

# Beyond Implementation: How and Why Business Practitioners Use Sociotechnical Systems Design



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As a business administration student from the Radboud University in Nijmegen, I cannot help but be a fan of sociotechnical systems design as an organization theory. I was curious if other business administration students from Radboud share this interest, so I decided to investigate that. This thesis is the result of that investigation.

I would like to thank Dr. Heusinkveld for his help and interesting tips to improve my research, and I would like to thank all interviewees that have participated in my research for their interest and enthusiasm.

- Bjorn van der Meer, 13th of June, 2022

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## Abstract

A lot of research has been done on the adoption, diffusion, and evolution of management ideas in organizational practices (e.g. Abrahamson, 1996). Yet, research about the different uses of management ideas by managers is lacking. This lack is remarkable, since literature explains several reasons of why managers adopt certain ideas (e.g. Sturdy, 2004). This research contributes to filling gaps in existing literature on the consumption of management ideas by not limiting the use of management ideas to direct implementation in organizational borders, and by taking into account the different personal interests, problems, goals, and uses of management ideas of consumers (Heusinkveld et al., 2011; Van Grinsven et al., 2020). To gain more insight in the motives for and uses of management ideas, in-depth interviews have been conducted with alumni of an EMBA programme at a Dutch business school. In this business school, the students specialize in Dutch sociotechnical systems design (STSD), a local and prescriptive management idea. By inductively coding narratives of the alumni, several motives for and uses of STSD in both work and daily life practices have been distinguished. Four common categories of motives for the uses of STSD in work can be categorized, namely to (1) improve organizations, (2) meet personal interests of organizing, (3) enhance reputation, and to (4) confirm thoughts on organizing. Outside of work, STSD is used to get a better understanding of organizations and social structures in general. STSD is used more often as a way of thinking about organizing rather than as an actual solution to organizational problems by implementing specific tools and techniques, and is also used to enhance reputations.

Overall, it is argued that this broader understanding of different uses contributes to getting a better understanding of the consumption of management ideas. Furthermore, this insight offers a basis for further research on the accessibility of management ideas and reflection on business schools' efficacy.

**Keywords:** Sociotechnical systems design (STSD), motives, use, EMBA, management ideas

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## Introduction

The management knowledge industry has been expanding in the last decades (Engwall & Kipping, 2004; Heusinkveld, Sturdy & Werr, 2011). There is more creation, diffusion, and commercialization of management ideas. Management ideas are *'more or less coherent visions, principles and/or guidelines for managers and others to adopt in organizing resources'* (Bort & Kieser, 2019, p.233). Management ideas are powerful, since they prescribe and reflect particular ways of acting and thinking (Sturdy, 2004). A lot of research is done on the evolution, adoption, diffusion, and impacts of management ideas. Many scholars agree that managers play important roles in the adoption and consumption of management idea (e.g. Abrahamson, 1996). Yet, the main focus of studies on the use of management ideas seems to be the direct implementation of tools and techniques of an idea in practice because this can lead to the improvement of organizational effectiveness and competitive advantage (e.g. Nohria, Joyce & Roberson, 2003; Sturdy, Brocklehurst, Winstanley & Littlejohns, 2006). The consumption of management ideas beyond organizational implementation is understudied (Heusinkveld et al., 2011). This literature gap is remarkable since literature on the managerial adoption of management ideas distinguishes several reasons for this adoption. For example, ideas are adopted because managers want to secure power, or because they have heard success stories from other managers (Sturdy, 2004; Wilhelm & Bort, 2013; Bort & Kieser, 2019). Next to that, studies on the outcomes of Executive Master of Business Administration (EMBA) programmes also conclude that implementation is not the main goal of students' consumption of management ideas. Even though EMBA programmes are expected to educate business practitioner students on multiple tools and techniques that are applicable and effective in their organizations, other outcomes of attending an EMBA are more significant. EMBA graduates do not seem to be ready for the 'real world' and value the acquisition of a network and the development of their own identity and self-confidence more (Sturdy et al., 2006; Sulaiman & Mohezar, 2008; Gupta & Bennet, 2014; Baruch & Leeming, 2001; Han & Liang, 2015).

However, even though the research explaining the reasons why people use management ideas broadens the view on the adoption of management ideas, the research is still narrow sighted. Another gap in the literature on consumers of management ideas can be found. Consumers of management ideas are seen as passive followers of the producers of these ideas, while they should be seen as active co-producers that may adapt and use ideas in diverse ways in order to achieve personal and organizational goals. Moreover, the transformation of the consumers of management ideas should be investigated as well (Watson, 1994; Heusinkveld et

al., 2011; Ansari, Fiss & Zajac, 2010; Bort & Kieser, 2019; Wilhelm & Bort, 2013; Van Grinsven, Sturdy & Heusinkveld, 2020; Groß, Heusinkveld & Clark, 2015). There are very few studies that take into account the broader consumer view by investigating the transformation of the consumers of management ideas. Van Grinsven et al. (2020) distinguished four types of translation-as-identity-work through which both the specific management idea and the identity of the managers are simultaneously constructed in relation to their organization. Vera Fernández (2021) identified three ideal types of identity work in which actors both construct themselves and the idea of Agile.

So, while there seems to be ample literature on the consumption of management ideas, this literature has some shortcomings and two literature gaps can be discovered. Two important matters of the consumption of management ideas seem to be overlooked in existing literature. The literature on the adoption of management ideas is mainly focused on organizational implementation, so consumption beyond implementation is understudied (Heusinkveld et al., 2011). Moreover, the consumer as an active co-producer of the idea and its own identity is not taken into account in studies (Van Grinsven et al., 2020; Heusinkveld et al., 2011).

In this study, motives for the use of Dutch sociotechnical systems design (STSD) by Dutch EMBA alumni are investigated. STSD is a theory that aims to improve organizations' and workers' functioning through redesigns of organizational structures (Van Eijnatten & Hoevenaars, 1989). STSD can be seen as a management idea because it offers a coherent idea on how it can help organizations through a redesign. Moreover, STSD offers various principles and guidelines that can be adopted by managers and other business practitioners. Examples of tools and techniques of STSD that can be used in organizations are the design parameters and the U-form sequence of designing an organizational structure, both developed by de Sitter (Achterbergh & Vriens, 2009). There seems to be clear guidelines in the theory, but adaptation of the theory and other uses of STSD beyond implementation are expected as well, for example to achieve personal goals. Since there is no research on the broad uses of a management idea yet, no other expectations of ways of use of STSD were held.

The gaps in the literature on management ideas are the bases for the research question that is answered in this study. The research question is: *How and for what reasons do Dutch EMBA alumni use Sociotechnical Systems Design (STSD)?*. The goal of this study is to contribute to scientific research on the consumption of management ideas, by gaining insight into the different ways and types of and motives for the use of a specific management idea by

EMBA alumni of a Dutch business school. Motives are reasons to act in a certain way. The act that is investigated in this study is the use of STSD in and outside of work after adoption. By gaining insight into the uses of STSD beyond organizational implementation and into the organizational and personal goals that the alumni want to achieve by using STSD, this study can contribute to filling the knowledge gaps in the literature (Van Grinsven et al., 2020; Heusinkveld et al., 2011). The broader aim of this study is to contribute to a broad scientific research programme on the development and impact of sociotechnical system design theory in the Netherlands and Flanders, by gaining insight in the consumption of sociotechnical system theory of Dutch EMBA alumni. Furthermore, the insights in the consumption and uses of STSD learned at the EMBA programme of a Dutch business school can be used to further develop scientific knowledge on the consumption of STSD – and organizational design approaches in general - in practice. Moreover, the results can form a basis for advice for the business school wherefrom the alumni are interviewed related to the contents of its EMBA programme, so that the programmes can best meet the personal, professional, and educational goals of the students (Kirby, Biever, Martinez & Gomez, 2004).

In order to answer the research question, nine in-depth interviews have been held with alumni of a Dutch business school which teaches STSD. The interviewees work as managers, consultants, and teachers. Because of their enthusiasm for STSD, these interviewees were expected to be the ‘best’ users of this theory. In the interviews, stories of the uses of STSD in work and daily life were discussed. Since there is no literature yet on the different uses of management ideas and STSD in particular, the interview data is analyzed inductively. This way codes were formed from the raw interview data in order to form theory about different uses of STSD. Based on these codes, a categorization of motives for uses of STSD is made. Four common categories of motives for the uses of STSD in work can be categorized, namely to (1) improve organizations, (2) meet personal interests of organizing, (3) enhance reputation, and to (4) confirm thoughts on organizing. Outside of work, STSD is used to get a better understanding of organizations and social structures in general. Other findings are that STSD is used more often as a way of thinking about organizing than as an actual solution to organizational problems by implementing specific tools and techniques, and is also used to enhance reputations. With these findings it is explained how STSD is used, also beyond implementation. Furthermore the personal interests and motives of the alumni are taken into account.

This research starts with a discussion of relevant theory on the production and consumption of management ideas. Here, two gaps in the literature on the consumption of

management ideas are demonstrated, and it is explained how this study includes these previously overlooked matters. Then, the theory of sociotechnical systems design is discussed. After that, the methodological choices of this research are elaborated on. Subsequently, the results of the analyses of the interviews are discussed by showing how STSD can be used in different ways and for different motives. This research ends with a conclusion of the results including a coupling with literature, and a discussion of the study.



## Theoretical framework

### Gaps in literature

The management knowledge industry has been expanding in the last decades (Engwall & Kipping, 2004; Heusinkveld et al., 2011). There is more creation, diffusion, and commercialization of management ideas as Agile, Scrum and self-managing teams. Management ideas are *'more or less coherent visions, principles and/or guidelines for managers and others to adopt in organizing resources'* (Bort & Kieser, 2019, p.233). Managers and other organizational members are constantly presented several of those management ideas that can be the solutions to their managerial and organizational problems. Management ideas are powerful, since they prescribe and reflect particular ways of acting and thinking (Sturdy, 2004). There is both a lot of production and consumption of management ideas, and research is done on both sides of this management knowledge “market”.

