CHAPTER 17. Insights from personal perspectives

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Abstract

This chapter contains the analysis by the editors of the 14 biographical life stories presented in the chapters of section II. This analysis, using clusters and temporal categories as presented in the analytical framework, allows us to better understand and highlight key elements that influence or make up the personalities of the leaders. For instance, some of them seem to play a key role like family values, turning points, or beliefs while others are more related to managerial skills like teamwork engagement and stakeholder management, to name a few. In sum, what we have learned is that there is no single, observable reality. Each of the leaders shared their realities, from which we can identify trends and lessons.

Keywords: Biographical research approach, analytical framework, life stories

This chapter contains the analysis by the editors of the 14 biographical life stories presented in the chapters of section II. As explained in Chapter 2 (A biographical research approach), we first developed, based upon the work of Cortazzi, (2001) and (Rosenthal, (2004), an analytical framework with three clusters: Time, Social Relations and Place combined with three temporal categories: Past, Present and Future. The editors then came together in a two-days’ workshop to exchange and jointly discuss their first analysis of the chapters to develop this framework further. Based upon these discussions and emerging from further readings (Yanow and Schwartz-Shea, 2006; Clandinin, 2013), the framework was then finalised with topics of relevance to this book (see Table 17.1). The first cluster of Time is related to the biographical roots of the interviewee and contains topics such as social class, family values, turning points, learning process and transition to future roles. The second cluster, Social Relations, refers to the relations between actors in the project of study, including topics that covered teamwork, institutions, personal traits and project culture. The third cluster is Place which includes the environment of the project containing topics of political and cultural context, stakeholders and risk management. These clusters were analysed using three temporal categories: Past, Present and Future. The editors, separately, used the framework and closely reading (Yanow and Schwartz-Shea, 2006) to go through all of the final chapters. The separate analysis were brought together using the framework and jointly discussed at a Skype meeting. The combined analysis is presented in this chapter. In this chapter each of the clusters will be discussed using the framework in Table 17.1.

Table 17.1. Framework for the analysis of the life stories

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<th>Time</th>
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<td>Biographical roots</td>
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Cluster Time / Past

Family values
A number of project leaders interviewed came from a working-class family background. A diverse set of family values was also recognized by the project leaders. Many of their parents stimulated interviewees to educate themselves. The parents of Zhu Yongling (Chapter 12) for example cherished education and atheism in a turbulent period of the cultural revolution in China. Others families encouraged them to chase their big dreams. The strongest example of this is the biography of Soohong Kim (Chapter 11) who mentioned that building the bridge connection was a ‘dream of three generations’; his grandfather who was a local leader, his father who was a famous architect and himself. To some, the family was a model for organizing their project, as in the case of Brijesh Dixit (Chapter 14) who applied family values by living together at the project’s campus. The interviewees frequently related values of openness, caring, and empathy to their own upbringing as a child. A related shared belief is in the power of hard work. Grahame Campbell (Chapter 8) for example, grew up in an Anglo Celtic neighborhood with demountable houses and without sewerage system and stated that ‘the stoic protestant ethic of hard work brings its rewards was stamped in my DNA’. Like Campbell, most interviewees were born in geographic areas where the local culture values hard work and directness, such as Annegret Schaber in the Ruhr mining area in Germany (Chapter 3), whose lived in an area characterized by people’s honesty, directness, pragmatism, down-to-earth attitude, modesty, diligence and tolerance. From early childhood, they learned to believe in the power of the ‘open word’, straight to the parents (or later to project stakeholders), or politically colored it to make it sound as if the idea were from their parent (project stakeholder).

