On the Acceptance of Social Innovations:

A Constructivist Frame Analysis on Beliefs and Social Influences Shaping the Acceptance of Shared Decision-Making in Perioperative Care for Elderly and Frail Patients

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Abbreviations

DRG	Diagnosis-Related Group
NI	Neo-institutionalism
SDM	Shared decision-making
SI	Social innovation
SNI	Sociological neo-institutionalism

1 Introduction

1.1 The acceptance of social innovations

What predicts the acceptance of social innovation (SI), novel ideas, processes, and practices? This is the core question pursued in this thesis. And it is a fundamental issue within the SI literature, dealing with "new social practices created from collective, intentional, and goal-oriented actions" (Cajaiba-Santana, 2014, p. 44), which are intended to respond to individual and collective social needs (Abad & Ezponda, 2022; Cajaiba-Santana, 2014; Grimm et al., 2013; van der Have & Rubalcaba, 2016).

Research on innovation acceptance is characterized by a vast landscape of theories, concepts, and models. These consider various factors relating to innovation characteristics, social, organizational and individual factors, which are assumed to shape the process of the innovation decision-making (Kim & Chung, 2017). But what is at the core determining whether novelty emerges and becomes applied? A look at the field of future studies, which I used to pursue, provides an intriguing notion: Research on futures primarily refers to the exploration and discussion of possible, desirable, and probable futures. The common ground of these categories aims at the capacity to attach novel ideas to the individuals involved – to their attitudes, believes and opinions on the nature, desired state, and potential evolution of the subject at hand. Novel ideas are thus linked to the ability of the individuals concerned to recognize and accept this novelty and to create room for it to unfold. In this sense, novelty is always linked to the present, thoughts, believes and conceptions of reality by individuals.

The literature on innovation research echoes this perspective, emphasizing the need to take individuals' characteristics for exploring and predicting the process of an innovation and its' acceptance by concerned stakeholders into account (Agarwal & Prasad, 1997; Kim & Chung, 2017; van Oorschot et al., 2018). Key models that have had significant influence on subsequent research include Rogers' (2003) innovation-diffusion model, Triandis' (1977) model of choice, the Technology Acceptance Model (TAM) (Davis, 1989), the Unified Theory of Acceptance and Use of Technology (UTAUT) (Venkatesh et al., 2003), the Theory of Reasoned Action (TRA) (Fishbein & Ajzen, 1975), and the Theory of Planned Behaviour (TPB) (Ajzen, 1985, 1991; Ajzen & Madden, 1986). These offer a wide range of overarching issues and detailed factors shaping how individuals approach innovation processes and their acceptance (Dedehayir et al., 2017; Kim & Chung, 2017; Lewis et al., 2003; Muthitcharoen et al., 2011). Although these insights were drawn mainly on technological practice and innovations, the findings also shape research on SI (Demirel & Payne, 2018; Małecka et al., 2022; Oeij et al., 2019).

Research on innovation acceptance remains dominated by these models (Dedehayir et al., 2017; Kim & Chung, 2017; Lewis et al., 2003; Muthitcharoen et al., 2011; Williams et al., 2015). Building on these studies, a wide variety of studies examine contextual adaptations and extensions. Among others, these consider the relation between organization and individual (Pak et al., 2019) and individuals' emotions (Choi et al., 2011; Raffaelli et al., 2019). Further, issues like trust (Gefen et al., 2003; Małecka et al., 2022), perception of risk (Arruda Filho et al., 2022), culture (Srite & Karahanna, 2006), and the role of peers (Demirel & Payne, 2018; Małecka et al., 2022) are being explored. However, the majority of these studies relate to technological innovations, calling into consideration their applicability to SI.

1.2 Research gaps and purpose

Research on individuals' characteristics shaping the acceptance of SI is subject to theoretical issues requiring consideration. This refers to conceptualizing the individual and their characteristics as socially embedded and to the necessity for developing a model specifically considering the requirements for SI.

The acceptance of a SI is subject to perceptual, understanding, and decision-making, which include individual and social norms, personal values, and subjective perceptions of the innovation (Bijker et al., 2012; Lamb & Kling, 2003). Thereby, in this thesis, the characteristics of an individual are understood as contingent to their milieu and social relationships. Individuals' characteristics, behaviors, and actions are therefore shaped by the social environment in which they live. This notion suggests that an individuals' characteristics are not isolated or independent, but rather shaped by the social relationships, norms, and values of the society, organization or collective to which they belong (Agarwal & Prasad, 1998; Dedehayir et al., 2017; Karahanna & Straub, 1999; Lee & Coughlin, 2015; Lewis et al., 2003). These social relations affect individuals' values, beliefs, and behaviors, as well as their perceived opportunities and outcomes in life and decision-making (Aral et al., 2009; Aral & Walker, 2014; Phelps et al., 2012). While this thought might appear 'natural', it is not sufficiently addressed in approaches, models and studies on individuals' characteristics (Agarwal & Prasad, 1997; Karahanna & Straub, 1999; Lamb & Kling, 2003; van Oorschot et al., 2018; MacVaugh & Schiavone, 2010).

Further, major models employed – also for SI – are rooted in research on technological innovations (Demirel & Payne, 2018; Kim & Chung, 2017; van Oorschot et al., 2018). The relevance of the analysis of characteristics such as 'personal innovativeness' and 'perceived usefulness' is beyond question and illustrates the usefulness of employing models initially

developed in the context of technological innovations – the wheel does not always have to be reinvented. However, – and this is particularly relevant for SI – a gap remains to potentially unrecognized characteristics. This is relevant for SI in the sense that this field of research still needs further exploration but continues to rely extensively on established characteristics that were originally identified in the context of technological innovations approaches (Demirel & Payne, 2018; Małecka et al., 2022; Mihci, 2019; Oeij et al., 2019). SI, in turn, concern changes and novelties in social processes – be it new forms of collective decision-making or collective ways of working – which may require further characteristics and benefit from an explorative approach (Cajaiba-Santana, 2014; Hölsgens, 2022).

To address the issues on the social considerations of the individual and the necessity for an explorative approach on SI, this thesis adopts a sociological and an explorative approach for identifying individuals' characteristics shaping the acceptance of SI. More specific, the frame theory is being applied. Frames are conceived as a theoretical approach that pertains to the belief systems of both individuals and groups. This approach enables studying suppositions, perspectives, modes of behavior, and values as qualifiable elements of research, offering insight into characteristics shaping perception, attitude and behavior (Benford & Snow, 2000; Goffman, 1974; Levin et al., 1998). This approach also implies a conception of the individuals' characteristics as socially embedded. Further, the explorative approach enables the identification of factors relevant for SI. Empirically, this is explored on the case study of shared decision-making (SDM) for elderly and frail patients in perioperative care. SDM is an alternative approach for organizing decision-making. Perioperative care refers to decisions concerning therapeutic measures before, during and after surgical intervention. Thereby patients, relatives, and healthcare professionals convene in an SDM consultation to reach a shared understanding of the health condition and interventions and to collectively decide.

The main contribution of this thesis concerns the conceptual and methodological elaboration of an explorative approach for the identification of individuals' characteristics influencing the acceptance of a SI. This implies the development and empirical application of the explorative approach, the identification of individuals' characteristics on the respective case of SDM and the development of a generic model on individuals' characteristics shaping the acceptance of SI.