A lot of research is done on the evolution, adoption, diffusion, and impacts of management ideas. The most influential study on management trends and how to understand management ideas is ‘Management Fashion’ by Abrahamson (1996). Abrahamson takes into account both the supply and demand side of management ideas. He states that management fashion setters, e.g. gurus, business schools and consulting firms produce the management ideas. These producers are competing with each other to define which management ideas lead management progress, by continuously redefining their’ and trend followers’ beliefs. This way, management fashion setters form the supply of fashions or trends of ideas. Organizational managers and other powerful persons adopt these management ideas because of varied reasons. Norms of managerial rationality and norms of progress create the continuing demand of users for management fashions. Norms of managerial rationality are societal expectations that managers will use the most efficient techniques to reach their goals. Norms of progress are societal expectations that managers will renew the ideas they use over time (Abrahamson, 1996). The demand by users of management fashions is shaped by different forces. Sociopsychological forces, e.g. disappointing performance of an organization or the status of adopters, influence the demand. Managers also want to learn more about management ideas and techniques because they can be possible solutions for the gaps in organizational performance caused by environmental, technical, and economic changes (Abrahamson, 1996).

Other scholars agree with the conclusions of Abrahamson (1996) that managers and other powerful persons in organizations play a significant role as the consumers of management

ideas. Many managers try to find and exploit the ideas and techniques critical for achieving a competitive advantage (Nohria et al., 2003). Sturdy et al. (2006) conclude that *“the search for means through which ostensibly useful ideas and techniques can be acquired to improve organizational effectiveness has become somewhat of a holy grail”* (p. 842).

Yet, the focus of studies on the use of management ideas seems to be on the direct implementation of tools and techniques of a management concept in practice, in order to achieve beneficial outcomes for an organization. The consumption of management ideas beyond organizational implementation is understudied (Heusinkveld et al., 2011). This gap in knowledge is remarkable since literature on the adoption of management ideas distinguishes several reasons for the managerial adoption of management ideas. Sturdy (2004) reviewed the popularity and adoption of new management ideas, based on six perspectives. These perspectives give reasons for why a certain idea may be adopted by managers. These perspectives are the rational, psychodynamic, dramaturgical, political, cultural, and institutional perspectives. Adoption of a new management idea can be approached from these perspectives separately, but reasons for adoption are likely to be a combination. Following the rational view, the reason for adoption of new management ideas is simple: a manager thinks rationally, and adopts an idea because it promises to work or actually works in practice. The psychodynamic perspective suggest that management ideas are adopted by emotionally informed managers. These managers are driven by desires and anxiety, and adopt an idea that potentially can comfort them by e.g. securing their managerial reputation, without fully considering the effectiveness the management idea has for their organization. Managers are portrayed as anxious and always under pressure. When ideas cannot contribute to better organizational performance, renewal, or security, they are soon rejected. While the first two perspectives focus on the demands of managers, the dramaturgical perspective focuses on the suppliers of management ideas. Consultants and gurus use rhetoric and presentation techniques to persuade managers of their ideas. The political perspective is concerned with the use and adoption of management ideas to secure power. Power is used by the suppliers of management ideas, but also by managers. Managers can adopt certain management ideas to defend their career interests or compete for status, but can also adopt certain ideas to distinguish themselves from other managers. The cultural perspective focuses on the nature of knowledge that is locally embedded. Culture can help to spread or adopt a management idea of a specific nature more easily. Management ideas about organizational structure can be adopted because they fit with the organizational culture of a country (e.g. an idea of self-managing teams in a country with a

less hierarchical culture), but also because they are foreign and therefore interesting to apply. The institutional perspective investigates societal influences on practices of organizations. Managers and organizations are likely to adopt management ideas for symbolic rather than rational reasons. Management ideas are adopted because organizations seek legitimacy from their societal environment, or because of isomorphism; adopting similar ideas and practices as other organizations with the same environment (Li & Chung, 2020; Sturdy, 2004).

Wilhelm and Bort (2013) have identified four discourses that managers use when accounting for their consumption of certain management ideas. The first discourse category is learning from others' experiences. Managers can adopt an idea because they have heard other managers' or gurus' convincing stories of success of the idea's application. Success stories by legitimate and experienced sources learn managers to find solutions for their organizational problems. The second discourse is controlling organizational change. Managers can also use ideas to exert control over other organizational members. Managers can use persuasion to make sure other members adopt their ideas. Next to that, managers can also use their power to enforce and structure organizational actions to fit with their personal values and intentions. The third discourse category is gaining external legitimacy. Managers can consume certain ideas in order to gain legitimacy from external stakeholders in the institutional environment. To gain external legitimacy, signalling the use of an idea or concept instead of actually implementing it is often enough (Wilhelm & Bort, 2013; Piazza & Abrahamson, 2020). "*Managers seem to be well aware of the strategic potential of symbolically using concepts in order to gain external legitimacy*" (Wilhelm & Bort, 2013, p.438). The fourth and last discourse category is collective sensemaking. By consuming a management idea, organizational members can better understand their organizational environment and events. Ideas and concepts offer a frame of reference that is socially accepted. This way ambiguity and uncertainty can be reduced for the whole organization (Wilhelm & Bort, 2013). Bort and Kieser (2019) also analyzed why different groups of consumers of management ideas consume these ideas. For this study, which researches business practitioners that are alumni of a business school, their analyses of both students and managers are relevant. "*Managers are often portrayed as the key consumers of new management ideas*" (p. 234). Managers are up to date with new management ideas, e.g. by reading journals and books, and implement them if they think they could be effective. Students "*attend business schools and consume management ideas usually as a preparation for a career in management or for career advancement*" (Bort & Kieser, 2019, p.238).

Studies on Executive Master of Business Administration (EMBA) programmes, which can be seen as producers of management ideas (e.g. Abrahamson, 1996), also suggest that there are uses of management ideas beyond organizational implementation. The studies conclude that implementation is not the main goal of students' consumption of management ideas. Business schools teaching management ideas are an important part of the management knowledge industry (Engwall & Kipping, 2004). Business schools are expected to enable students to develop relevant skills to make them more effective in their work as a CEO or manager (Sturdy et al., 2006). EMBA programmes are different than normal MBA programmes, since they are directly aimed at working managers and other business practitioners. EMBA programmes are organized to enable their students to obtain a degree in a relatively brief time, while at the same time maintaining involvement in their organizations (Petit, 2011). A lot of managers attend EMBA programmes to get acquainted with possible applicable and effective management ideas, which constitute the core of the programmes. EMBA programmes "*have become the most lucrative academic degree programs in graduate management education*" (Petit, 2011, p.19). Managers or their employers pay premium prices for tuition, and the number of EMBA programmes keeps growing (Petit, 2011). The goal of EMBA programmes is to make their graduates better managers or leaders by adding value to its graduates (Baruch & Leeming, 2001; Passarelli, Boyatzis & Wei, 2018). Trieschmann et al. (2000) state that business schools have two goals they strive to reach: knowledge exploitation through education and instruction to students, and knowledge exploration through research projects.

However, the main goal of EMBA programmes, which seems to be to educate students on multiple tools and techniques that are applicable and effective, turns out to not be a significant outcome of attending such a programme. In our current global and dynamic work environment, the main critique on graduated EMBA students is that they are not able to translate knowledge to real-life situations, since EMBA education is '*wholly out-of-touch with the real world*' (Sulaiman & Mohezar, 2008; Rubin & Dierdorff, 2009, p.208). Doria, Rozanski and Cohen (2003) conclude that EMBA education falls short in preparing students for the real business life, and several scholars recommend a reform of EMBA programmes (Passarelli et al., 2018; Costigan & Brink, 2015; Rubin & Dierdorff, 2009; Datar et al., 2010). Thus, the focus on implementation does not seem to pay off. The application of specific learned management techniques by business practitioners turns out to be rare. Because of various reasons, e.g. students with no expectations to apply ideas in advance or a mismatch with organizational context, the application of learned ideas is not high (Sturdy et al., 2006). There are more

significant outcomes of EMBA programmes than the acquisition of applicable theories, tools, and techniques. Besides the acquisition of important personal and learning skills, competency, and a well-connected network (Sulaiman & Mohezar, 2008; Gupta & Bennet, 2014), attending an EMBA programme also is a journey of self-discovery (Han & Liang, 2015). Petriglieri and Petriglieri (2010) see business schools as identity workspaces, *institutions that provide a holding environment for individuals' identity work* (p. 44). Business schools do not only develop management education that influences what managers do and know, but that also supports the managers in shaping and understanding their own identity. The development of a greater notion of self-confidence and the acquisition of a language or discourse are also valued outcomes of consumption of management ideas at a business school (Sturdy et al., 2006; Baruch & Leeming, 2001). By following an EMBA programme, the enactment of the identity of managers is more legitimized. EMBA is also a form of language or discourse training, since it provides the ability to speak and think in a certain way (Sturdy et al., 2006). However, the results of these studies have not been used in research on the different uses of management ideas yet. To date, the study by Vera Fernández (2021) seems to be the only one that researches the use of management ideas beyond organizational borders. Vera Fernández (2021) researched the roles that people take on while promoting the idea of *Agile organizing* on the platform *LinkedIn*, outside of work. They identified three ideal types of identity work, namely promoting, evangelizing, and training, in which actors both construct the idea of Agile and themselves (Vera Fernández, 2021).