Turning points
Almost all interviewees mentioned important turning points in their lives, which has moulded them. For Sean Sweeney (Chapter 9), the Museum of New Zealand project “changed his life”. For Réal Laporte (Chapter 16) the death of his father marked his (young) life. We saw a wide range of turning
points; returning to school, moving to another city, merging with students from other religious backgrounds (Simoni, Chapter 7), hitchhiking (Parker, Chapter 10), working experiences abroad (Campbell, Chapter 8), and studying. For example, when Hans Ruijter (Chapter 6) took a 3 month internship at the Eastern Scheldt Storm-surge barrier megaproject it changed his career; “there is where my love for the technology emerged, it was in the middle of the summer, I went with small boots to the construction sites…..it was fantastic”. In another example of Zhu Yongling (Chapter 12), we observed the importance of the year 1978, when he became a college student at Tongji University, which was also the beginning of China’s process of economic reform and opening-up. His college life and professional life moved forward during this process. These turning points all had in common that interviewees experienced important moments in their lives that contributed to their career development towards becoming a megaproject manager.

**Significant others**

Project leaders frequently mentioned mentors and significant others playing an important role in their career. Family members were the most frequently mentioned mentors; fathers, uncles (Sweeney, Chapter 9), mothers (Schaber, Chapter 3) and grandfathers (Kim, Chapter 11). For example Neil Couling (Chapter 5), whose grandfather was a Marxist miner influencing him on taking up jobs nobody wanted. Interviewees were also influenced by significant phantoms such as missing or absent fathers (Arbaud, Chapter 15; Parker, Chapter 10). A mentor could also be found in the project context as in the example of Ma Zonghao (Chapter 13) who had Mr Wang as an important mentor for understanding leadership as an act of mindfulness in which he learned to keep the big picture while giving attention to small details. Or Jean-Marc Arbaud’s (Chapter 15) mathematics teacher, who was his mentor influencing his choices in life and supporting his personal development at an early stage of his life. Many of the interviewees recognized and valued the role of their mentors in the development of their careers.

**Learning process**

Playing team sports is frequently mentioned by interviewees as way to learn becoming a leader. To Neil Couling (Chapter 5) and Mark Thurston (Chapter 4) the loyalty to a (football) team was important in their learning process. To others it was the difficult, not per se large, complex projects that they learned most of. For example the Road Pricing project brought Hans Ruijter (Chapter 6) to a steep learning curve; “one of the first things I had to do was presenting for the full Dutch Cabinet, which was completely new to me”. In another example, the inclusion of diverse regional cultures in the Swiss megaproject taught Dieter Schwank to become sensitive on cultural differences (Chapter 7). For others, music proved to be learning ground. For example, Graham Campbell (Chapter 8) learned to play the clarinet, which would guide him: “that every detail mattered, affinity with every note, empathy with
every musician; it’s a framework that translates quite well to the big things we build’ (Botros, 2018, p.86).

Based upon the cases, we gathered that professionalization of project leaders developed within projects (see Zonghao, Chapter 13; Laporte, Chapter 16). Not only in successful projects, but also in difficult, problematic, political and sensitive projects. These type of projects were also mentioned by interviewees as steepening their learning curves.

**Cluster Time / Present**

*Learning by doing*

Understanding that the professionalization of project leaders takes place within their projects, we analysed in the chapters whether they reflected upon their work practices during the action, that is, the management of their megaprojects. In general, leaders learnt through action, in what Yanow and Tsoukas (2009) call reflection-in-action, which is the reflection upon one’s work practices while doing. Learning while doing is central in the profession of civil engineers in which most of our interviewees were trained in (Florman, 1996). For example, Brijesh Dixit (Chapter 14) learned most from the frontline, being in the project close to the execution of the project and solving problems emerging there. Réal Laporte (Chapter 16) learned from each project by getting over things fast, which helped him to analyse a situation fast to see whether a problem is going to happen, and if so, to quickly accept and act accordingly to solve it. Frequently, project leaders start with smaller but often tricky projects in order to grow to manage more complex megaprojects. Their careers showed that it rarely stood standstill, but ther was always a steady desire to develop further, both in pursuing education as well as professional experiences to take on more challenging roles, until they were ready to take on roles that nobody else dares to accept, like Neil Couling (Chapter 5) in the recovery of a failed megaproject. Our interviewees noticed that leading a megaproject is an end stage of one’s career; in which someone’s training, experiences, and ambitions all come together. Only a few exceptions were noted, such as Ma Zonghao (Chapter 13) who started with managing megaprojects at a young age who worked in more than one megaproject.