1.3 Research question and approach

The thesis consists of five related research projects (table 1), pursuing following overarching research question: *Which subjective characteristics shape the social innovation related decision-making of individuals?*

Table 1: Overview of research approaches

Overarching research goal	Paper title	Research Questions	Methodological Approach
Provide an understanding, summary, and overview on methodological approaches on original studies dealing with shared decision-making for elderly and frail patients within perioperative care	P1.1: Barriers and facilitators to shared decision-making for frail and elderly patients within the perioperative setting: A scoping review protocol P1.2 Patients' and healthcare professionals' perceived facilitators and barriers for shared decision-making for frail and elderly patients in perioperative care: A scoping review	RQ1: What are facilitators and barriers perceived by elderly and frail patients and clinicians for shared decision-making in perioperative care? RQ2: What are the conceptual approaches and methods used in analyzing facilitators and barriers to the introduction of shared decision-making in perioperative care as perceived by elderly and frail patients and clinicians?	Qualitative, descriptive scoping review
Provide an empirically based understanding and explanation of frames shaping the acceptance of shared decision-making within the perioperative setting on the individual and societal level	P2: The Social Construction of the Patient-Physician Relationship in the Clinical Encounter: Media Frames on Shared Decision-Making in Germany	RQ: Which news-media induced frames shape the perception, evaluation, and acceptance of shared decision-making among patients and physicians?	Qualitative, news-media review
	P3: How Beliefs and Social Influences Affect the Acceptance of Social Innovations: A Frame Analysis on Organizing Shared Decision-Making	RQ: What frames shape the acceptance of a social innovation among stakeholders under asymmetric conditions within a high-stakes setting?	Qualitative, semi-structured interviews
Investigate the conceptual landscape of frame research	P4: On the origin and diffusion of frames: Theoretical review of frame research and future directions from a network perspective	RQ: How are frames conceptualized in terms of origin and diffusion?	Qualitative, theoretical review, conceptual
Exploration and analysis of subjective factors promoting and impeding diffusion of an innovative model of integrated mental healthcare	P5: Promoting Integrated Care through a Global Treatment Budget - A Qualitative Study in German Mental Health Care using Rogers' Diffusion of Innovation Theory	Exploring facilitators and barriers on the diffusion of the Global Treatment Budget (GTB), an innovative model of integrated mental healthcare.	Qualitative, semi-structured interviews

An overview of previous studies on SDM consists of a scoping review on SDM for elderly and frail patients in perioperative care. The objectives were to consolidate findings and to discuss the methods employed for their identification. This constitutes an overview of the empirical, conceptual, and methodological grounds on which the empirical studies of this thesis are built.

Subsequently, an exploration of the news media discourse and an exploration of the specific case study of the PRÄP-GO project at the Charité were undertaken. The study of the news media discourse pursued the purpose of exploring patterns of debate and discourse in the news media, which potentially influence healthcare professional, patients, and relatives understanding of SDM. The purpose of the empirical study at the Charité, drawing on the scoping review and news media analysis, was to understand the views, beliefs, and values that shape the discourse and acceptance of SDM in the specific empirical, perioperative context, among healthcare professionals, patients, and relatives. The following research question was pursued:

These studies were complemented by a conceptual discussion of the selected research approach, frame theory. The purpose of this study was to contribute to the conceptual basis of frames, providing knowledge of extant studies and concepts of frame theory. The major contribution of this study concerns the identification of extant concepts on the origin and diffusion of frames, the elaboration of a network approach and the demonstration of possible methodological approaches.

Complementing these studies, I contributed to a research project on the diffusion of the Global Treatment Budget (GTB), an innovative funding model, for integrated mental healthcare. The methodological and conceptual basis is derived from Rogers' (2003) adoption model and refers to subjective characteristics, which affect the acceptance of innovations. This involvement fostered the exploration and implementation for identifying subjective facilitating factors and barriers.

1.4 Thesis structure

The aim of this synopsis is to explain the theoretical basis of the thesis, to present the methodological and conceptual aspects of the studies conducted, to summarize the empirical findings, and to theorize the empirical findings. The synopsis covers subjects that are not yet part of the articles. However, to avoid significant gaps which would impede understanding this synopsis, selected aspects which are also available in the manuscripts are reproduced. The remainder of this thesis is structured as follows:

The second chapter addresses the theoretical foundations and applied concepts of this thesis. First, SDM and the empirical setting are introduced (2.1). Further, the epistemological approach (2.2) and the theories informing this thesis (2.3) are addressed. The third chapter concerns the methodological approach and design of this thesis. This covers the research approach (3.1), the frame analysis (3.2) and the empirical design (3.3). The fourth chapter

addresses the synthesized discussion of the findings of the scoping review on SDM, the news media analysis, and the empirical research with patients, relatives, and healthcare professionals (4.1 – 4.5). The fifth chapter concerns the contribution of this thesis to each of the research fields. First, the empirical contribution for research on SDM is outlined (5.1). Further, the contribution to SI research is discussed (5.2) and boundary conditions presented (5.3). The sixth and concluding chapter concerns implications for practice and research (6).

2 Theory

2.1 On the conceptual origins and consideration of shared decision-making

Within the scope of this thesis, SDM is understood as a SI, which represents an alternative perioperative decision-making. Healthcare professionals, patients and relatives are actively involved in decision-making. This also has an effect on the object of decision-making and the discussed subjects. Personal wishes and needs as well as the patients' circumstances are thereby emphasized.

In order to understand the origins and evolution of SDM this section concerns a retrospective view on how the role of patients has evolved and a consideration of the four basic principles of medical ethics. I consider these important to understand the intellectual origin of SDM and the involvement of patients, their needs, and opinions in perioperative decision-making.

How the role of patients is understood is subject to whether the encounter between patients and healthcare professionals is perceived within a biomedical or biopsychosocial understanding of health-related issues. In particular, this has implications on understanding the relationship between patients and healthcare professionals: How the roles of healthcare professionals and patients are perceived, how medical decisions are understood and what possible health-promoting measures are envisioned (Ahuja, 2019; Geisler, 2002). The biomedical perspective is characterized by understanding health conditions as issues of biological nature, for which biological and medical knowledge is required. Therefore, this understanding does not imply the necessity to consider social requirements and living conditions of patients. The necessity for patient participation is therefore associated to a change in perspective and understanding of health conditions, its' causes, and approaches to dealing with them. This change is conceptualized by the shift from the biomedical to the biopsychosocial approach (Borrell-Carrio et al., 2004; Engel, 1960, 1977, 1980, 1997; Farre & Rapley, 2017; Koerfer et al., 1994).

Crucial components of the biopsychosocial approach concern the shift in the conception of health-related issues and perception of the role of patients. It attempts to conceive patients holistically and thus to include the psychological as well as the social circumstances of individuals (Cliff, 2012). The nature of the encounter between patients and healthcare professionals and the determination of the cause of the health condition is thus given a twist. Patients are not only subject and source of the medical examination, but also active participants in the health-related discussion (Borrell-Carrio et al., 2004; Engel, 1980, 1997; Farre & Rapley, 2017; Koerfer et al., 1994). The biopsychosocial approach is considered as a means of providing

a framework for the relation between patients and healthcare professionals that promotes discussing the cause of patients' condition and to involve patients in this process. Patient-centeredness (even human-centeredness) is thus at the core: "Biopsychosocial thinking aims to provide a conceptual framework suitable for developing a scientific approach to what patients have to tell us about their illness experiences" (Engel, 1997, p. 523). By embracing the needs and individual perceptions of patients, I understand this shift as a cornerstone for the emergence of the SDM concept.

Beyond that, it is also useful to position SDM within medical ethics. In medical ethics, four principles are essential: Beneficence, nonmaleficence, autonomy, and justice (Beauchamp & Childress, 2013; Borza et al., 2015). These do not imply any hierarchy and should be considered as equal. The principles of autonomy and of beneficence are the two most concerned principles for the relationship between patients and healthcare professionals. The former is referred to as "a norm of respecting and supporting autonomous decisions" (Beauchamp & Childress, 2013, p. 13) and beneficence is referred to as "a group of norms pertaining to relieving, lessening, or preventing harm and providing benefits and balancing benefits against risks and costs" (2013, p. 13). The arising obligations can be in agreement as well as in conflict within a given situation. By way of example, the obligation of healthcare professionals to perform a specific treatment on patients (beneficence) may be in conflict with the wishes of patients if they refuse further treatment (autonomy) (Geisler, 2004). Balancing this very tension is simultaneously an obstacle and a core task of successful SDM implementation.