Even though the research that explains the motives why people use management ideas broadens the view on the adoption of management ideas, that research is still narrow sighted. These theories see consumers as passive adopters of management ideas and ‘followers’ of the producers of these ideas, and therefore as lower in the hierarchy than the producing actors. A broader consumer view should be taken into account when investigating the diffusion and impacts of management ideas (Heusinkveld et al., 2011), because consumers actually are active and creative in the implementation and adaptation of new ideas. One could even say that the consumer view is an incorrect label, since consumers can be seen as producers and co-producers of ideas themselves (Bort & Kieser, 2019; Collins, 2004). Consumers actually do influence management ideas in many ways. During the adoption, management ideas are translated and adapted in numerous ways in order to fit with the contexts of the organizations they are adopted by (Ansari et al., 2010; Benders & Van Veen, 2001). Because of different contexts and languages, ideas are very likely to be adapted, and the rhetoric of the management idea and the

actual practice might not correspond that well. Ansari et al. (2010) conclude that the fit between the organization and the adopted idea is dynamic and influenced by political, cultural, and technical forces. Therefore, “*different forms of fit and misfit will trigger different patterns of practice adaptation*” (p.68). Ansari et al. (2010) provide a framework in which the adaptation in the implementation process of management ideas is assessed by describing dimensions of fidelity and extensiveness. These dimensions range from low, to mixed, to high. Fidelity relates to what extent the practice that is adopted resembles the previous version of the idea of the practice. Extensiveness refers to how far the practice is implemented throughout the organizational departments.

Watson (1994) states that organizational managers in their function face a so-called *double-control problem* regarding their goals. Managers must contribute to controlling their organization, i.e. the organizational side, while at the same time managing their personal identities and career, i.e. the personal side. Regarding the organizational side, managers are responsible to control the organization in which they work by contributing to its performance. They must make sure the organization is designed well and stays effective and viable. At the same time managers have to control their personal side, including their own personal interests, values, and priorities. For example, managers can use a certain management idea to update their resume or to improve their reputation. Managers often make choices based on the fit with their own interests and values rather than the organizational priorities (Watson, 1994). So, because of translation and adaptation of management ideas to fit in organizational contexts and both organizational and personal goals, it can be argued that management ideas are likely to be changed by active consumers of these ideas.

Moreover, when taking a broader consumer view, not only the transformation of the management idea in terms of diffusion and adaptation should be investigated, but the transformation of the consumer of management ideas should as well (Groß et al., 2015; Heusinkveld et al., 2011). The producers of management knowledge actually have limited influence on the consumption of their ideas, because users of management ideas give meaning to the ideas, but also to their organizations and themselves. Consumption can also shape identities. The identities of agents are important for understanding the adoption of management ideas (Wilhelm & Bort, 2013). Groß et al. (2015) studied the consumption of management ideas by investigating different consumption activities by business practitioners that were audiences of management guru seminars. They conclude that consumption orientations do not necessarily have to be stable, but are rather likely to shift. Therefore, consumption activity should be

understood as dynamic to understand the impact of management ideas (Groß et al., 2015). Clark and Salaman (1998) also conclude that management gurus' ideas do not only constitute organizations, but also the identity of the managers themselves.

Because there are very few studies that take into account the broader consumer view by investigating the transformation of the consumers of management ideas, here another literature gap can be found. However, for this gap, some scholars have tried to contribute to filling the hiatus. Van Grinsven et al. (2020) studied the shaping of identity in the adoption and translation of new management ideas. They have researched the translation processes and shaping of identity of managers in their role as translators of a specific management idea. By combining theories on agency in translation and identity work, they found four types of translation-as-identity-work. Through these types, both the specific management idea and the identity of the managers are simultaneously constructed in relation to their organization. The four types, in this study in relation to the management method Lean, are externalizing, professionalizing, rationalizing, and proselytizing. These types are based on dimensions of perceived engagement of the top management with the management idea, and the orientations of the managers themselves towards the idea. Externalizing managers put up the idea as a tool and present themselves as consultants. They remain distant from the idea, since there is low engagement from the top management, and they themselves have negative orientations towards it. Externalizing managers only implement the idea because they are obliged or have a fear for the consequences if they do not implement it. Professionalizing managers establish the idea as a method, while acting themselves as experts. While the engagement from top management is low, the managers are committed to the idea, and they therefore try to enhance the idea's position. Rationalizing managers put up the idea as a project and present themselves as project managers. The top management is highly engaged in the management idea, but the managers themselves are not. Therefore they try to understate the idea. The last type, proselytizing managers, deal with high engagement from top management and do highly commit to the idea themselves. They maintain close to the idea by constructing the idea as an imperative and showing themselves as servants of the idea (Van Grinsven et al., 2020). Vera Fernández (2021) researched the roles that people take on while promoting the idea of *Agile organizing* on the platform *LinkedIn*, and included both the transformation of the idea and the transformation of the identities of the promoters of Agile.

So, while there seems to be ample literature on the consumption of management ideas, this literature has some shortcomings and two literature gaps can be discovered. Two important matters of the consumption of management ideas seem to be overlooked in existing literature. The literature on the adoption of management ideas is largely focused on organizational implementation. Consumption beyond implementation is understudied (Heusinkveld et al., 2011). Examples of consumption beyond implementation of a management idea are the acquisition of a language or terminology, the shift or development of self-confidence and an identity, and ways of thinking in different situations. For example, the ways of thinking in a theory can be used in work meetings or when writing a research paper. When these types of consumption are investigated, better insights in the impacts of the consumption of a specific management idea can be provided. Moreover, the consumer as an active co-producer of the idea and its own identity is not taken into account in studies (Van Grinsven, 2020; Heusinkveld et al., 2011).

In this study, the ways of use of the Dutch sociotechnical systems design (STSD) by Dutch EMBA alumni are investigated. Previously overlooked matters are included in this research. In other words, broader uses of consumption beyond implementation are studied. Also, the consumers of management ideas, in this study the EMBA alumni, are not seen as passive and rational managers but their different personal interests, problems, goals and uses of STSD are taken into account.



## Socio-technical systems design

In this research, the consumption of the Dutch modern sociotechnical systems design theory (STSD) by students of a Dutch business school is investigated. Therefore STSD as a theory should be introduced. First, an explanation of the history and development of STSD is given. After that, STSD as a management idea is discussed.

### History and development of STSD

To begin, a distinction between classical and modern STSD can be made. The classical STSD has developed since 1951 at the Tavistock Institute of Human Relations in London, where researchers were inspired by open-systems approaches. In the 50s and 60s, several ideas and theories have been developed and tested, which cumulated to a paradigm that can be called classical STSD (Van Eijnatten & Hoevenaars, 1989). Socio-technical systems design is a science that aims to improve organizations' and workers' functioning through redesigns of parts of the technology of an organization or (parts of) labour tasks. Central in the classical paradigm is the distinction between the social and technical subsystems or aspects of an organization. The autonomous task group was seen as the means to realize a joint optimization of these subsystems (Kuipers & Kramer, 2002). Yet, the classical STSD paradigm still had a lot of 'loose ends'. From 1970, sociotechnical thinking has been used in Europe and America, but nothing more was added to the established theories. However, in the Netherlands, scholars have tried to tie the loose ends and further thought out the theories, because there was dissatisfaction about the theoretical base of the classical STSD approach. The sociotechnical paradigm has been expanded and renewed on methodological, methodical, practical, and content levels to an integral unique and logical approach to (re)organizing organizations. This approach is called the modern sociotechnical systems design (STSD) approach and has diffused quickly to other continents over time (Van Eijnatten & Hoevenaars, 1989). A pioneer in this renewal was De Sitter, who tried to establish a theoretical base for STSD based on systems theory and to develop STSD as a substantive practical theory on structure design (Kuipers & Kramer, 2002).

The modern STSD approach has been developed and expanded for an important part in the Netherlands, where the 'alternative' method of Integral Organizational Renewal (IOR) has been founded by De Sitter (1998) (Achterbergh & Vriens, 2009). The Dutch variant of STSD, IOR, has several conceptual differences with the mainstream modern STSD approach (Van Eijnatten & Hoevenaars, 1989; Van Eijnatten, 1998). Instead of thinking that a system consists of social system and a technical system, a system is thought of to consist of a production structure, a control structure, and an information structure. Also, the main (re)design for the

mainstream STSD is to partially improve the quality of work, while the aim of Dutch STSD is to enhance an organization's controllability and quality of work integrally, through redesigning the organizational structure. Hence, the scope of the Dutch STSD is the total organization, divided into macro, meso, and micro levels, while the mainstream STSD focuses on workgroups. The main (re)design principles of the mainstream STSD are to have minimum critical specification (i.e. to only specify what is essential), and to take into account human values. The main (re)design principles of the Dutch STSD are to parallelize and segmentize the production structure, and to build control capacity in every task. De Sitter (1998) specifies that a designer should (re)distribute work in an organization in order to keep the organization viable. Inspired by cybernetics, he specifies that a work should be designed so that it attenuates disturbances and amplifies regulatory potential to deal with disturbances (Achterbergh & Vriens, 2009).

### STSD as a management idea

First it should be investigated if STSD can be seen as a management idea or theory. Management ideas are *'more or less coherent visions, principles and/or guidelines for managers and others to adopt in organizing resources'* (Bort & Kieser, 2019, p.233). These management ideas can be the solutions to organizational problems. Management ideas are powerful, since they prescribe and reflect particular ways of acting and thinking (Sturdy, 2004). STSD meets these requirements, since it is a theory that aims to improve organizations' and workers' functioning through redesigns of parts of the technology of an organization or labour tasks (Van Eijnatten & Hoevenaars, 1989). Dutch modern STSD aims to enhance an organization's controllability and quality of work integrally, through redesigning the organizational structure (Kuipers & Kramer, 2002). This indicates that there is a coherent idea on how the STSD theory can help organizations through redesigning organizational structures. STSD is described in several books and (digital) articles and taught at different business schools. Therefore it is an accessible theory that can be adopted by managers and other organizational members. So, STSD offers several tools, principles and guidelines that can be adopted and used in organizations, and can therefore be seen as a management idea (Bort & Kieser, 2019). Some of these tools and guidelines are discussed in the following paragraph.