**Cluster Time / Future**

*Learning by reflecting*

Generally, our interviewees learnt by doing and took little or no time to reflect upon their profession from standing apart from the task at had, for example, through the writing of a Master thesis (Campbell, Chapter 8) or Phd thesis (Ruijter, Chapter 6). This is what Yanow and Tsoukas (2009) call reflection-
on-action. Reflection did occur after the projects, for example through evaluations or during the process of contributing to this book, which helped and supported some of the leaders to take the time to reflect in hindsight on their respective experience. The interviewees did not plan their learning processes and careers, but frequently these were shaped by their projects. Mark Thurston (Chapter 4) states that “the diversity of company, the diversity of opportunity, the diversity of mentors and role models, the diversity of the work I was responsible for and the people I was leading have all helped shape me and had a bearing on where I find myself today”. Reflection also occurs after the projects, for example through evaluations or during the process of contributing to this book, helping and supporting some of the leaders to take the time to reflect in hindsight on their respective experience.

Some of our interviewees did focus upon the future role of leaders of megaprojects. Grahame Campbell (Chapter 8) wrote his personal reflection in a book “Clarinets, Pipelines and Unfrozen Places: The Evolution of an Engineer”. He presented and discussed his book with engineering graduates at the University of New South Wales in Sydney to reflect upon engineering practices and increase their communication skills. Another example is Hans Ruijter (Chapter 6) who participated in a training program for public megaproject managers to reflect upon their future role and their collaboration with private partners.

Cluster Social relations/ Past

Personal situational setting

Many of the interviewees reported on their struggles at primary school and later at university, which may have contributed to their appreciation of others in form of teamwork, contributions by others, and manifested itself in a self-perception that is more critical than the perception by others (Couling, Chapter 5). However, these perceived shortcomings were overcome through various means, such as learning on line or change in subject areas. A red thread that goes through all the stated careers is the development of structural thinking and its importance for the leadership role in megaprojects. This was developed through a wide range of means, like working with tribal groups in India (Dixit, Chapter 14), spending spare time, e.g. by fishing, in the area that later became the location for the megaproject (Kim, Chapter 11), apprenticeship in engineering (Parker, Chapter 10) or structured programs at the Swiss University ETH (Simoni, Chapter 7), that shaped structured thinking. In summary, during their childhood, most of the interviewees used his/her particular personal settings to explore reality, either by more hands-on means or by ‘swimming against the stream’ of their family by choosing endeavors that developed their structural thinking.

Constructing self-identity

The common denominator in the construction of self-identity was individualism which ‘brings out the tension between a shared sense of identity and individual self-identity’ (Edwards, 2011). This presented
itself in various ways. From being the first in the family to attend university (Couling, Chapter 5) or having the desire “to do something that felt alien” (Thurston, Chapter 4), or having a reputation of being the ‘chief heretic’ (Parker, Chapter 10), as well as by wanting to be challenged intellectually (Ruijter, Chapter 6). At first sight, this seems at odds with the preference for sports/music during childhood and the belief in teams later in their project management role. However, the team could also provide the fertile ground to grow into the role of an individualist by gaining the respect as the ‘alien’ first and, when successful, become respected as a leader. This perspective portrays the project managers as the point of integration, a notion that pervaded the project management literature towards the end of the last century (Maylor, 2001), and aligns well with the subsequent developments towards more agile approaches, flat hierarchies, or self-organizing teams, which all provide an eco-system for individualists to show their leadership capabilities.