Over time, four modes of relationship between patients and healthcare professionals have emerged: These four forms describe segments of the continuum of patient autonomy on decision-making and responsibility. The poles are constituted by the paternalistic model (healthcare professionals exercise decision-making authority) and by the informative model, in which patients exercise decision-making authority, while healthcare professionals only guide decision-making. These modes are complemented by the deliberate and the interpretative model. Within the deliberate model patients ask questions, while healthcare professionals inform, recommend, and make decision with patients. Whitin the interpretative model patients ask questions, explain own views and lead in decision-making, while healthcare professionals inform, recommend, help patients to understand own views and counsel on decision-making. (Agarwal & Murinson, 2012; Emanuel, 1992)

The deliberate and interpretive models are within the scope of SDM and aim for active patient participation: Decisions are product of cooperation between patients and healthcare professionals. The core of such participation concerns the pursuit of patient-centeredness and

autonomy, as particularly illustrated in an updated version of Agarwal and Murinsons' (2012) conceptualization of the relationship between patients and healthcare professionals. Thus, when it comes to the question of why SDM is sought in the first place, the role of patient autonomy is understood to be essential: "We do not only determine to a large extent what is good for us, but exercising our autonomy is also important for our well-being." This sentence implies a cornerstone for the orientation towards SDM: The exercise of patient autonomy, joint participation in decision-making between patients and healthcare professionals, is considered to have a positive effect on patients' well-being (Kelley et al., 2014; Koerfer et al., 1994).

In this sense, SDM is to be understood as a SI that exerts an influence on decision-making. It further implies novelty on the relationship between healthcare professionals and patients and is rooted on a shift from a biomedical to a biopsychosocial approach (Borrell-Carrio et al., 2004; Cliff, 2012; Engel, 1997; Kaba & Sooriakumaran, 2007).

2.2 On the epistemological premises and the sociology of knowledge of the thesis

Frames are conceived of as an analytical approach referring to individuals' and collective belief systems, enabling insight into assumptions, views, logics of action, and values as measurable aspects of research. Thereby frames shape an individuals' and collective perception, decision, and action. (Benford & Snow, 2000; Goffman, 1974; Levin et al., 1998)

Within this thesis, it is assumed that the exploration of frames fosters an understanding of subjective characteristics that influence how SI is perceived, understood, and attributed meaning. Employing this notion, implies epistemological premises, which have considerable consequences in the development of this thesis and will be discussed in this section.

The aim of this section is to explain the epistemological rationale on frames, pursued in this thesis, and the rationale for how individuals acquire knowledge, understand and attribute meaning to their experiences. However, I emphasize that this is not meant to be an excessive nor exhaustive philosophical exposition. More simply, it is assumed that the clarification of the epistemological premises and theories shaping my understanding, is essential for readers to understand the line of research this thesis is pursuing. These premises provide the spectrum of guiding ideas for the research questions and, consequently, for the findings that can be produced.

2.2.1 Experience, perception, and knowledge

How do we perceive, experience, and generate knowledge about this world? An analytical instrument for responding to this question – and being an epistemological premise of

this thesis – concerns the distinction between encounter (of facts and worldly elements) and knowledge (about these facts and worldly elements).

In this sense, and implying a processual idea of human experiences, Husserl (1999) coined the notion of *pre-predicative encounters* and *predicative knowledge*. Using these premises to conceptualize an ontological bases for our world, Husserl (1999) conceives the world, and its thereof constructed elements, as given (i.e., as immediate). These constitute the ground of the *pre-predicative encounter* of an individual, and are in this sense objective, since these are independent of the subjects' perception (1999). Thus, the *pre-predicative encounter* enables merely an acknowledgement of the existence of probable, worldly elements.

Their classification, typification and attribution of meaning, are the properties of *predicative knowledge*: "Truly existing objects [are] only the product of our activity of cognition" (1999, p. 33, translated by AV). Thus, humans' consideration and assessment of their experiences constitute the base for knowledge and not the 'raw' encounter. This sense or meaning, in turn, essentially expresses nothing about the intrinsic nature of the experience or the perceived object – existing irrespective of any subjective perception – but only about the interpreting subject.

This epistemological basis has implications for my understanding of the research conducted within this thesis: We are in a given world and experience and constitute our world through our embodied perceptions. Knowledge about the world and its objects is subject to subjective assessment and sensemaking. That does not mean the world is created subjectively, but instead that it is discovered and attributed meaning subjectively. (Schütz, 1971)

This epistemological approach shapes my understanding of frames in the sense that I conceive of frames as the very vehicle through which we perceive, categorize, and make sense of this world.

2.2.2 Sociology of knowledge

The reception of this epistemological premise has implications on how the theory of frames is conceived within this thesis. Since *predicative knowledge*, the subjective process of sensemaking of the experiences and observations, constitute our understanding of this world, the question emerges: How do individuals arrive at a specific interpretation and sensemaking of experiences? Thus, I would like to address distinct approaches that shape my understanding on the origin of individuals' and collective frames.

Schütz (1974) covers in his treatise on subjective and objective sense, the agency of subjective interpretation of experiences. The individual is in a continuous interplay between

experiencing and interpreting their perceived worldly elements – may it be a tree, an animal, or a conversation. What is perceived does not enter the subjects' consciousness unprocessed, but is experienced, understood, and assessed *by* the individual – consciously and unconsciously. Everything experienced thus *becomes*, only through its' interpretation, through which it is given its subjective meaning (1974). This process is conditioned by underlying interpretive schemes, as well as pre-existing webs of beliefs and knowledge, coined as *provinces of meaning* [Sinnprovinz] (1971). This refers to the various realms of reality (which can be an individuals' dream shaping the interpretation of an experience, but also social influences, harboring different languages, knowledge, and social norms) through which humans' experience life and attribute meaning to these experiences.

From a sociological perspective Goodman (1978) refers to *symbol systems* as features of specific *reference groups* of individuals: These constitute the bases for subjective and collective construction of social realities. The world in itself does not impose any structures, nor order or categories upon the individual: "Shouldn't we stop speaking of right versions as if each were, or had, its own world, and recognize all as versions of one and the same neutral and underlying world? The world thus regained, as remarked earlier, is a world without kinds or order or motion or rest or pattern" (1978, p. 20). The structures, order and categories are, therefore, humanly constructed and constitute the basis of distinct *symbol systems*. These *symbol systems* are constituents of various *reference groups* (family, friends, colleagues) which harbor divergent referential concepts to the same neutral world. Thus, knowledge does not correspond to the discovery of this neutral world, but to the construction of the world by means of referential concepts as *symbol systems*.

Hereby, I understand Goffmans' (1974) frame theory and its epistemological roots to be related to these considerations, who considers *societal communities* and their *frames*: An individuals' reality is created through their belief system, values, norms and attitudes shaping their perception of experiences. The underlying belief system, however, is contingent to their social environment and socialization. (1974)

To address my understanding of the socialization, the formal and informal rules, cultural influences, norms, and moral concepts which shape individuals' perception, understanding and attitudes, I would like to turn to sociological neo-institutionalism (SNI).

2.3 Sociological neo-institutionalism and the theory of frames

This thesis is informed by SNI and frame theory (table 1). SNI serves as a basis for understanding the practice of the adoption of SI as contingent to established institutions. Frame theory serves as a particular theoretical approach to this thesis, for conceptualizing institutions.

