his'/hers' own capabilities and interests to lead the project in a perceived "best way", which may or may not be to the satisfaction of the conditioning influences, hence leading to the complementarities and incompatibilities outlined above. As in the generative dance, the horizontal leader interacts with the vertical leader over a period of time to develop the project forward and they both make up their mind about the quality and desirability to continue or re-shape, or even abandon their actions and interactions.

Elaboration

This is the evaluation and possible re-shaping of the conditioning factors for the next round in the cycle. The interviews in the project context showed that it relates to the transition of the horizontal leader back into the team member role or to maintain the HLS status for another iteration of the cycle, as well as the decision on the conditions for the cycle, no matter being led by a vertical or a horizontal leader. In other words, it is about the decision to enter into morphostasis by not changing the conditioning and staying with the existing influential factors and expectations, or entering in morphogenesis by changing form, contents, structure or other existing or planned characteristics of the project. This ends the cycle and leads to the preparation for the next morphogenetic cycle.

Conclusion

This study aimed for the development of a theoretical framework for studies on balanced leadership in projects. Thirty-three cases with 166 interviews in eight countries were used to collect data and interpret them from the perspective of Realist Social Theory and its

morphogenetic cycle of conditioning, interaction, and elaboration. Alvesson and Kärreman's (2007) non-traditional, reflexive technique was used for data analysis, interpretation and theory building.

We can now answer the research question. The framework developed from the empirical data and the existing publications on balanced leadership in projects indicates five events in a cyclical relationship, which both explain the ways balancing in leadership unfolds in projects and provides the structure for a categorization and repository of existing studies in this subject. The conditioning for a transition from VLS to HLS was described as starting with the nomination of individuals in the pool of team members and therefore potential horizontal leaders. This is partly overlapping in time with the identification of possible situations and candidates, which provides the basis for possible selection. This is described, for example, in Müller et al. (2015) by the interaction of the three elements of the socio-cognitive space. Upon empowerment and acceptance by the horizontal leader the interaction between agent and structure sets in, as described by Müller et al. (2016) as finding the equilibrium between situational demands, self and others' expectations, and possibilities for execution. Which then gradually enters into the elaboration of possible changes for future interactions of the cycle and the transition of the horizontal leader either into the earlier team role or into a new cycle of an appointed horizontal leader.

Theoretical implications are described in the analysis and discussion sections, supported by Figure 2. The paper provides a new framework for a cyclical understanding of leadership in projects as a sociological phenomenon. This has implications for the understanding of project leadership being iterative in nature, which is in contrast to the more sequential paradigm applied in some project management methodologies. The framework allows to design specific studies for the five identified events, as well as the transitions between them.

Moreover, through its five steps it outlines an agenda for future research The first related study addresses the identification event and is published by Müller, Zhu, et al. (2017).. To that end, the paper described a first cyclical theory on balanced leadership, which now needs to be applied in future studies to test and refine it.

Practical implications are in the awareness of practitioners, consultants and trainers in project management about the cycle and its events in order to apply it purposefully for the benefit of their projects. Examples include the timely identification of needed roles in projects in order for team members to position themselves accordingly and thereby foster their career development, as many horizontal leaders become vertical leaders of other projects thereafter.

Future research is indicated through qualitative studies as described above. More case studies and more observational studies are indicated to better understand the iterative nature of the events and how they unfold in reality. Along the lines of the present paper, it is suggested to follow scientific practices and first identify global patterns of the phenomenon (i.e. the five events).This includes global validation of the present findings through further case studies, followed by hypothesis building and quantitative testing thereof.

The strengths of the present study include the reliance on a very well established sociological theory to explain a new perspective in leadership. The clearness of the results validate its applicability. A further strength lies in the large sample of 166 interviews, which largely exceeds the average in management studies and contributes to the reliability of the results. A further strength is in the use of a contemporary method to analyses and theorize on the data. However, this may also constitute a weakness in a more traditional scientific understanding, which indicates a need for more studies using traditional methods, which then have to rely on smaller sample sizes, as traditional coding techniques do not lend themselves to large sample sizes. Other limitations stem from the newness of the concept of cognitive-space, where

neither boundaries nor the limitations are well researched. Questions that arise here touch upon the fairness and ethics in building, sharing and interpreting the elements of the cognitive space and their influence on HLS appointments, the handling of potential rivalry among candidates for horizontal leadership, or dysfunctionalities stemming from the transfer of leadership authority. These questions should be addressed in future studies.

The study's contribution to knowledge lies in the structuration of a relatively new phenomenon, that of balanced leadership, in terms of a framework for a) the way it unfolds in projects, and b) the establishment of a research agenda and a context for understanding the positioning of and links between individual studies on the subject. For that we identified five cyclical events (Figure 2), which unfold when balanced leadership emerges in projects.

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Conflict of interest

There is no potential conflict of interest with respect to the research, authorship, and/or publication of this article

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Appendix: Interview demographics

Country	Sector	Size (employees)	Interviews	Roles interviewed		
				Senior manager	Project manager	Team member
Canada	Government	5	4	2	1	1
	Utility	5	6	3	1	2
	Utility	5	3		3	
	Government	4	1		1	
Australia	Finance	4	4	2	1	1
	Government	2	4		3	1
	Finance	5	6	2	1	3
	Finance	4	5	3	1	1
	ICT	3	3	1	1	1
	Construction	4	4	1	3	
China	Engineering	4	6		3	3
	Construction	4	3		2	1
	Architecture/Svs	3	4		3	1
	Outsourcing	4	5	1	2	2
	Pharma	5	7	1	3	3
Sweden	Engineering	5	6	2	3	1
	Consulting	1	6	1	5	
Norway	Consulting	1	7	2	2	3
	Government	5	6	1	3	2
	Government	5	4	1	2	1
	Construction	5	5	1	2	2
	Construction	5	6	1	4	1
NL	Transportation	5	6	1	2	3
	Engineering	5	5		2	3
India	ICT	2	6	2	2	2
	Construction	2	7	2	2	3
	Construction, Utility	4	7	2	3	2
	Pharma	5	7	1	2	4
	Construction, Engineering	5	7		4	3
South Africa	Engineering	1	4	1	2	1
	Finance	5	5	1	2	2
	Finance	5	5	1	3	1
	Finance	2	2		1	1
Sum			**166**	**36**	**75**	**55**