We also observed that leaders narratively constructed their self-identity in the interviews through the telling of stories on successes, failures and the hardship faced in managing megaprojects. Some of our interviewees even have written their personal project narratives in books (Campbell, Chapter 8; Ruijter, Chapter 6). Through these constructive narratives, alike in the book’s chapters, our interviewees identify with their projects; through narrativization they ‘become’ the project as stated by Carlsen and Pitsis (forthcoming).

Along with that comes an identity of being true to oneself and others and being authentic (Thurston, Chapter 4; Simoni, Chapter 7), which provides for transparency for stakeholders (Dixit, Chapter 14). A self-identity that is in line with some of the most successful leaders, such as Lee Iacocca’s being ‘brutally honest’ concept during his time at Chrysler Corporation (Hyde, 2003). To that end, there are parallels between leading megaprojects and corporations, a similarity that has been addressed earlier (Miller and Hobbs, 2005).

Social intelligence
Among the most often mentioned personal traits in the chapters are those that are typically related to the psychological constructs of social and emotional intelligence. As described in the section on the managers’ upbringing, they respect the contribution of others and are able to read and take into account the emotions of others. Related to social intelligence is emotional intelligence, which addresses the ways individuals steer themselves. Psychologists like Dulewicz and Higgs (2005) or Goleman, Boyatzis, and McKee (2002) measure emotional and social intelligence along some of these dimensions, and research in project management has shown that the emotional intelligence measures correlate strongly with project success (Turner and Müller, 2006), independent of project type, size industry or geography. Emotional intelligence traits were mentioned in several chapters in various forms, for example in form of emotional stability of Soohong Kim (Chapter 11) or resilience capabilities.
of Neil Couling (Chapter 5). These are complemented by open-mind characteristics of the leaders, like mindfulness (Zonghao, Chapter 13) and transpositional attitudes (Yongling, Chapter 12) for the successful building of subsea tunnels and bridges. Some of the authors of the chapters trace this back to the development of critical thinking and non-conceptual processing capabilities during their teenage years.

Last not least an often neglected trait: humor. Humor is mentioned several times as a means to take the tension out of a situation, or to generate some level of optimism in difficult situations (Thurston, Chapter 4). Research has shown that humor is a complex phenomenon at construction sites, for example, “whereas older engineers are likely to gain participation and improved performance when they use humor with younger foremen, younger engineers are unlikely to benefit much from humor usage with older foremen.” (Ogunlana, Niwawate, Quang, and Thang, 2006, p.87). It has also been shown that humor in general moderates the relationship between leadership style and performance in a positive way (Avolio, Bruce, Howell, Jane, and Sosik, John, 1999) and having a sense of humor is an important trait of (project) managers (Pettersen 1991).

Beliefs
A shared belief across the interviewees is the importance of family, team and camaraderie. Almost all spoke positively about their family, their childhood and their relationships with parents, even though some of the fathers were working far away for a large part of their childhood (Couling, Chapter 5; Arbaud, Chapter 15; Laporte, Chapter 16). The majority of the leaders reported that their families valued education, and almost all educated themselves to university level, specializing in engineering, albeit at different times in their life. For example, for Sean Sweeney (Chapter 9) ‘it [education] all happened in our latter years’. Many reflected on their engineering education as a journey that taught them to be structured, breaking down large problems into small manageable pieces, but also to work on details without losing the big picture (Laporte, Chapter 16). But that was only the beginning. From their engineering education they developed into management, often stemming from a desire to work with people. This they typically trained in diverse assignments of increasing responsibility until they were appointed to lead a megaproject.

Interestingly, this is complemented by a belief in the power of teams as a means to create valuable outcomes. The interviewees learnt this from early childhood on through team sports and music, and then cultivated this further in their projects. To that end, they believe in the skills and abilities in their team and only to a lesser degree in their own – a characteristic that earlier studies identified to be associated with the most senior project managers (Müller and Turner, 2007). A related belief was the importance of long lasting relationships across time and space. This appeared to develop early on, but then continued through their life. Most of the manager mentioned childhood friends with who they still
maintain relationships, even across large geographical distances. Or later developments, like Hans Ruijter (Chapter 6) mentioned: “Working together on an innovative project in an isolated location created personal bonds for life”.