Table 2: Related schools of thought and theories

Theory	Contribution to understanding the process of innovation	Contribution to the thesis
Sociological neo-institutionalism	Institutions are formal rules and laws, cultural influences, cognitive frames, schemas, and moral concepts. Behavior is conditioned by the cultural and social environment.	Informs the thesis on the elements of social processes and institutions, like cognitive frames, schemata and ideas, underlying the emergence, diffusion and adoption of an innovation.
Frame theory	The emergence and diffusion of innovations are conditioned by individual and collective frames. These frames are based on social processes (i.e., the learning of social norms, behaviors, and logics of perception, meaning, and action), conditioned by the predominant institutions.	Contributes to the thesis as a specific conceptual and methodological approach for understanding and operationalizing individual and collective social processes, constructs and its underlying elements, shaping the emergence, diffusion and adoption of an innovation.

2.3.1 Sociological neo-institutionalism

Neo-institutionalism (NI) denotes that institutions determine how actors perceive reality and their respective behavioral logic (DiMaggio & Powell, 1983; Meyer & Rowan, 1977; Zucker, 1977). The term actors refers to all kinds of collectives, groups and organizations as well as individuals (Kirchner et al., 2015; Meier, 2011). Institutions are defined as formal and informal rules, norms, behavioral codes, schemata and frames (DiMaggio & Powell, 1983; Meyer & Rowan, 1977; Orban et al., 2016). These are based on social and collective processes and behavior, which are manifested in the institutions (Sandhu, 2012; Orban et al., 2016). However, the specific understanding of institutions ultimately depends on the respective type of NI.

NI implies explicit references to Berger and Luckmanns' (1967) *The Social Construction of Reality* (Meyer & Rowan, 1977; Zucker, 1977; Meier, 2011). In this respect, the concept of institution and the associated institutionalization is informed by Berger and Luckmann (1967). Institutions are thereby understood as "linguistic objectifications, from their simple verbal designations to their incorporation in highly complex symbolizations of reality [...] they may be symbolically represented by physical objects, both natural and artificial" (1991, pp. 92–93). Institutions are experienced as objectified by actors and reproduced through the transmission of habitualized practices: "All these representations, however, become 'dead' (that is, bereft of subjective reality) unless they are ongoingly 'brought to life' in actual human conduct" (1991, p. 93).

In SNI, cognitive frames, schemata, and ideas are considered as institutions (Orban et al., 2016; Sandhu, 2012). These institutions imply individual moral concepts, situational

preferences, and attitudes. These are attributed a perceptual and action-guiding impact on individuals and are the decisive driving force underlying individual decisions (March, 1994).

The individual adoption and manifestation of institutions are subject to socialization. This is pursued on the assumption that the adoption of institutions (i.e., the learning of social norms and values, and frames, schemata and ideas shaping perception, meaning and action) are contingent upon the respective social environment. Socialization processes in organizations constitute a cornerstone of this research, whereby the term organization is conceived broadly (i.e., family, friends, school, associations). These socialization processes refer to the adoption of organizational norms, values, logics of action and behavior of the organizational members (Van Maanen & Schein, 1977; Nerdinger, 2019). In accordance with their subjectively perceived status within the organization or their role, the members (consciously and unconsciously) adopt values and logics of action (Parsons, 1994). Thereby, individuals are exposed to a multitude of organizations in which they adopt divergent and potentially conflicting rules, norms, and patterns.

This leads us to a critically highlighted issue of SNI: The individual autonomy of choice (DiMaggio, 1988; Garud et al., 2007; Kirchner et al., 2015). If the perception and behavior of individuals are shaped by their underlying schemata, ideas or frames, to what extent can they be attributed the capability to decide and act on their own, freely, or even in a new way? Individuals are not deemed complete determinism in their perception, attribution of meaning and related behavior. Most importantly this has to do with the impossibility of conceiving schemata, ideas or frames with such precision that detailed attributions of meaning and behavior could be deduced. Thus these institutions always imply individual elasticity: „There will never be a book for the rules of social life that is analogous to a book (the book) for the rules of chess, because it is impossible to specify all contexts and all the possible "moves" open to interaction" (Manning, 1992, p. 77).

Within this thesis I consider frames as the theoretical approach for understanding institutions, as organizing individuals' experiences. It is the decisive element for how individuals perceive the world, attribute meaning and substantiate behavior. This means that the assumptions, values, and rationales that have been experienced and acquired shape the way individuals perceive reality.

2.3.2 Frames shaping the perception, beliefs and acceptance of social innovations

Frames are conceived in this thesis as an approach that provides a theoretical and empirical understanding to individual and collective belief systems (Benford & Snow, 2000; Goffman, 1974; Levin et al., 1998).

Frame theory teaches us, that we live in a subjective world embedded in social settings. We are born into a world in which, through a variation of learning processes, we individually and in interaction with our social circle gain an understanding of this world, forming our belief system, values and attitudes (Goffman, 1974). These influence our being, thinking, communicating, and acting: We impose our own inner order on extracorporeal things, experiences, and facts. This understanding of frames is in line with Goffmans' (1974) title – *An essay on the organization of experience* – indicating the premise our impression and understanding of our experiences and the world out there are thus a product of our self than a reflection of objective reality.

This implies crucial implications for the perception, understanding and attitude towards SI: We impose our belief system upon the way we perceive SI, think about them, and accept or reject them. To gain an understanding of the characteristics of individual decision-making about SI, it is necessary to capture this belief system. And therein lies a significant added value of frame analysis: To determine how individuals impose their inner world upon SI and how this shapes their understanding of it. Based on determining their understanding of the SI, frame theory enables to understand how individuals who apparently deal with the same characteristics and necessities of a SI come to completely different conclusions. The underlying belief system, which condition the assessment and social construction of SI constitute the distinction – and the consideration of frames enables an approach to this.

In this sense, research in this area addresses how opinions about innovations are constituted (Druckman & Bolsen, 2011) what role objective and factual information plays in the implementation of innovations (Potts, 2010) and what influence frames have on decision-making (Bernardi et al., 2017; Vishwanath, 2009). At this point, studies address analogous issues in the context of healthcare that examine the role of frames in innovation decision-making. For example, frames have been studied for the implementation of digital patient records (Angst & Agarwal, 2009), for the introduction of health information systems (Bernardi et al., 2017), and for the introduction of policy processes for the centralization of hospital services (Jones & Exworthy, 2015). The results of these studies illustrate that the willingness to accept and attitude toward an innovation is conditioned by actors' frames.

The approach pursued within this thesis involves exploring frames to determine the attitudes towards SI, specifically SDM. When studying the acceptance of a SI and individuals' corresponding attitudes, the analysis of frames promotes to comprehend, describe, and analyze the underlying assumptions, values, reasoning, and actions that guide perception, decision-making and behavior. (Goffman, 1974).

3 Research design and methodology

3.1 Research approach

This cumulative thesis consists of five articles, which were produced in four research projects. This section provides an overview of the employed approaches. Detailed descriptions of the methodological procedures are provided in the respective articles.

The research contributions P1, P2 and P3 refer to addressing SDM in perioperative care for elderly and frail patients, as SI. Chronologically, P1 is devoted to reviewing the available evidence on SDM. This involves a discussion of the barriers and facilitators to the implementation of SDM as perceived by patients and healthcare professionals. In addition, the methodological approaches adopted for this purpose were also reviewed. This research is intended to provide an understanding of the landscape of approaches and to promote the development of a distinctive methodological approach.

P2 addresses the media landscape related to the implementation of SDM. This was carried out on the assumption that both patients but in particular healthcare professionals develop their understanding of SDM also through exposure to news media. Accordingly, both popular journals and professional journals were selected for this study.