Examples of specific Dutch STSD tools are the design parameters developed by De Sitter. *"These parameters capture relevant characteristics of organizational structures that, according to de Sitter need to have specific values, so that organizational structures are able to attenuate and amplify"* (Achterbergh & Vriens, 2009, p. 229). For every organizational

structure, the values of these parameters can be established. Designers of organizations should give the organizational parameters specific values to optimize organizational structures, in order to improve their controllability. Another important contribution of De Sitter and the Dutch STSD approach is the order of an organizational (re)design. As indicated before, De Sitter distinguishes the production structure, control structure, and information structure. Next to that, the organization is divided into macro, meso and micro levels. De Sitter states that first the production structure should be set up to be able to connect the control structure accordingly, from micro to macro level (Kuipers & Kramer, 2002; Achterbergh & Vriens, 2009). This U-form sequence guarantees that organizational levels interact well with each other. After a (re)design of the production and control structure of an organization, an accommodating information structure can be designed. Another important matter of STSD is the focus on external functional requirements. External functional requirements are set by business environments and should be met by organizations to remain viable. The organizational structure should support meeting the external functional requirements, which are quality of organization, quality of work, and quality of work relations. Quality of organization is the potential of the organization to effectively realize its goals. Quality of work refers to the meaningfulness of jobs and stress. Quality of working relations refers to the effectiveness of communication in organizations (Achterbergh & Vriens, 2009).

To conclude, the Dutch modern STSD approach can be seen as a management idea. The idea is local and prescriptive, because it offers various tools, principles, and ideas to develop viable organizational structures for a wide range of organizations.

### The use of STSD

In line with this research, the possible uses of STSD should be discussed. Most studies on STSD and systems theory look at the contribution that STSD can have on organizational structures and organizational effectiveness (e.g. Offereins, Benders & Vermeerbergen, 2020; Toonen, 2021) or the way that STSD can be applied in organizations in specific sectors (e.g. Van Cleeff, 2018). The adaptation and different ways of consumption of STSD is overlooked, just like in other studies on organizational design theories (Heusinkveld et al., 2011). In the case of STSD as a design approach, the proposed use is to use the parameters and to take into account the functional requirements and design sequence when (re)designing an organizational structure. This way, the (re)design can help to ensure that an organization meets its external functional requirements and remains viable. There seems to be very clear guidelines for the use of STSD in organizations.

However, as elaborated on earlier in this chapter, the types of consumption of a management theory can vary a lot and can also exceed organizational borders (e.g. Van Grinsven, 2020). Therefore the broader consumption of the STSD theory must be studied. The specific tools and techniques can be used in practice, and because of the clear guidelines these tools cannot be adapted much. STSD can also be used beyond organizational implementation. For example, the way of thinking of STSD, i.e. the focus on external requirements rather than the actual implementation of structure parameters can be used. Moreover, STSD can be used by managers as a way to secure legitimacy from external stakeholders (Wilhelm & Bort, 2013).

## Methods

In this chapter the methodological choices made in this study are discussed. The selection of the interviewees, the selection of questions and the coding procedure of the interview data are elaborated on.

Because there is, to the writers' knowledge, no research on the use of STSD and other management ideas beyond organizational implementation, an exploratory study is conducted. To get insight into the uses of STSD in organizations and the motives for these uses, interviews have been held. The interviewees are chosen based on some requirements. The interviewees all have attended and graduated from a specific Dutch business school in the last years, between 2015 to 2022. This business school is specialized in STSD and offers a two-year part-time EMBA programme. The business school offers a unique type of EMBA programme; it is the only EMBA programme which reasons from a social-organizational perspective, with emphasis on dealing with complexity. Alumni that have graduated from the business school have all followed all mandatory courses of the programme, including the course 'Sociotechniek', which introduces the ideas of Dutch STSD. These alumni are therefore representative for all alumni of the Dutch business school, and are also useful for the research on the development of STSD in the Netherlands and Flanders. Because of good contacts with the business school and a personal interest in STSD, this design theory is chosen for this study. The choice for EMBA students can also be argued for. Studies on learning experiences of (E)MBA students in developed countries have been conducted (e.g. Sturdy et al., 2006; Han & Liang, 2015), but context-specific research is needed. Institutional characteristics can influence learning experiences and professional and personal needs of managers. Next to that, the learning experiences of EMBA students are likely to differ from those of regular students of a master's in business administration. Students in EMBA programmes are mostly middle-aged people with developed careers, having multiple roles and broad responsibilities. They are likely to experience challenges in their personal and professional lives (Han & Liang, 2015), and chances are higher that they will use learned theories in practice. Because managers have interests in and desires for relevant tools that can be applied in practice, different examples of uses can be expected as outcomes of this study (Sturdy et al., 2006).

For the preliminary selection of interviewees, another criterion was set. The potential interviewees should have written their theses on STSD, or have used relevant sociotechnical literature in their theses. The use of STSD in a thesis is already a further implementation of the theory, because students at the business school can write their theses on a topic of choice.

Therefore it is more likely that alumni that have graduated with a thesis on STSD use sociotechnical ideas in their daily work and life more than alumni who have only been introduced to STSD in a course. For the first round of interviewee selection, alumni have been approached in collaboration with the management board of the Dutch business school management board. After getting permission from the business school's director to recruit potential participants from their dossier of alumni, a list of potential participants was set up by using the thesis repository to search for people that fit the requirements. A recruitment e-mail was sent to all potential research participants in which the goal of the research is explained, and the question to have an interview was asked (see appendix A). However, the recruitment e-mail drew little response. Therefore the strict requirements were loosened and networks of interviewees and professors of the business school have been used to contact more potential interviewees. To these potential new interviewees the same e-mail was sent. In the end, interviews have been held with nine business practitioners. This number turned out to be enough to make statements about the different uses of STSD and the motives for these uses. Saunders (2012) states that when respondents are selected based on their appropriateness and expected contributions to the research instead of randomly, there are no strict rules for a suitable sample size. New interviews should be held until saturation is reached (Saunders, 2012). After the fifth interview, all new interview data was confirmatory to old data and could be analyzed and categorized relatively fast, so saturation is reached. Also, by selecting certain participants, conclusions of the research are more difficult to generalize (Saunders, 2012; Myers, 2019). However, the aim of this research is not to make a conclusion for a broad population, but to develop an understanding of the use of STSD by a small population of Dutch EMBA alumni. Therefore, the alumni that have been selected and recruited seem the best participants for this study.

All interviewees were very enthusiastic about STSD and interested in this study. Some people are inherently more likely to volunteer to help in research than others (Myers, 2019), but these people often do so because they consider the research interesting and are willing to devote their time. They are also likely to have stronger opinions and feelings about the topic of the research (Saunders, 2012). Therefore, volunteering Dutch EMBA alumni are useful and appropriate as informants for this study, because they are expected to give good insights into their times at the Dutch business school and their motives for and uses of management theories. Because of their enthusiasm for STSD, these interviewees were expected to be the 'best' users of this theory. To be able to make a generalizable conclusion, people with various job functions

in different industries were interviewed, to show that uses of STSD are not limited to one industry or job function. Interviewees work as consultants, teachers, and managers in different industries. Relevant information on the jobs, industries, and time of EMBA attendance of the interviewees can be found in Table 1.

*Table 1: Details of Interviewees*

<b>Interviewee</b>	<b>Job description</b>	<b>Attended EMBA in</b>	<b>Industry</b>
Interviewee 1	Product manager	2018-2020	Correctional institution
Interviewee 2	Consultant and teacher	2018-2020	Consultancy and education
Interviewee 3	Consultant and PhD candidate	2015-2017	Consultancy in franchise
Interviewee 4	Managing director	2015-2018	IT, Sales
Interviewee 5	Manager business operations	2020-2022	Healthcare
Interviewee 6	Teacher, researcher, and manager of education programme	2018-2020	Education
Interviewee 7	Manager of care institute	2015-2017	Healthcare
Interviewee 8	Strategic advisor	2015-2018	Public space
Interviewee 9	Project leader and advisor	2015-2017	Youth care

To answer the research question, interviews were held. The choice for interviewing as a qualitative mode of enquiry is made because with interviews people's perceptions of impacts and different motives for uses of a management idea can be captured. The interviews are respondent interviews, wherein interviewees are asked to share their own experiences on a specific topic (Alvesson & Ashcraft, 2012). Because Dutch is the native language of all interviewees and the interviewer, all interviews were conducted in Dutch. The interviews were semi-structured by a guideline with several themes and questions that kept enough room for elaborations and further questions about certain topics (Bleijenbergh, 2013). The themes have not been adapted in-between interviews. These themes follow the EMBA alumni chronically in their scholarly and personal careers. Before starting the interviews, all interviewees were verbally asked for consent of the uses of the interview data. The discussion of consent will be discussed in the section on research ethics. See appendix B for the guideline of the interview, including the themes, questions and the consent form that was discussed verbally.

The interviews started with small introductions of both the interviewer and the interviewees. After that, questions were asked about the motives for attending the EMBA programme at a business school, and specifically the business school they chose. Next, a question was asked about their acquaintance with STSD. After that, the interviewees were asked

about their use of STSD in the business school, at work, and in their daily life. To end the interview, the impacts of attending an EMBA and learning about STSD were discussed. To ensure that the interviewees understood the questions and the direction of the research, sometimes examples of uses were given or directing questions were asked. Some interview questions were asked to all interviewees, but others were made up on the spot to dig deeper into a specific answer of an interviewee. Each interview lasted between 25 and 40 minutes. All interviews were – after asking consent from the interviewee – recorded so they could be transcribed more easily afterwards. To ensure reliability this transcribing was done immediately after the interview (Eisenhardt, 1989; Wilhelm & Bort, 2013).