**Cluster Social relations/ Present**

**Teamwork engagement**

Studies on teamwork engagement has shown positive relationships with task and team performance. Teamwork engagement is also positively related to individual work engagement (Costa, Passos and Bakker, 2014). Throughout the chapters, we were able to identify convergent points expressed by the interviewees on the imperative role played by team engagement for project success. Interviewees recognized the importance of developing a partnership with teammates and other stakeholders around the project. For example, Brijesh Dixit (Chapter 14) states; “Team, Team, Team. The first and the most important stakeholder is your team. The team itself”. Interviewees emphasized that participation of team members in the decision-making process is key. Leaders alone cannot make all the decisions. As raised by Zhu Yongling (Chapter 12): “Forming a unified sense of purpose with employees by taking their voices into account plays an important role in improving staff morale and increasing their satisfaction.” Interviewees also stressed that it is not only a matter of being able to participate in decision-making but they also expect that team members are able to make decisions and take their responsibilities. Thus, involvement of team members for this purpose requires the recruitment of members who have the ability to work in a context that requires accountability. Selection of members who can work in a complex environment and be empowered to actively participate in decision-making and take over responsibilities becomes essential. Diversity in team members is also recognized by interviewees as a key to improve decision-making processes.

Thus, the success of teams depends on the way team mates interact with each other (Mark, Mathieu and Zaccaro, 2001). Strong identification with the group leads members to invest energy to aid group success. Identification also depends on the respect and pride team members have for their team (Kahn, 1990). Working environment and sharing working characteristics influenced team members’ motivation and its convergence within the team. Emotional contagion among team members is a mechanisms underlying teamwork engagement (Torrente et al., 2012). Hackman (1990) and McGrath (1997) have recognized that team effectiveness depends on how the diverse backgrounds and characteristics of team members are utilized. Megaprojects leaders seek the best individuals for the job and the best combination of individuals for the teams in terms of knowledge, skills, abilities and personality characteristics (Mohammed and Angell, 2003). Sankaran (2018) found that leaders of megaproject believed that selecting the right people and budging them into an effective team was critical to the success of their projects.
Project culture

A project culture that closely connects its stakeholders and develops a sense of ownership by the teammates and the community for the project is raised as crucial for projects to succeed. A project culture is understood as the wholeness of practices, values and norms that are shared in a project (Van Marrewijk, 2007). Project culture is frequently being mentioned in project studies to be important for the success of a project (Cheung et al., 2011). In our chapters many interviewees mentioned the importance to develop a strong sense of mission and honor by team members of the project. Indeed, it was pinpointed that developing an “amazing collaborative spirit on the project” fostered an ownership feeling for the project (Sweeney, Chapter 9). Interviewees recognized that a shared destiny by team members around the project has a positive effect on its success. Zhu Yongling (Chapter 12) explained that the “establishing of partnerships to unite all construction participant into a community of a shared destiny so that they would think together and work together” had been important in building the Hong-Kong-Zhuhai Macao Bridge.

Scholars have recognized the concept of sense of destiny in the field of organizational behavior (Babnik, Breznik, Dermol and Sirca, 2014) and have proposed that the sense of professional mission will produce a positive, healthy (psychological and physiological) state of an individual in his/her work. This state can generate a series of positive results such as job satisfaction and happiness at work. In addition, it has been suggested that early engagement of communities can contribute to project social acceptability and performance (Di Maddaloni and Davis, 2017; Teo and Loosemore, 2017).