For P3 an empirical study with patients, their relatives and healthcare professionals in perioperative care was conducted. This study took place within the scope of the project PRÄP-GO which was conducted at the Charité. A qualitative study on the acceptance of SDM took place. This involved an exploratory interviews and non-participatory observations of SDM consultations. Interviews were conducted with 18 patients, four relatives and five healthcare professionals. Thereby, two interviews were conducted with patients and their relatives, before and after participating in a SDM consultation. Further, five non-participatory observations were conducted. The purpose of this was to establish insights on the practical implementation of SDM.

A theoretical review of frame research was conducted alongside these studies (P4). The rationale for this review is a thorough examination of the theory of frames, its epistemological underpinnings, fields of application, and methodological approaches. The findings regarding the epistemological foundation and the sociological premises inform this synopsis. The discussion of the fields of application and the conceptualization of the origin and diffusion of frames informs P4.

Research project P5 is distinct from the other research projects in its content. This research project concerns the implementation of a Global Treatment Budget (GTB) as an innovative model of integrated mental healthcare. The theoretical and methodological basis of

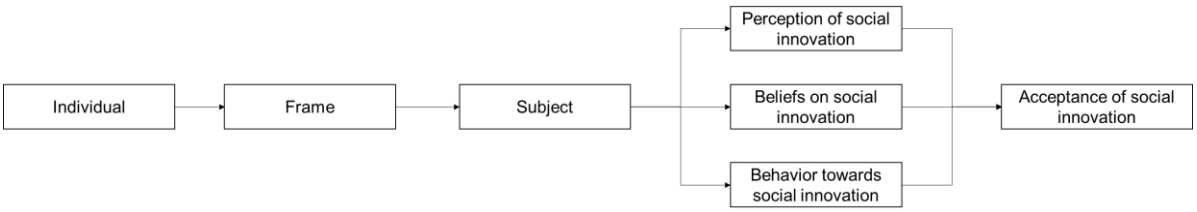
this research project derives from Rogers' (2003) paradigm of the adoption process. An essential part of it concerns characteristics of individuals, situational perception and perceived characteristics of the innovation. This study facilitated the conceptualization, implementation, and exploration of individual characteristics as exemplified by Rogers' (2003) model. In addition, this study facilitated the exploration of subjective factors in an alternative research context and has informed engagement with and reflection on this thesis.

3.2 Frame analysis

The theory of frames and the methodological approaches of the frames analysis constitute the basis for the studies of P2 and P3. The reason for considering individual characteristics is to understand what affects individuals' attitudes and actions towards accepting or rejecting novelty. The theory of frames and the methodological approach of an explorative frame analysis were employed to identify individual beliefs, characteristics, values, and attitudes.

A basic model was developed for this purpose, which was completed with tangible information during the empirical study (P3) (figure 1). Based on the individual their frames, it is assumed that these frames exert an influence on the subjects which are related to the SI. How certain subjects are understood affects how an SI is perceived, what beliefs are held about it, and how the individual relates to it. Consequently, this conditions the decision to accept or reject SI.

Figure 1: Conceptual approach



4 Results

In the course of this cumulative thesis, six articles were produced across five research projects (table 2).

Table 3: Overview of manuscripts

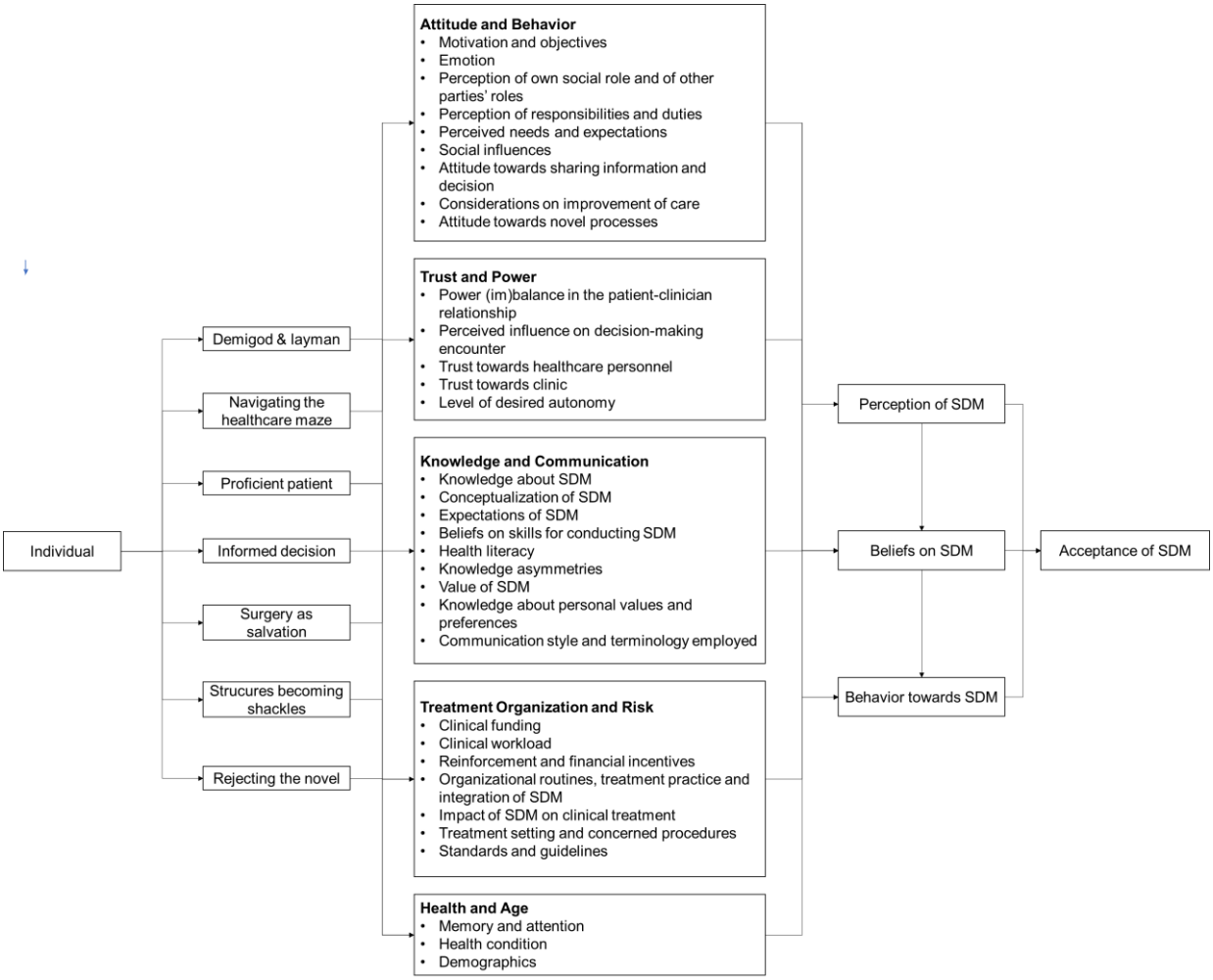
P1.1	*Title*	Barriers and facilitators to shared decision-making for frail and elderly patients within the perioperative setting: A scoping review protocol
	Authors	Amyn Vogel, Camille Guinemer, Daniel Fürstenau
	Outlet	Open Science Framework 10.17605/OSF.IO/8FJNB
P1.2	*Title*	Patients' and healthcare professionals' perceived facilitators and barriers for shared decision-making for frail and elderly patients in perioperative care: A scoping review
	Authors	Amyn Vogel, Camille Guinemer, Daniel Fürstenau
	Outlet	BMC Health Services Research 10.1186/s12913-023-09120-4
P2	*Title*	The Social Construction of the Patient-Physician Relationship in the Clinical Encounter: Media Frames on Shared Decision-Making in Germany
	Authors	Amyn Vogel, Felix Balzer, Daniel Fürstenau
	Outlet	Social Science and Medicine 10.1016/j.socscimed.2021.114420
P3	*Title*	How Beliefs and Social Influences Affect the Acceptance of Social Innovations: A Frame Analysis on Organizing Shared Decision-Making
	Authors	Amyn Vogel, Daniel Fürstenau, Martin Gersch, Claudia Spies, Friedrich Borchers, Felix Balzer
	Outlet	83rd Annual Meeting of the Academy of Management
P4	*Title*	On the origin and diffusion of frames: Theoretical review of frame research and future directions from a network perspective
	Authors	Amyn Vogel
	Outlet	10.17169/refubium-38499
P5	*Title*	Promoting Integrated Care through a Global Treatment Budget.
	Authors	Carolin Farideh Afraz, Amyn Vogel, Carsten Dreher, Anne Berghöfer
	Outlet	International Journal of Integrated Care 10.5334/ijic.5940

This paragraph is devoted to the synoptic presentation of the findings of the three articles from P1, P2, and P3.