Because, to the writer's knowledge, there are no studies that have researched the uses of STSD in and outside organizations, and because the studies on the utilization of popular management concepts are limited to implementation and to organizational borders (Heusinkveld et al., 2011; Wilhelm & Bort, 2013; Van Grinsven et al., 2020), this study is conducted exploratory. This way, the results from this study can be the basis for new theory on the use of STSD and theories on organization design in general in and beyond organizational borders. The interview data were coded and analyzed to gain a better understanding of the data. For the coding of the interviews, an inductive approach was appropriate. Since there is no literature on the utilization of STSD and the goals of this utilization, the code structure is made from the interview data. In the interviews certain sentences and words that indicate goals of the interviewees have been searched for. Moreover, indications of the use of STSD, i.e. the integration of STSD in practices were focused on. The coding of the interview data is done in an inductive, bottom-up way. The first step of this bottom-up approach was open coding. Events of uses of STSD that interviewees explained were highlighted and labelled, but the researchers tried to avoid pasting preconceived ideas on the data. In the next step, selective coding, the most frequent and significant indications of uses of STSD were grouped in higher-level categories. For theoretical coding, these categories were explained, connected, and compared (Symon & Cassel, 2012). An example of the code schemes is provided in appendix C. After analysing the first interviews it became clear that both the interviewees' goals and their motives are manifold. Still, a categorization of different motives and ways of use could be made, which is discussed in the results section.

The results of the interview analyses are used to answer the research question of this study. The results give insights into the uses of STSD and the motives for these uses. This way, the research can contribute to filling the knowledge gaps on the consumption of management



ideas, especially beyond implementation, and the roles that managers can take in this consumption (Heusinkveld et al., 2011; Van Grinsven et al., 2020). Moreover, this research can contribute to a broader scientific research programme on the development and impact of sociotechnical system design theory in the Netherlands and Flanders, by gaining insight in the consumption and perceptions of the theory by Dutch EMBA students. The analysis ends abductively since the results from the interview data coding are compared with existing literature on the utilization of organizational research findings in managerial practices. The findings from this study are used to contribute to a categorization of the uses of management ideas in practice. Further, the results of this study are used for recommendations for future research. Next to theoretical contributions, the results are also used to form a basis for advice for the Dutch business school wherefrom the alumni are interviewed related to the structure and contents of their EMBA programme. The results also give reasons to think about the attractiveness and accessibility of STSD and management ideas in general.

## Research Ethics

While conducting this research, the researcher has complied to general principles of professional academic conduct codes and research ethics (e.g. Bell & Bryman, 2017). The researcher tried to conduct the interviews in a professional and open manner. The similarities between the academic backgrounds of the researcher and the interviewees helped to create a good atmosphere in the interviews. The participants of this research have been treated as professional as possible, keeping in mind the integrity of this research. Before every interview, informed consent was discussed. In this informed consent, participants were clearly informed about the goals of the interview, the goals of the research they participated in, and their freedom to stop or pause the interview and withdraw from participating at any time. Furthermore, the participants were guaranteed that their personal information and interview data were to be handled with confidentiality and anonymity. The interviewees were asked specifically if they would grant permission to record the interview. Throughout the interviews, some statements that the interviewer picked up were discussed with the interviewees to check for confirmation. At the end of the interviews, participants were told that if they want to see the results of this study, that they could get sent an abstract of the important findings. The informed consent that is discussed verbally before every interview can be found in the interview guideline in Appendix B.

To conform to the informed consent, the data is handled with confidentiality and anonymity in this research. By making the information in Table 1 general, and by carefully picking quotes that do not have clear clues to specific people, the participants of this study are irreducible. This way the identity of the participants involved in this research will not be disclosed. Furthermore, this research is written with the aim of providing original work. Efforts have been made to refer to used sources as accurately as possible. To provide transparency in the processing and display of the results, an example of the code scheme is provided in Appendix C. Because of the subjectivity of the researcher in interpreting and analysing the interviews, some statements or events may have been picked up as more important, but an utmost attempt has been made to look at the data as objectively as possible.

Lastly, because this research contributes to broader research on the development of STSD in the Netherlands and Flanders, the interview data will be shared with the researchers, who happen to be the supervisors of this study. Because the interviewees all gave consent for the use of their data for the goals of this research, this is expected to not lead to issues.

## Results

In the interviews several events were described in which STSD is used. All interviewees hold a positive opinion about the STSD theory, and they have all adopted it in their work and use it in one way or another. The interviewees discussed many motives for their uses of STSD in their work. Motives are reasons to act in a certain way. The certain act investigated in this study is the use of STSD in and outside of work. All interviewees have adopted STSD, but they have used STSD in different ways after this adoption. After inductively coding and analysing the interview data, categories of motives for the use of STSD in certain practices could be formed. Overall, four general motives were found for the use of STSD in work practices. These motives are (1) to improve organizations, (2) to meet personal interests of organizing, (3) to enhance reputation, and (4) to confirm thoughts on organizing. These motives are made more specific based on the different professions that the interviewees have. The interviewees work as managers, consultants, and teachers. First the motives for the uses of STSD of managers are discussed, second the motives that consultants have, and lastly teachers' motives. For the teachers, an extra motive is included: to inspire students. After the distinction based on profession, the interviewees' motives for the use of STSD in their personal life are discussed, which are to get a better understanding of (1) organizations and (2) social structures. For every motive, the motive and the uses of STSD to achieve this motive are elaborated on. Moreover, some supporting quotes from the interviews are displayed for every category. Since the quotes are from interviews that were held in Dutch, the quotes are translated as considerate and literally as possible to not lose meaning in translation. Some quotes have been supplemented with some words that clarify what is meant by certain reference words.

### Motives for the use of STSD in work practices

#### Managers

Managers use STSD because they want to achieve both personal and organizational goals. Motives of the use of STSD in certain managerial practices can be grouped into three categories.

#### Improve one's own organization

The first motive for the use of STSD in managerial practices is to improve one's own organization. The managers that use STSD in one way or another do so because they believe that STSD can help to improve the structure of their organization or organizational part. Improvements in organizational structures can help to achieve organizational effectiveness and job satisfaction. In order to achieve these goals, interviewees have indicated that they explicitly

use the different tools and techniques that STSD offers to some extent. One manager indicated that he has horizontally designed the part of the organization structure which he is responsible for using the steps and order as described in the STSD theory, i.e. the U-form by de Sitter. Another manager explains that she has designed a project based on STSD principles and that this structure has been successful. These results show that STSD is directly implemented in organizations by some managers. Because STSD is a prescriptive theory that offers several tools and techniques that can be implemented, the direct implementation of the tools does not come as a surprise. However, few managers directly implement STSD tools in their practices. The general ideas of STSD about organizing and focusing on the social side of organizations are used more often by managers. By thinking about their organizations and organizational problems from an STSD perspective, STSD can be used to give advice on how to deal with those problems and increase organizational effectiveness. Managers indicate they interpret from an STSD perspective before actually applying tools and techniques. For example, the number of teams and dependencies of organizations are analyzed in organizations before a structure is (re)designed. This way of thinking seems to precede the actual implementation of specific tools, or is not even followed by the direct implementation of tools. So, STSD is used by managers as a tool, as a technique of organizing, and as a solution to improve organizations. Furthermore STSD is used as a lens to approach organizational problems.

- *“I had three different departments, you could say, also with quite different markets and products and product groups. So that was really a piece of cake to just organize that horizontally. (...) And that is successful.”* (Interviewee 4)
- *“I then give tips and advice and I also show how you could tackle specific organizational structures according to STSD* (Interviewee 1).

### Meet personal interests of organizing

The second motive for the use of STSD in managerial practices is to meet personal interests on organizing. Since all managers think STSD as a theory or idea is useful, their personal interest on organizing is to organize based on STSD principles. But, as one interviewee claimed: *“To make an intervention succeed, you need to have support from the highest people inside an organization.”* (Interviewee 4). Managers must make their colleagues and top management understand STSD. This way they can convince their peers and directors to organize in their preferred way, and secure their personal interests. The interviewees that try to convince colleagues to (re)design an organization based on STSD principles have to gain support for their actions. Interviewees mentioned that they make presentations and they draw

structures to show how those structures can improved. This way the STSD perspective is shared with colleagues. So, STSD is used to propose, explain, and justify some managerial actions and decisions. One interviewee genuinely believes that organizing based on STSD is the way of organizing, even though all other managers in the organization use other management techniques to design their teams. He mentioned that he was spending so much time on promoting STSD that it almost became a day job, so he had to reduce that time. To do this, different tactics were used, e.g. deploying a professor or using his successful redesign as an example. Another employee has the same problem that colleagues are not inspired by the STSD way of organizing. Therefore, he uses stories with an STSD perspective as a way to influence the strong organizational culture that exists in his organization. STSD is also used to give an academic base to personal plans that managers have. Remarkable is that all managers indicated that they do not use the specific terminology of the theory when trying to achieve support and understanding, because most people do not know and understand the terms. Instead they try to explain the theory and its ideas in layman's terms. In Dutch this is called "*Jip-en-janneke*" language, referring to a series of children's books in the Netherlands. The reason for the use of easier language is that many colleagues do not have a background in business administration and therefore do not understand the terms. Also, when managers try to convince top management design based on their personal values, which are more socially focused than financially, they use easier language as well and try to avoid terms as 'socio' and 'social'.

- *"Usually I ask for half an hour in the Management Team and I make a presentation. I really make those Jip and Janneke, so I really take them [colleagues] by the hand. (...). "You achieve that people will understand it a bit, so you are a bit like the Messiah who is proclaiming STSD"* (Interviewee 4)
- *"Well, I must honestly say that I now think I have to grab that [STSD theory] tomorrow, or even today, to perhaps reinforce the content, but also to be able to better convince people of the idea of the plan."* (Interviewee 9)
- *"Well, organizing in teams, that is what I am thinking about along with my colleagues at the moment. And I do that from an STSD point of view. So in that sense I try to get that into the organization."* (Interviewee 6)

### Enhance managerial reputation

The third motive for the use of STSD is the enhancement of their managerial reputation. Managers use STSD to improve their reputation or position inside their organizations. However, rather than the actual knowledge of STSD, the possession of the knowledge is used to improve

reputations. Many managers indicate that they are better collocutors to their colleagues, and that they are taken more seriously now they have graduated from the EMBA programme and have specialist knowledge about organizational design and especially STSD. This way they can distinguish themselves from their colleagues and promote themselves as a specialist. By being able to participate more in discussions and getting more voice, personal interests can be pursued more. Also, some interviewees indicate that having attended the EMBA can lead to an official promotion inside an organization, i.e. changing job functions and getting more responsibilities. So, STSD is used as a boost for careers. Yet, the managers do not seem to have to fight for a better reputation inside their organizations. They notice that they get taken more seriously by their colleagues, but they do not have to do anything for that themselves, except for letting them know that they are well-informed on organization design.