Trust

Scholars and practitioners widely acknowledged trust’s importance as it is a key to positive interpersonal relationships (McKnight and Chervany, 1996). However, in the chapters few concerns were raised around the concept of trust. Interviewees did recognize the importance to build trust with the teammates. For example, in the SAA megaproject (Ruijter, Chapter 6) several workshops were organized to develop trust between client and contractor. Building trust around the project seems to generate control over it. Some interviewees mentioned that building high level of trust with the governmental authorities by engaging in clear and direct communication style was a way to get their support. The lack of reference to element of trust in the chapters does not mean that the topic is not important. It seems that this notion of trust is then as granted by leaders in the governance and management of megaprojects (Maurer, 2010; Swärd, 2016; Wong et al., 2008). The lack of mentioning the topic might also be related to the stage of the project. Swärd (2016) found that the level of trust changed during the project life cycle caused by events; in the early project stages deeper forms of trust are not needed because interdependence is moderate but these deeper forms of trust expand over time. Other studies showed that trust (together with its complement, control) acts as a mechanism that governs the management and the interaction...
between the project and its stakeholders. As such it is less apparent and only evident through people’s behavior, such as through organization’s strictness with which policies and formalities are enforced (Müller, 2017).

Cluster Social relations/ Future

Public private collaboration

In the chapters presented in this book we observed another trend; many of the project leaders try to contribute towards a better collaboration between public and private partners in future megaprojects. For example, an important focus of Hans Ruijter (Chapter 6) was to build a resilient partnership model that can serve future megaproject. Increasingly, leaders of megaprojects, such as Ma Zonghao (Chapter 13) in the Dalian Bay Subsea Tunnel and Soohong Kim (chapter 11) in the Incheon Bridge, are executing Public Private Partnership projects. In such projects private and public sectors have to take collaborative actions across multiple institutional fields (Van Marrewijk et al., 2008). This collaboration has been troubled by a fragmented industry inundated with adversarial relationships, confrontational attitudes, poor tendering practices and a lack of trust, based upon fundamental differences in interest between clients, contractors, and other stakeholders (Bresnen and Marshall, 2000; Adamson and Pollington, 2006). Although not many leaders mention future collaboration in their biographical stories, we still observed in their stories a changing attitude towards a humanistic approach of megaprojects, with strong focus on human behavior and social dimensions such as a social acceptability of the project (Van den Ende and Van Marrewijk, 2019). Furthermore, we should not forget that all of the projects presented have a strong focus on bringing future value to society (Caron, Radu and Drouin, 2020).

Cluster Place/ Past

Cultural context

National and regional cultural values are clearly visible in the leadership style of our interviewees. We can’t fully understand the leadership style of Zhu Yongling (Chapter 12) without knowing the cultural historical development of China. Or the influence of Indian bapakism, which is the fatherly role of a manager in organizations, on the family style of project manager Brijesh Dixit (Chapter 14). In a final example, Ma Zonghao (Chapter 13) explains that guanxi, which is the personalized social networks of power, and a crucial system of beliefs in Chinese culture, is important to his megaproject. Apart from national cultures, regional culture can also shape the leader. The difference between Simoni, originated from the Alps, highly valuing security and stability versus Schwank, originated from German oriented Basel, with a liberal, international, and open attitude is striking (Chapter 7).
In many megaprojects, employees from diverse cultural backgrounds work together, bringing along cultural differences (Van Marrewijk and Smits, 2016). For example, Soohong Kim (Chapter 11) met with serious cultural differences between the United Kingdom and South-Korea in the construction of the Incheon Bridge. Others, have included cultural diversity in their leadership style. For example, John Parker worked in the remoteness of Irian Jaya (Chapter 10) while the cultural contexts of Africa, Russia and Brazil shaped Jean-Marc Arbaud’s (Chapter 15) vision and understanding of the importance of adjusting to the cultural context when leading megaprojects. In some projects the collaboration of diverse regional cultures was an important asset, as in the Swiss megaproject (Chapter 7).