First, the determined frames from P2 and P3 are consolidated and compared. This is followed by a presentation of the influences of these on the facilitating and hindering factors. These factors were categorized as *Attitude and behavior*, *Trust and power*, *Knowledge and communication*, *Treatment organization and risk*, and *Health and age*. This categorization represents an attempt to synthesize factors that are related. I am aware that any categorization and creation of factors has its limitations and is often ground for debate. Regarding the factors, the question might occasionally arise as to why they are not understood as a single, bundled factor. The reason for this lies in the attempt to examine the factors as differentiated as possible. This applies, for example, to the factors *Knowledge about SDM*, *Conceptualization of SDM* and *Expectations of SDM*. These are closely related to each other and could also be considered as

one factor (for example: *Knowledge and Conception of SDM*). This was avoided at this point because I believe that knowledge and the acquisition of knowledge about SDM have a significant impact on understanding and conceptualization of SDM and together these are the basis for expectations of SDM. Similarly, the question of why certain factors do not appear in a common category will arise. In this sense, the categories should not be viewed as isolated. The underlying factors of a category may also be related to other factors. As an example, this applies to the factors *power (im)balance in the patient-clinician relationship* and *knowledge asymmetries*. It is apparent that these factors have a reinforcing relationship in the sense that the perception of knowledge asymmetries significantly influences the perception of existing power relationships, but also the attribution of decision-making power. Given this, individual categories and factors should be understood as interrelated rather than isolated. The discussion of the influence of factors on each other cannot be answered conclusively within the scope of this thesis. In the course of the presentation of the individual factors, some relationships, reinforcing and counteracting, will be discussed.

Figure 2: Overview of results P1, P2 and P3



4.1 Frames

This paragraph concerns the consolidation of the results of frame analysis conducted in P2 and P3 (table 3). This concerns identifying the main similarities and differences and further highlighting the key content of the frames.

4.1.2 Frames shaping the perception, beliefs and acceptance of SDM

Four frames were identified in the media analysis as well as in the study on patients, relatives, and healthcare professionals. This refers to the frames *Demigod and layman, Proficient patient, Informed decision* and *Structures becoming shackles*. The sole issue to be mentioned at this point concerns the labeling of the last frame. Although the frames *Wealthcare* (P2) and *Structures becoming shackles* (P3) are labeled differently, they consist of the same elements and imply the same perspective. The different labeling is prompted because in P3 the impact of economization and organization of healthcare was highlighted more accentuated as shackles on the scope of action by healthcare professionals. Given this, the decision was made to retain this label.

Table 4: Comparison of determined frames

Frames	Determined in
The paternalistic understanding: Demigod and Layman	P2 and P3
Patients' health literacy: The proficient patient	P2 and P3
The informed decision as the guiding principle	P2 and P3
Organization and economics of healthcare: Structures becoming shackles	P2 and P3
Rejecting the novel	P2
Digitalization: Empowerment through digital communication and information channels	P2
The complexity of navigating the healthcare maze	P3
The patients' journey: Surgery as salvation	P3

Deviations relate to the frames *Rejecting the novel* and *Digitalization* (P2) and *The complexity of navigating the healthcare maze* and *Surgery as salvation* (P3). In P2, the frame *Rejecting the novel* has been identified since many issues centered on the pure rejection of the new, whereas the subject of *Digitalization* and the potential for participation were discussed. Both were scarcely if at all addressed in P3. The two frames identified in P3 are also shaped strongly by the setting. The frame *Surgery as salvation* emphasizes the explicit surgical context and the

hopes of patients associated with it. The frame *The complexity of navigating the healthcare maze* implies the complexity of treatment pathways and perioperative decisions.

The frame *Demigod and layman* refers particularly to medical competence and comprehension about treatment procedures. Thereby, this frame implies the attribution of relevant competencies to healthcare professionals and the dismissal of these competencies in patients. In doing so, this frame implies a paternalistic understanding of the relationship between patients and healthcare professionals and a biomedical understanding of perioperative decisions. In this sense, personal needs and desires of patients are not attributed importance. Perioperative decisions are an exclusively medical issue, which requires medical and procedural knowledge. It should also be emphasized that this frame does not refer exclusively to healthcare professionals but plays an equally significant part in the perception of patients.

The frame *Proficient patient* also implies the biomedical point of view, although patients are attributed considerably more competence and involvement. In this sense, patients' experiences with their health are considered a valuable contribution, enabling them to have the ability to understand the medical content and to contribute to the decision. In doing so, this frame is tantamount to valorizing personal experiences with ones' own health. However, also in this frame, medical expertise remains the dominant concerns and supersedes patient wishes and personal concerns which are not of medical nature.

The frame *Informed decision* has been identified in P2 and P3 as an essential motivating factor for participation in SDM. It is also the sole frame targeting patients' exercise of autonomy. The main aspect refers to the perception that decisions concern their life and their body that they want to be informed about. Thereby the need for autonomy and the recognition that patients need to participate in all decisions concerning their health, their body and their life is expressed.

The frame *Structures becoming shackles* implies that the responsibility for participation and engagement is shifted towards the political and economic domain. Structural barriers related to political and economic aspects are regarded as barriers. The focus is primarily on the significant imbalances of power and authority, where neither patients nor healthcare professionals are considered responsible for implementing SDM. Instead, the onus is placed on the political sphere and clinic management, leaving patients and healthcare professionals powerless. Within P3, this frame has been primarily identified as guiding healthcare professionals' perception. The key element of this perspective is that systemic factors, such as clinic financing and organization are considered as the cause for issues like time constraints and paternalistic behavior. Thus, the root cause of certain aspects, such as healthcare professionals not taking enough time for SDM or behaving in a directive and paternalistic manner, is not attributed to

individual healthcare professionals, but instead is primarily viewed as externally located. Healthcare professionals perceive themselves as being constrained by organizational and financial structures, which limit their individual scope of action. The remuneration and decision-making practices within clinics also contribute to this limitation.

The frame *Rejecting the novel* is characterized by the principal rejection of the new and was particularly evident in P2. This frame is characterized by the emphasis on barriers: Be it lack of medical evidence, lack of standards and guidelines, or doubt about improving well-being and exercising patient autonomy. Although some elements of this frame were also present in P3 (i.e., lack of standards), the pure rejection of the new did not emerge as a primary guiding principle for perception and action.

The frame *Digitalization* is characterized by the perspective that digital tools improve the possibility of participation. This refers primarily to information access for patients through online portals and sources. The term 'e-patient' was also introduced in the media analysis, which refers to the emergence of patients which are empowered by online sources. This frame emerged mainly in the media analysis. Although the possibilities of obtaining information through the use of online sources were partially mentioned in interviews with healthcare professionals, patients, and relatives, these remain marginal in scope and have not been identified as shaping attitudes toward participation in perioperative decision-making. This is mainly related to the perspective, that perioperative issues – unlike issues that are being discussed with general practitioners – imply a high degree of complexity and required medical and processual knowledge.