- *“At a certain point you will be seen as the one who understands organizational structures, design, and change.”* (Interviewee 4)
- *Colleagues also notice that I know a lot about it [organization design]. Well, knowing...that I have a certain view on it, and they find that very interesting and they take it really seriously. And I also notice that they ask me for advice and actually do what I say.”* (Interviewee 1)

### Consultants

The motives of the use of STSD in practices of consultants can be grouped into three categories as well.

#### Improve other organizations

The first motive for using STSD in consultancy practices is to improve other organizations. Interviewees that work as consultants try to improve the organizational structures of organizations that have hired them to do this. The consultants give advice based on STSD and do so because they believe that STSD can help to improve the structure of an organization. Improvements in organizational structures can help to achieve organizational effectiveness and job satisfaction. In order to achieve these goals, the consultants indicated that they explicitly use the different tools and techniques that STSD offers. For example, one consultant specifically uses the parameters of de Sitter in her work. She evaluates organization structures using those parameters. Another interviewee has integrated an STSD tool in her existing set of tools to diagnose the state of affairs in organizations. Like the managers, consultants also use the ideas and principles of STSD about organizing next to the specific tools the theory offers. Before applying and implementing tools, the consultants first analyze the organization structure

using an STSD perspective. For example, they investigate the number of dependencies in an organization. This way of thinking precedes the actual implementation of specific tools, or is not even followed by the direct implementation of tools. So, STSD is used by consultants as a tool, as a technique for organizing, and as a solution to improve organizations. Furthermore STSD is used as a lens to approach organizational problems.

- *“And so when you design an organization, you first look from the vision and the processes, and then you actually look from coarse to fine. (...). And that just matches very well with the parameters of STSD, so I use them a lot in my work.”* (Interviewee 2)
- *“The results of that [learning about STSD] is that you understand well (...) what effect structure has on the functioning of an organization. (...). Yes, having a lot of insight into that helps me a lot to make organizations better.”* (Interviewee 2).

### Meet personal interests of organizing

The second motive for the use of STSD by consultants is to meet personal interests of organizing. The consultants that were interviewed were convinced themselves that organizing based on the theory of STSD can be the solution to some organizational problems. Yet, the top managements of their client organizations still need to support that way of organizing. The consultants indicated that one of their goals is to make sure that clients understand and support what the consulting firm that they hired is trying to do. So, to make sure the new way of organizing works, consultants need to explain what they are doing next to actually organizing it. This way, the top management of organizations can support their proceedings. To achieve this support, consultants make presentations and drawings. This way, the STSD approach to organizational problems is transferred. Moreover, they give workshops in which the proposed uses of STSD are directly applied in small groups to show the effects of a certain change in structure. So, STSD is also used to justify the actions and decisions that consultants take. STSD gives an academic base to the consultations that are given. Regarding terminology the same applies to consultants and their clients as to managers and their colleagues. To convince clients to design or get designed in a socio-technical way, consultants make use of easier language. The reasons for the use of easier language are because many people in the top management of organizations do not have a background in organization design, or because they do not care about what theory consultants use as long as it is effective.

- *“I mainly make drawings, because the theory is quite complicated for people who do not know it very well. So I have gradually learned not to explain too much, but mainly to show it (...). Because unless you are a business administrator, a lot of people are not*

*very interested in it [STSD terms] and they mainly want to know what it can bring.”*  
(Interviewee 2)

### Enhance own (firm's) reputation

The third motive for using STSD as consultants is the enhancement of their reputation as a consultant or of their consultancy firm. Consultancy firms use the possession of knowledge of STSD to promote themselves as a specialist. This way the organizations can achieve legitimacy and a certain reputation from their (potential) clients. STSD is used as an academic base. The consultants legitimize their job and promote their unique combination of an academic base and experience from practice to their clients. This way they distinguish themselves from other practitioners in the same industry and they can achieve a certain competitive advantage. For example, one interviewee said that she works at the only consultancy firm in the country that gives consults based on STSD. Some organizations specifically ask for consults based on that theory, and they find these organizations because they promote their specialism. So, the possession of it, rather than the actual knowledge of STSD is used by consultants to achieve legitimacy and a good reputation. STSD is also used to become part of a group of specialists. Two consultants are so enthusiastic about STSD and de Sitter that they have joined an institute dedicated to de Sitter. A lot of consultants that consult based on STSD are members of this institute. Therefore joining this institute can be seen as a way to legitimize yourself as a specialist. For one interviewee this seems to be the motive for becoming a member of the group, while the other one became a member to hear more about examples from practice of the use of STSD. So, STSD is used as a status symbol to enhance reputation. Here a remarkable difference is noticed between consultants and managers. Consultants seem to think more that their reputation is important and that it should be enhanced compared to managers, who do not really try to enhance it.

- *“And I am, well I dare say, the only one [in the industry] who can really make that link between academics and practice from that integral view.”* (Interviewee 3)
- *“I am also a member of the Ulbo de Sitter Institute. And those people all work a lot with STSD, of course.”* (Interviewee 2)

### Teachers

In the interviews one motive is found for the use of STSD by teachers, which is to inspire students.



### Inspire students

The motive for the use of STSD by teachers is to get students inspired by the STSD theory. Here personal interests are met as well because the teachers themselves are interested in STSD. While other interviewees mainly try to achieve that colleagues or clients are persuaded of STSD, teachers of organization design hope that their students will take away something from what they have learned in class. This way the teachers try to inspire students to use the way of thinking of STSD, e.g. the focus on people instead of money, but they do not force the use. So, STSD is used as a source of inspiration.

- *“So it is not that we have organized entire courses for it, but it is, even if I can only share a little bit of what I have learned from it, it does help students.”* (Interviewee 6)

### For all three professions

#### Confirm thoughts on organizing

A motive for the use of STSD by all interviewees is to confirm their way of thinking about organizing. Many interviewees indicated that when they heard about STSD for the first time, that they were surprised that there was an organization theory out there that matches so well with their thoughts on organizing. These thoughts, interests, opinions, and intrinsic motivations are about the importance of the social side of organizations, i.e. the people in organizations. The Dutch business school has a social-organizational approach to organizing, and this is taught especially via STSD. Therefore, the STSD theory matches very well with how the interviewees already thought about organizations, organizational structures, and solutions for organizational problems. Also, two interviewees have indicated that they started to look for a new job while learning about STSD, because they were no longer satisfied with the way their current job was designed. When they learned about STSD principles, their dissatisfaction was confirmed and they started to look for a new job. So, all interviewees also use STSD as a source of inspiration to think about organizing and as confirmation for the thoughts on organizing that they already had.

### Motives for the use of STSD outside of work

Two motives were found for the use of STSD outside of work, in the personal life of the interviewees. Here, no distinction based on profession is made, so these results are for all interviewees. The motives are: (1) to get a better understanding of organizations, and (2) to get a better understanding of social structures.

### Get a better understanding of organizations

The first motive for the use of STSD outside of work is to get a better understanding of organizations in general. Even when interviewees do not have to use STSD to convince others, or they have no wishes to improve an organization, STSD is still used to approach organizations. Interviewees use the theory to recognize and think about experiences in their past career, but they also use it to think about the current functioning of organizations. This clarification can lead to peace and better acceptance of the (mal)functioning of organizations. STSD is also used to think about work of others, for example when interviews talk about work at a party. One consultant uses examples of the implementations of STSD in organizations she hears about at the Ulbo de Sitter institute to train herself. STSD is also used when reading e.g. news articles about the malfunctioning of banks or the organization of testing sites for Covid-19. A remarkable finding is that many interviewees indicate that when they think about organizing they always use an STSD perspective to approach it. The STSD perspective is always in the back of their minds, and some interviewees explained that they cannot even think about organizing in any other way than from an STSD perspective. Interviewees claim that they are ruined and screwed up by the perspective, because they cannot let go of it anymore. So, STSD is used as a source of inspiration to think about organizations outside of work.

- *“It [STSD] has brought me a lot of peace of mind, because I can now accept that organizations are complicated and that things do not always work by the book. And I really like when I know why it would not work, and the theory helps to explain that, you really see that.”* (Interviewee 1)
- *“Yes, I think you always have that STSD perspective in the back of your mind, like: hey, is this way of organizing here useful?”* (Interviewee 6)

### Get a better understanding of social structures

The second motive for the use of STSD outside of work is to get a better understanding of social structures. STSD is also used when thinking about matters in daily life. One interviewee indicated that he uses basic interpretations of STSD to raise his children or when he reads biographies of famous people. Other interviewees indicate that they approach the structures of their sports or hobby clubs from an STSD perspective. However, because of strong cultures they cannot really (re)design their clubs. Here, some interviewees also say that they cannot think about matters in their daily life from another perspective than STSD. So, STSD is used as a source of inspiration to think about social structures in daily life.