Political context
Although scholars agree that large scale infrastructure megaprojects are political (Altshuler and Luberoff, 2003), or even called ‘political animals’ (Flyvbjerg et al., 2003), our interviewees only cautiously discuss these issues. Ma Zonghao (Chapter 13) speaks carefully about the relationship with government in the Dalian Bay megaproject; “We are not familiar with political styles of northeastern part of China. We have to get used to it, and keep a good relationship with them”. We hardly learn how he dealt with these political sensitive issues. We see in the biographical stories that politics and dealing with the political context is perceived as a necessary but not a favorite task for a project leader. This was also observe by Pinto (2000) with project managers who wanted to stay away from politics. Some reflect more openly, like Campbell (Chapter 8) on the political turmoil after a fight broke out in a project meeting, resulting in the walkout by the Chief Minister.

The majority of our interviewees, such as Jean-Marc Arbaud (Chapter 15), prefer to be in the “arena”, rather than in the “political stands”. So much is learned in political projects, as for example Hans Ruijter (Chapter 6) learned about the power of framing, the influence of political context on a project and the simultaneous existence of multiple perspectives in the Congestion project. Most outspoken on the topic of political project is the New Zealand case on the national museum of Maori identity (Sweeney, Chapter 9). But openness over this political task is not common. It works best if a project leader has a business oriented client such as in the case of Grahame Campbell and Nick Greiner (Chapter 8) who had their ways of dealing that were more business-like than in the political sense.

Environmental complexity
The place and space of the project leader’s origin has proven to be important for understanding their development. A majority of the project managers recall a strong connection with their native city and the values related to this geographic area (Schaber, Chapter 3; Kim, Chapter 11). For example, Soohong Kim’s strong connectedness with Yeongjung Island made him choosing nature as the starting point and
most important stakeholder of the construction megaproject. Also, Réal Laporte (Chapter 16) had a strong connection with the Quebec’s mountains and nature, which helped him to establish working relations with the indigenous communities affected by controversial hydroelectric facilities. Frequently, leaders of megaprojects have to deal with ecological concerns, raised by environmentalists and local communities (Van den Ende and Van Marrewijk, 2019). Tryggestad et al. (2013) discuss how even frogs can become important stakeholders in construction megaprojects.

Also the harsh conditions of (remote) megaprojects play an important role in the biographical stories of leaders. Grahame Campbell (Chapter 8) experienced remoteness and harness; ‘We had swamps, we had desert and difficult situations to deal with’. The harsh and isolated conditions required leaders to be able to improvise to keep up the team spirit.

**Cluster Place/ Present**

**Stakeholder management**

Leaders placed a great emphasis on stakeholder management and used many creative ways to engage with stakeholders. Annegret Schaber (Chapter 3) was very conscious of the extra effort to be put into megaproject management due to its complexity and demonstrate leadership in engaging with multiple stakeholders who had different priorities. She elaborated: “The A40 project was from its beginning a relatively complex endeavour because of the many diverse stakeholder groups and disciplines involved”. Another interesting strategy, used by Zhu Yongling (Chapter 12), was to unify the stakeholders towards the greater good. Zhu Yongling and his team accomplished this by creating enthusiasm and an innovative spirit; “during the design and construction progress of HZMB, the partnership among all the participants motivated their enthusiasm and innovative spirit and united them into a community of mission to think together and work together towards the ultimate success of the project”.

Zhu Yongling (Chapter 12) inspired his protégé (Chapter 13) to implement stakeholder management. Ma Zonghao stated that; “the ideal project leader candidate was required to tackle the risks and uncertainties in the project implementation processes while maintaining sophisticated relationships among multiple stakeholders”. Brijesh Dixit (Chapter 14) also inspired his team to engage with stakeholders by getting them more involved in the progress of the project to render a more positive perception of the megaprojects. He explained that making good use of the media was very important; “motivating my team to ensure inclusivity and transparency towards stakeholders… by garnering public support to obtain their cooperation by using the media in addition to making direct contact with the citizens”. Innovative stakeholder arrangement was also demonstrated by Neil Couling (Chapter 5) by treating stakeholders are partners rather than people who developed an antipathy towards
the project. He explains that; “I began to form an alliance with stakeholder groups to discuss how the Universal Credit project would move forward and stakeholder groups who were once opposed were now ‘Purring’.” The notion of stakeholders was extended even to ecosystem affected by megaprojects that can cause environmental degradation. Soohong Kim (Chapter 11) explained that;