The frame *The complexity of navigating the healthcare maze* has thematic overlaps with the frame *Demigod and layman*. Both imply a biomedical understanding and the attribution of competence to healthcare professionals. This frame is again assessed separately, as it occurred primarily with patients following attendance at an SDM conference and also implies further content as a result. These relate primarily to the practical experience of participatory decision-making and the realization that this requires linguistic, medical and procedural knowledge which overwhelm patients. Thus, while the frame *Demigod and layman* is primarily conditioned by a perspective on patients and physicians, the frame *The complexity of navigating the healthcare maze* is conditioned by practical experiences and observations.

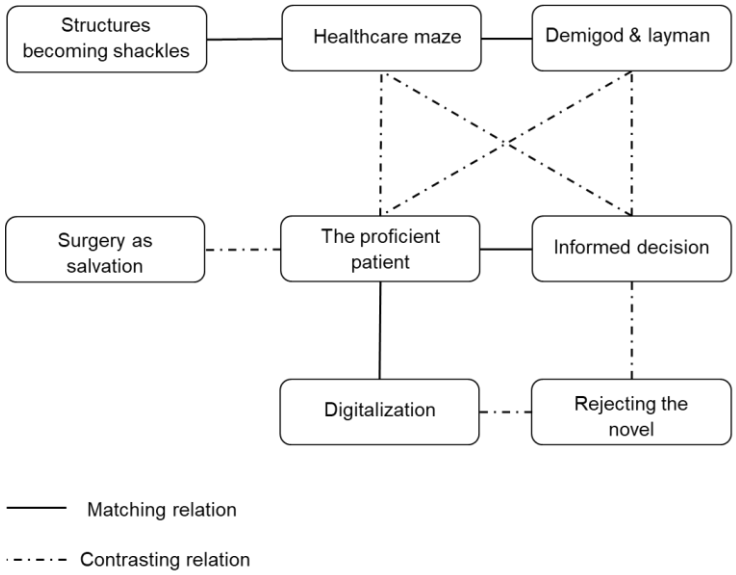
The frame *Surgery as salvation* pertains to patients who fall into one of two categories: those who – due to various reasons – are unable to recognize any decision-making options, and those who have already made up their minds about their course of action. The latter mostly concerns patients who have been suffering for a prolonged period of time and have tried multiple non-

surgical treatments, leaving healthcare professionals and clinics as their final hope. As a result, these patients tend to place their complete trust in healthcare professionals and are more likely to follow their advice.

4.1.2 Qualitative relations between determined frames

The determined frames imply matching and contrasting relationships (figure 3).

Figure 3: Qualitative relations between frames



At the core of SDM acceptance are the relations between the frames *Proficient patient, Informed decision, The complexity of navigating the healthcare maze*, and *Demigod and layman*. *Proficient patient* and *Informed decision* are to be understood as mutually reinforcing. The will and belief in the incremental value of informed decision-making by patients exhibits a relationship to the assumption of the competent and autonomous patient. Both frames attribute a value to participation by patients in perioperative decision-making and, at the same time, attribute the ability for patients to participate - whether through active participation in decision-making or through extended information on decisions and procedures. In this sense, these frames are also conducive to the acceptance of SDM. Opposing these two frames are the frames *The complexity of navigating the healthcare maze* and *Demigod and layman*. The key binding aspect between these frames relates to the rejection of participation by patients - whether because of the complexity of perioperative processes and the subject of decisions, or because of patients' lack of medical competence. In this sense, these two frames are major barriers to SDM acceptance.

The frame *The complexity of navigating the healthcare maze* also relates to the frame *Structures becoming shackles*. The common feature concerns the perception of the challenges and complexity of processes that limit the individuals' scope of action - be it perioperative processes or structural issues at the political and clinical management level. In both frames, actors' scope of actions are conceived as contingent to prevailing structures.

The frame *Proficient patient* also exhibits a contrasting relationship with the frame *Surgery as salvation*. The decisive contrasting aspect relates to the role of patients: While in the *Proficient patient* frame patients are attributed competence, agency, and an active role, within the frame *Surgery as salvation* patients are considered passive and dependent on the personal environment and healthcare professionals.

The frame *Proficient patient* in turn exhibits an affirmative relationship to the frame *Digitalization*. The binding aspect relates to the patients' ability to participate and their competencies. Digital tools are considered to be a means for acquiring knowledge and building competencies.

The frame *Rejecting the novel* has the least relation to the specific issue of SDM and occurred primarily in P2. Particularly, the idea that digital tools can be used to build competencies (*Digitalization*) and the idea that participation and informed decision-making (*Informed decision*) provide value the perioperative process were rejected as new forms of competency building and communication processes.

These frames and relations constitute the basis for how SDM is perceived and assessed and how individual factors are applied but are also perceived and assessed in entirely different ways. In the following, the identified and consolidated factors of P1, P2 and P3 and influences of the frames on how these are perceived, understood, and judged are to be presented.

4.2 Attitude and behavior

4.2.1 Motivation and objectives

This factor can be considered as an overarching concept and relates to the motivation and goals that are relevant in perioperative care for the parties involved.

Concerning patients, this factor relates to the discrepancy between patients' willingness and desire for participation and their rejection of involvement. It also delves into the underlying factors that contribute to patients' and healthcare professionals' attitudes and behaviors. The primary challenges in this area involve healthcare professionals' insufficient involvement, patients' lack of confidence in taking part, and the perception of having no alternative.

Additionally, patients' passive and sometimes submissive behavior are also considered barriers to SDM. Studies have shown that the key facilitators for SDM include patients' desire to be informed and to be involved in treatment related decisions, as well as being treated with respect and receiving tangible and honest explanations from healthcare professionals.

4.2.2 Emotion

This factor concerns emotional issues and emerges as particularly relevant for patients. This relates to anxieties about their role as a patient, fears associated with their health condition and the surgical procedure, and the partially desperate search for support and reassurance. These factors are considered barriers to the successful implementation of SDM. It became apparent that these 'negative' and patient distressing emotions were impeding in the sense that they reinforced the perceived dependence on healthcare professionals. In extreme cases, healthcare professionals were perceived as saviors and relievers of compromised health. Consequently, the very idea of an SDM process is inconceivable, let alone practically feasible.

Beyond this, there are also promotive emotional bases. Patients who feel self-assured and have faith and confidence in their own abilities – even without demonstrating a significant level of medical competence – have access to envisioning and practically engaging in SDM processes.

It also should be noted that the emotional basis of patients is not a static state. Especially in the course of the interviews and observations, it became apparent that the approach to dealing and communicating with patients has a considerable influence on their emotional basis and willingness to participate in decision-making.

4.2.3 Perception of own social role and of other parties' roles

The perception of ones' own role and the role of others shapes the behavior of patients and healthcare professionals. Regarding patients, it should be emphasized that they find themselves in an unfamiliar role and often perceive themselves as vulnerable. A typical metaphor for this is the concept of a layperson: uninformed, and dependent on the support of healthcare professionals. Accordingly, this understanding is related to passive and submissive behavior. At the same time, healthcare professionals are perceived as demigods in white: Resourceful, competent, and supportive. This perception of ones' own role as a patient and the role of healthcare professionals has shown to be an obstacle to the successful implementation of SDM.

In contrast, patients consider themselves responsible for their own health, usually demonstrate a solid medical understanding, but more importantly, recognize their own personal

needs, requirements, and conditions as relevant. This perception of ones' own role has shown to be very conducive to the implementation of SDM. It is crucial that these patients assign a great deal of importance to their own needs and requirements, to their everyday lives and conditions. For these patients, it is not difficult to participate, to discuss and to make independent decisions – also irrespective of the perception regarding their own health competence.