- *“I cannot even join a carnival club if a car has to be made for the children, because I think: yes, this is not convenient. haha. So you are kind of screwed up forever.”*  
(Interviewee 4)
- *“I am very much indoctrinated and raised in that kind of thinking. I do notice that.”*  
(Interviewee 7)

### Other interesting findings

There are some other interesting findings from the interview data that cannot be placed into the categories of motives or the ways of use. As indicated before, all interviewees neglect the theory-specific terminology of STSD. The terms are not easy to understand by people who have no background in organization design, and therefore they are seen as obstacles when interviewees try to explain or convince people of STSD. This refers to another interesting finding. There is a difference in opinions about the connectability of the theory with practice. Some interviewees found it quite easy to integrate STSD into their work and to couple the things they learned about STSD to their experiences in practice. Others have difficulties to give the theory shape to make it fit in their work. This is remarkable, since the theory is quite prescriptive and offers specific tools that can be applied. The interviewees explain that the difficulties mainly occur because other people with other ideas prevail, or that there is no support, and that terminology is an obstacle to convince colleagues. One should think about the ways to make the theory more attractive and easier applicable in practice. As one interviewee said: *“So being able to make the theory a little sexier wouldn’t be too bad, I think, also for science.”* (Interviewee 9).

Furthermore, all interviewees hold a positive opinion about both the business school and the STSD theory, and they have all adopted STSD in one way or another. This matches well with the interests that all interviewees have in the social side of organizations. Also, all interviewees indicated that they chose to attend the specific business school because of its social approach to organizations and its specialism in STSD. This is also an interesting finding, because the business school does not seem to promote its specialism a lot.

## Conclusion and discussion

With the use of the results from the interview data, the research question on how and for what reasons Dutch EMBA alumni use STSD can be answered. In the interviews, several motives for the uses of STSD were described. Motives are reasons to act in a certain way. The act that is investigated in this study is the use of STSD in and outside of work after adoption. STSD is used in the work of the interviewees for different motives because they have different professions. Yet, the motives match in general. STSD is used at work to (1) improve organizations, (2) meet personal interests of organizing, (3) enhance reputation, and to (4) confirm thoughts on organizing. By teachers STSD is also used to inspire students. Outside of work STSD is used to get a better understanding of (1) organizations and (2) social structures. Some interviewees cannot even think about organizing in another way anymore. These motives are the reasons for the uses of STSD by the Dutch EMBA alumni. The interviewees have indicated their personal interests in their narratives of the uses of STSD in their work and daily life, which is in line with the idea of Heusinkveld et al. (2011) and Bort and Kieser (2019) that consumers of management ideas are not passive, but active consumers that adapt and co-produce these ideas. Therefore this study contributes to filling the gap in literature on management ideas that is caused by not taking into account the personal identities and goals of managers (Van Grinsven et al., 2020).

Next to different motives, STSD is used in different ways. First of all, the specific tools and techniques that STSD offers are used by some interviewees. These tools and techniques are used for organizational implementation. Yet, interviewees more often use STSD as way of thinking about organizations and their problems. The main ideas and principles of STSD are used as a basic interpretation and approach to organizations and social structures. Furthermore, there is acquisition of specific terminology, even though this terminology is not shared with colleagues or clients. On top of that, STSD is used to enhance reputations and to convince others of certain practices. So, STSD is also used beyond organizational implementation, which is in line with conclusions of e.g. Heusinkveld et al. (2011) and Sturdy et al. (2006) on the outcomes of consumption of management ideas. Therefore this study contributes to filling another gap in the literature on the consumption of management ideas, which is that the consumption of management ideas beyond organizational implementation is understudied (Heusinkveld et al., 2011).

Besides different motives and ways, there are also different types of uses of STSD. STSD is used as a solution for organizational problems, as a tool, as a technique, as a lens to

approach structures, as a source of inspiration, a status symbol for reputation, a boost for careers, and as a confirmation of thoughts. Even though STSD is quite a prescriptive theory that offers specific tools and techniques that can be applied in organizations, many other types of uses of the theory were explained in the interviews.

To conclude, there are several motives for, ways of and types of uses of STSD by Dutch EMBA alumni after the adoption of the management idea. These motives differ between people and between professions because of personal and organizational interest and goals. STSD is used by the interviewees in different ways, e.g. direct application, as a perspective, and to enhance reputation. These insights show that indeed consumption beyond implementation should be studied, and consumers of management ideas should be seen as active co-producers with personal interests. Researchers can use these insights to investigate the uses of management ideas more broadly. Business schools can use these insights to reflect on their efficacy. To reduce the critiques of employers that EMBA education falls short in preparing students for the real business life (Doria et al., 2003; Rubin & Dierdorff, 2009), business schools should try to focus less on the implementation of specific management techniques. Following an EMBA programme is also a journey of self-discovery and develops identity (Han & Liang, 2015; Petriglieri & Petriglieri, 2010). Therefore business schools should reflect on their goal of trying to educate students on tools and techniques that are applicable and effective, and try to give students more space to develop their personal interests in different perspectives and ways of thinking about organizing.

Now that different motives for, ways of and types of uses of STSD are found in the interview data, it is investigated if the findings can be coupled to existing literature. To the knowledge of the researcher, no other studies are done that discuss the different uses of STSD as a design theory. Most studies on STSD and systems theory look at the contribution that STSD can have on organizational structures and organizational effectiveness (e.g. Offereins et al., 2020; Toonen, 2021) or the way that STSD can be applied in organizations in specific sectors (e.g. van Cleeff, 2018). Less is written about the use of STSD as a way of thinking or perspective or as a status symbol. Literature that matches to some extent with the findings of this study is about the relation between findings from science and their use in practice. Several scholars have examined this relation, mostly in the healthcare industry, and they have distinguished three modes of utilization of research in practice (e.g. Squires et al., 2011; Beyer, 1997; Estabrooks, 1999; Astley & Zammuto, 1992). The different ways in which knowledge utilization takes place are the instrumental, conceptual, and symbolic (or persuasive (Squires et

al., 2011)) modes. Astley and Zammuto (1992) have concentrated specifically on the relation of organizational science and managerial actions, so therefore their research fits best with this study. Astley and Zammuto (1992) explain that instrumental utilization happens when the findings of organizational studies have a direct impact on managerial practices, tools, and techniques, which are directly developed based on the findings. However, because science is detached from the contingent practices of managers, the direct impact of science on the practices is expected to be relatively small. Instead of offering specific techniques and tools, Astley and Zammuto (1992) state that organizational research rather offers general ideas and concepts to managers. Conceptual utilization occurs when a manager does not directly use organizational research in tools or practices, but the research does influence the manager's way of thinking about a problem. By using their inside knowledge of the organizations they work in, managers can interpret and potentially apply certain tools and techniques. Symbolic utilization is evident when managers use scientific information to justify their ideas, actions, and decisions. The reputation of organizational science is used to legitimize the application of theoretical concepts in practice, to influence practices of others, and to legitimate positions (Astley & Zammuto, 1992; Beyer, 1997; Squires et al., 2011).

This categorization of Astley and Zammuto matches well with the findings from the interview data. There are several indications of the direct application of the tools and techniques that STSD offers, like the parameters of de Sitter to improve organizations in one way or another. Interviewees mainly apply these tools to try to achieve organizational goals like effectiveness and job satisfaction. The direct application of tools and techniques fit well with the description of instrumental utilization of research findings in organizational practices. Still, Astley and Zammuto (1992) state that most theories from organization science do not offer a lot of tools that are directly applicable in managerial practice. Even though some findings show that tools of STSD are evidently well applicable in practice, this statement is agreed upon, since most of the evidence of direct application comes from interviewees that work as consultants. Astley and Zammuto (1992) state that organizational research rather offers general ideas and concepts than specific techniques and tools. In the findings of the interviews there are many indications of uses of STSD as a perspective or way of thinking as well. These findings fit best with the term of conceptual utilization of a theory, where the general idea and concepts are used rather than specific tools. Some interviewees indicated that they elucidate the general idea of STSD when they explain their proposed actions to their colleagues or clients. However, the results from analysing the interviews show that STSD is used more by many interviewees as a

perspective or way of thinking. Rather than only using a general concept of STSD, it is used as a whole, as a framework to approach both organizational and challenges in people's daily life. The use of STSD as a perspective or way of thinking is the most prevalent in the interviews. Some interviewees even stated that they cannot think about organizing from another perspective anymore. Therefore it is suggested to rename the category to 'utilization as a perspective'. Next to that, the STSD perspective is also used outside of work. Here one notices how limited the current literature on the uses of theories in practice is, since it stays inside organizational borders. In the interviews was found that there are a lot of uses of the "STSD way of thinking" in daily life outside of work. There are also indications of the symbolic utilization of STSD. STSD is used by some interviewees to justify and convince others of their ideas, actions, and decisions. Furthermore, the reputation of the theory is used to enhance reputations and to legitimate positions inside organizations. These findings of ways of use of STSD fit well with symbolic utilization (Astley & Zammuto, 1992). So to conclude, the categorization of modes of utilization by Astley and Zammuto (1992) seems to fit well with the findings from the interviews of this study. However, the categorization is limited to managerial practices inside organizations. Also, a difference is found between the use of a concept in a theory or the whole theory as a perspective to approach organizations. The findings from the interviews also indicate that STSD is used quite often outside of work. So, suggestions are made to change the term of conceptual utilization to utilization as a perspective, and to broaden the categorization to include use outside of work. The uses outside of work still fit within the categories of 'utilization as a perspective' or symbolic utilization, but these categories would then be more extensive.

The other findings from the interview data that are not about the motives for, ways and types of uses of STSD can be useful for managers, scholars, and business schools. A remarkable finding is that the specific terminology of STSD is seen as an obstacle when interviewees try to explain or convince people of STSD. Furthermore, some interviewees have difficulties to give the theory shape to make it fit in their work. This is remarkable, since the theory is quite prescriptive and offers specific tools that can be applied. The interviewees explain that the difficulties mainly occur because other people with other ideas prevail, or because there is no support, and because terminology is an obstacle to convince colleagues. Managers, business schools and scholars should think about ways to make the theory more accessible and easier applicable in practice. When the theory is made more accessible, business programmes can better meet the personal, professional, and educational goals of their students (Kirby et al.,

2004), and alumni could more easily convince colleagues or clients of the theory. Business schools should rethink their EMBA programmes, because it is evident that overall perspectives of theories are used more often than specific tools and techniques. Furthermore, the area of the use of STSD could be expanded beyond the Netherlands and Flanders when it is made more accessible. While some gurus conquer the world with their persuasive ideas, STSD seems to be stuck between these countries' borders. This finding urges managers, business schools and future researchers to make the STSD theory more accessible and attractive to use.