“In my mind, nature was the biggest stakeholder. It was the first time anyone included nature as a stakeholder. Nobody understood why I started with nature, but it was because Yeongjong Island was my home, the crabs were my friends and I did not want to hurt them. I invited 23 environment related non-government organizations from the area in to discuss and articulate their own goals and expectations what nature wants; what nature really wants’

Risk management

Risk management is considered an important factor for managing construction projects (Lehtiranta, 2014). Leaders of megaprojects are confronted with a diversity of technological, financial, social and political risks. For example, Brijesh Dixit (Chapter 14) was advised not to use BIM due to bad performance in similar projects, but ”chose to ignore this advice as he intuitively felt that BIM would provide benefits to the project. Innovations occur only when old practices are exchanged by newer ones”. Leaders need to balance the diverse, and sometimes competing, risks (Osipova and Eriksson, 2013). Hans Ruijter (Chapter 6) weighed the technological risk of an new undertaking, the financial risks and the provision of a better solution. He advocates not to shy away from taking risks by stating that; “risks could be taken in the project; we dare to make constructions that never, or almost never have been done before if this results in the best possible solution”. Megaproject leaders often used innovative ways to solve risks. Annegret Schaber (Chapter 3) used the A40 motorway on a daily basis and knew that shutting this down for a couple of years would be a disaster. She therefore decided that closing the motorway for short a period and accelerating the projects was less risky in the long run than work during normal operation of the highways at nonpeak times; “a partial closure of the motorway would have taken minimum two and a half or three years. So, I started calculating and came to the conclusion that it would take three months if we completely close it.”

Innovative processes

Most interviewees were interested in technological innovation, but tried to find a balance between innovation and control. Jean-Marc Arbaud (Chapter 15) sees excessive control as a way to hinder innovation. Innovation is needed to solving emerging problems in the execution of the megaproject (Davies and Hobday, 2005). Grahame Campbell (Chapter 8) felt that integration of design development with construction helped to maximis innovation; “If you lock in price early to minimise risk, you kill innovation”. Another way to stimulate innovation is by putting oneself in the shoes of others. Hans
Ruijter (Chapter 6) explained how role play was used to simulate problems that can occur in megaprojects; “by letting the participants take each other’s role in the role play the empathy and willingness to see from a different viewpoint was exchanged”. Sometimes serendipitous events could also lead to innovation. Brijesh Dixit (Chapter 14) explains the inspiration to use BIM came from hearing that the London Crossrail project made extensive use of BIM. He then visited CrossRail and was convinced that this was the future of Indian railway projects; “I had long felt that technology would be a key driver in bringing about efficiencies on projects…. I felt that this technology (BIM) represented the future of infrastructure project management”.

This analysis, using clusters and temporal categories as presented in the analytical framework, allows us to better understand and highlight key elements that influence or make up the personalities of our leaders. Some of them seem to play a key role like family values, turning points, or beliefs while others are more related to managerial skills like teamwork engagement and stakeholder management, to name a few. In sum, what we have learned is that “there is no single, observable reality, rather, there are multiple realities or interpretations of a single event” (Merriam and Tisdell, 2016, p.9). Each of the leaders shared their realities, from which we can identify trends and lessons. We are convinced that in reading the chapters and the analysis, you as a reader, can also identify other astonishment events and learn from them. This is the beauty of the possibility to create multiple dynamic interpretations. In Chapter 18 we will discuss some trends and lessons that we learned from the biographical cases. There we will draw some conclusions on what can we learn from the personal views of megaproject leaders when they led their projects.
References