Also, all interviewees indicated that they chose to attend the specific business school because of its social approach to organizations and its specialism in STSD. This is also an interesting finding, because the business school does seem not promote its specialism a lot. For the specific Dutch business school where the interviewees are alumni from, a recommendation is to promote their specialism and perspective on organizing even more.

There are some limitations of this study. First, because of the subjectivity of the researcher, some results may be seen as more important by the researcher than they are seen by the interviewees. The interviews have been coded as objectively as possible, but some subjectivity is unavoidable. Furthermore, conclusions are based on nine interviews, which can lead to overgeneralization. However, the goal of this study is not to make a conclusion for a broad population, but to develop an understanding of the use of STSD by a small population of Dutch EMBA alumni. Therefore interviewees were selected because they were expected to have the best stories on their uses of STSD. Yet, the specific business school that was chosen is specialized in STSD and uses a social-organizational approach to organizing. Other Dutch EMBA programmes do not all teach about STSD that much or even at all. Thus, it is difficult to generalize the findings of the interviews with alumni from the specialized business school for all Dutch EMBA alumni. This specialization of STSD by the business school also leads to another difficulty that was bumped into while analysing the interview data. Because STSD comes back in the whole curriculum of the business school, it is difficult to make a distinction between the EMBA programme and STSD. For example, when interviewees say that they got a higher position in their organization, it is difficult to distinguish if that is the consequence of having attended the EMBA programme or the consequence of the use of STSD. Another limitation is that motives for behaviour vary in different contexts and over time (Wilhelm & Bort, 2013). Therefore it is difficult to make clear statements in the motives for the use of STSD over time, because these are likely to change.



Several recommendations for future research can be done. First of all, future research can be done on how to make STSD or other design theories more accessible and attractive to use. Future research can for example try to ease the terminology of design theories. Also, other studies can try to make the conclusions from this study more generalizable. Alumni from other business schools that teach STSD can be interviewed, because these alumni might have other opinions on the theory. Furthermore, more research on the motives for uses of management ideas can be done. Future researches can compare the findings of this study with their research on motives for and ways of uses of STSD or other management theories. It should be investigated if the categorization of motives and the new categorization of utilization of management ideas fit other management ideas. Moreover, because motives for behaviour change over time and in contexts (Wilhelm & Bort, 2013), a longitudinal study on the uses of STSD or another management idea and the personal interests of people can be interesting. This way different contexts, times and personal interests can be captured, which can have interesting impacts on the uses of a management idea. So to conclude, because this study is inductive and has tried to form new theory on the use of a specific management idea, it can be supplemented, elaborated, and improved in many ways. This study can be expanded by taking into account more people with more professions, students from other Dutch EMBA programmes, and other management ideas like Lean, Agile or self-managing teams. Furthermore, more insight into motives for the use of management ideas and the development in these motives can be gained by making the study longitudinal.

In sum, this study has investigated the several motives for and ways of uses of STSD by Dutch EMBA alumni. Even though STSD offers specific tools and techniques, the idea or way of thinking is used more by business practitioners. This insight is food for thought for the business schools to reflect on their EMBA programmes. Furthermore, the terminology of STSD is perceived as too difficult to convey the idea to others. To make more people fans and users of the STSD theory, the statement of Interviewee 9 is agreed upon. Indeed, *“being able to make the theory a little sexier wouldn’t be too bad”*.

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## Appendices

### Appendix A: Recruitment E-mail

# Uitnodiging deelname aan onderzoek Sociotechniek

Beste X,

Wil je ons vertellen welke rol en impact de sociotechniek op je dagelijkse werk heeft (gehad)?

In samenwerking met Radboud Management Academy willen wij beter inzicht krijgen in het gebruik van de sociotechniek en het denken over de waarde van het gedachtengoed door mensen die dit in hun opleiding hebben meegekregen. Dit houdt verband met een breder wetenschappelijk onderzoeksprogramma naar de ontwikkeling en impact van sociotechniek in de lage landen, opgezet door dr. Stefan Heusinkveld en dr. Lander Vermeerbergen.

Aangezien het sociotechnisch gedachtengoed een belangrijk onderdeel heeft uitgemaakt van jouw Masteropleiding aan de Radboud Management Academy, willen we je erg graag vragen naar de verdere rol en impact die sociotechniek mogelijk op je dagelijks werk en leven heeft (gehad) in de loop van de tijd. Denk hierbij niet alleen aan het mogelijke gebruik in relatie tot veranderingen in structuren van je organisatie, maar ook aan het gebruik van de terminologie en de manier van denken in verschillende situaties in of buiten het werk, zoals bijvoorbeeld tijdens netwerkbijeenkomsten met mensen in leidinggevende functies of in het schrijven van een scriptie.

Zou je ons willen helpen met dit onderzoek door een interview te geven over je ervaringen met de sociotechniek? Dit interview neemt ongeveer 1 uur van je tijd in beslag en zal bij voorkeur plaatsvinden in de maanden april of mei 2022. Wij willen daarbij graag de volgende thema's aan de orde laten komen:

- Hoe ben je met de sociotechniek in aanraking gekomen?
- Hoe heeft jouw visie over de sociotechniek en de waarde ervan zich ontwikkeld in de loop van de tijd?
- Op welke manier heb je de sociotechniek gebruikt in de loop van de tijd, en in welke situaties?

- Welke rol speelt de sociotechniek in je huidige werk en leven?

De uitkomsten van het interview worden uiteraard geanonimiseerd en vertrouwelijk behandeld. Indien je geïnteresseerd bent, ontvang je na afronding van het onderzoek een overzicht met de belangrijkste resultaten van het de interviews met RMa-alumni over het bovengenoemde onderwerp. Met de resultaten van het onderzoek wordt wetenschappelijke kennis verder ontwikkeld over de rol en impact van de sociotechniek - en ontwerpbenaderingen in het algemeen - in de praktijk. Daarnaast vormen de resultaten een waardevolle basis voor adviezen aan RMa met betrekking tot het opleidingsprogramma.

Indien je ons wil helpen bij ons onderzoek laat dit dan weten door een reply op deze mail. Dan brengen we je daarna in contact met de onderzoekers.

Met vriendelijke groeten en alvast veel dank voor je hulp,

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**drs. Ingrid Pauwels**, Directeur Radboud Management Academy

## Appendix B: Interview Guideline Including Informed Consent

### Introduction and Informed Consent:

- Welcome, I first have some announcements and I will ask for informed consent.
- We are going to talk about your experiences, I will make notes about it and analyze these. I will compare your data with other alumni.
- I use the interview data to answer my research question which is about the broader use of the (Dutch) modern sociotechnical systems design theory.
- The goal of my study is to contribute to scientific research on consumption and co-production of management ideas, by gaining insight into the uses and reasons for these uses of EMBA alumni of a Dutch business school of the specific management idea of STSD. Also, the study will contribute to broader research on the development of STSD that will be conducted by my supervisor.
- The data will of course be treated anonymously and confidentially. During the interview we can pause or stop at any time.
- Do I get permission to conduct the interview?
- I also would like to ask for permission to record this interview, for me to transcribe the data more easily afterwards.
- Do you have any questions?
- Brief introduction of myself.
- The questions go in chronological order.

### Theme 1: reasons for attending an EMBA programme:

- Why did you attend an EMBA programme?
- Why did you choose to do the EMBA programme at this specific Dutch business school?

### Theme 2: the introduction of STSD to the alumni:

- How did you get acquainted with Dutch STSD? Did you know about it before the EMBA programme?
- Did the theory appeal to you? Did it match existing ideas about work?
- Additional: Were you convinced by the teachers that it is a good theory?
- Additional: What do you think of the theory? Good or critical about it

### Theme 3: the use of STSD over time, in EMBA, in work and in daily life

- How did you learn more about STSD?



- How did you use STSD in the EMBA programme? Thesis
- How did you use STSD beyond and after attending the EMBA programme?
  - o Additional: Did you use it as proposed, to (re)design an organizational structure?
  - o Additional: Is STSD used as an approach to problems/projects?
- Additional: do you make use of the STSD-specific terminology?
- How did the consumption of Dutch STSD develop over time?
- Do you try to convince colleagues/clients to use STSD in organizing?

Theme 4: the impacts of attending the EMBA programme and specifically the consumption of STSD on the daily life and work of the alumni

- What are the outcomes of attending the EMBA programme?
  - o Think of learned theories and skills, getting a network, or more confidence
  - o Did your role in the organization change by having attended EMBA?
- What are the impacts of your use/consumption of STSD?
  - o Did your role in the organization change by using STSD?
  - o E.g.: better understand how organizations function
- Are there any more impacts of using STSD on your work and/or daily life?
- Are there any more impacts of having attended the EMBA programme on your work and/or daily life?

To end:

- Thank you for making time for this interview and the answers.
- I will transcribe and analyze it now
- To some interviewees: explain how potential results will look
- Explain that interviewees can get a summary of the important findings of the thesis when it is finished
- Do you know someone in your network that is also using STSD and maybe is open to do an interview?

## Appendix C: Example of Code Scheme

Quote	Open code	Axial code	Selective code/category
<u>“ Ik geef dan tips en adviezen en ik laat ook zien hoe je dan volgens de sociotechniek vooral bepaalde organisatiestructuren aan zou kunnen pakken...”</u>	Giving advice especially based on STSD theory about designing structures	Use STSD in advice about structure design	Use: Organization and Personal interests

Table 2: Example of Code Scheme with a Quote from Interview 1

Translation of the quote: *“I then give tips and advice and I also show how you could tackle certain organizational structures, especially according to STSD...”* (Interviewee 1).