Healthcare professionals are similarly concerned. First and foremost, they are in a familiar environment in which they feel secure in terms of subject, language, and competence. Accordingly, the self-image as a demigod in white and the perception of patients as laypersons are obstacles to implementing SDM. In these cases, healthcare professionals do not see patients as equals and behave in a correspondingly dominant manner when dealing with them. But here, too, it became clear that healthcare professionals who are able to understand the needs and requirements of patients, to engage with them and to pursue the goal of developing individual solutions are conducive to the implementation of SDM. These healthcare professionals do not consider themselves as the sole source of competence and resourcefulness, but perceive patients as equals and their interests and needs as the basis for decision-making.

Understanding and addressing these perceptions can help ensure that decisions are made in the best interest of patients and that all stakeholders have a thorough comprehension of the advantages and disadvantages of the treatment alternatives.

4.2.4 Perception of responsibilities and duties

Closely related to the perception of ones' own social role is the perception about responsibilities and tasks. A recurring and characteristic construct relates to the attribution of responsibility for treatment and decision-making to healthcare professionals. Particularly for patients, the treatment and decision-making is understood as a service that is provided to patients. Consequently, patients assume a passive role. Regarding the implementation of SDM, this represents a significant barrier, as this attribution of responsibility for treatment and decision-making is not compatible with active involvement in SDM processes. This is also true for healthcare professionals: Self-attribution of responsibilities has implications for the lack of actively involving patients in SDM processes. This division of responsibilities and tasks within perioperative care is constitutive for the relationship between patients and healthcare professionals.

Beyond this, there are also those patients who consider themselves responsible for their own health and quality of life and ensure that this is considered in decision-making. There are

also healthcare professionals who consider the empowerment of patients and active participation in decision-making to be an essential part of their role. Both are particularly favorable for the implementation of SDM, but they remain the exception.

4.2.5 Perceived needs and expectations

The scope of the perception of ones' own role and the attribution of responsibilities and duties, also reflects the perception of needs and expectations regarding the treatment process. For patients, the needs and expectations are mostly shaped by the perception of being a layperson, the attribution of responsibilities and competencies to healthcare professionals, and the notion of being provided a service. Although the role as a patient is unfamiliar, this role overrides all other self-conceptions. Accordingly, medical needs are paramount and override the need for voice, participation, and autonomy. Expectations are also located accordingly: Patients go to the clinic to be cured. Especially for the elderly and frail patients concerned here, the expectations of a clinic stay are linked to a 'traditional' understanding of the healthcare process. Untangling such expectations remains a major barrier to the implementation of SDM in perioperative care. Interestingly, these expectations and needs are regularly at odds with other medical settings. Visiting the general practitioner is the prime example: Patients have frequently spoken in this context of being intensively involved in discussions with general practitioners or of not following up on imposed therapeutic measures and medications if they perceive them to be inappropriate or even obstructive to their daily lives.

Expectation is also an issue that affects healthcare professionals. They, too, have an approach to the day-to-day routine in the clinic, to internal processes and to dealing with patients. In this approach, the expectation is characterized by a clearly defined course of the treatment process, in which the active participation of patients in decision-making is not envisaged.

4.2.6 Social influences

The perception of SDM, ones' own role in the perioperative decision-making and the attribution of responsibilities are also the product of social influences. It became quite clear that patients' expectations of the treatment process, the goals of a potential surgical intervention, and specifically their willingness to participate were strongly influenced by family, friends, and neighbors. Thus, some patients preferred certain interventions based on expressed experiences by people who are close to them. Likewise, these relationships shape patients' understanding of the upcoming treatment process, their communication with healthcare professionals, and their own role. In terms of participation in decisions and exchanges with healthcare

professionals, patients also face a variety of influences: While some patients were encouraged to actively talk to healthcare professionals and express their wishes, other patients were encouraged to follow medical advice. Accordingly, it is apparent from these factors that SDM cannot be understood as an isolated phenomenon in a specific context. Due to the considerable influence of the community, it is necessary that SDM becomes more and more part of the everyday practice of the patient-healthcare professionals' relationship.

Beyond the influence of family, friends and neighbors, healthcare professionals also have a significant influence on the willingness of patients to participate. Especially in the second interviews with patients and in studies dealing with the attitude of patients after an SDM consultation it became very clear that an open, honest and linguistically adapted interaction with patients has a beneficial influence on the attitude of patients.

The attitude of healthcare professionals is also determined by their social environment. Reference was repeatedly made to the clinical setting. In particular, this concerns the leading role of established healthcare professionals and chief medical officers, whose attitude and behavior toward SDM have a considerable influence on the behavior of other healthcare professionals. Here, too, it becomes apparent that the implementation of SDM requires widespread acceptance and adoption and cannot be carried out as an isolated side project.

4.2.7 Attitude towards sharing information and decision

This subject concerns healthcare professionals and implies aspects of the factor *perception of responsibilities and duties*. This factor is dealt with separately because it concerns the core of the SDM consultation. The main issue here is the attitude of healthcare professionals regarding the exchange of information and decision-making with patients. The self-image as a decision-maker and responsible party is characteristic for a hesitant to rejecting attitude. In this perception, exchanging information with patients is considered a necessary burden in the best case, and SDM as unnecessary additional effort.

In a more moderate form, however, the attitude persists that mutual exchange of information is useful for decision-making – although without the active participation of patients in decision-making.

4.2.8 Considerations on improvement of care

This factor refers to the perception of the usefulness and purpose of SDM for improving perioperative treatment. For patients, SDM is perceived by the majority as an additional and time-consuming process step, without any added value. This applies in particular to patients attending the clinic with the specific aim of being treated and cured as quickly as possible. A

conversation about possible treatment measures, preferences and needs is understood as unnecessary. In contrast, exercising autonomy is considered valuable by some patients. Being allowed to participate, to be heard and to talk to healthcare professionals is hereby considered valuable in itself.

Among healthcare professionals, medical evidence remains an issue of concern. Here, too, the additional effort is perceived and at the same time the medical added value is questioned. In contrast to this, the empowerment of patients, the exercise of autonomy, and the improvement of therapy acceptance are considered to be important factors to some healthcare professionals.

As far as both patients and healthcare professionals are concerned, this factor splits into two camps: One camp is characterized by the perception of the additional effort, especially since it is believed that SDM does not change anything in the treatment process or in the patients' health condition. The other camp is characterized by the appreciation of patient autonomy and participation.

4.2.9 Attitude towards novel processes

This factor concerns the core of any innovation: The willingness to accept novelty. In the category *Attitude and behavior*, in particular, numerous beliefs, role perceptions and conceptions emerge that constitute the cornerstone for the acceptance and rejection of SDM. These relate to 'traditional' role conceptions, the understanding of healthcare professionals as demigods in white and patients as laypersons, and the understanding of provision of services in perioperative care. However, these also relate to a need for autonomy, the goal of empowering patients and promoting participation.

SDM represents an alternative organization of perioperative decision-making. Usually, this is uncharted territory for all those involved. Accordingly, this uncharted territory meets values, needs and expectations that partly do not correspond to it. The idea that healthcare professionals are responsible for treatment and decision-making, that patients have to follow the medical opinion and that personal needs, requirements and wishes play no role in perioperative care are prime examples.

It became very clear that certain perceptions continue to hold even when patients and healthcare professionals have had positive experiences with SDM. Both, in the reviewed studies and in the interviews following an SDM consultation, it became apparent that some patients and healthcare professionals continue to reject participation in SDM, even though the underlying arguments have been debunked. Accordingly, this is a key factor that must be

considered when implementing SDM. Regardless of positive or negative experiences, regardless of studies that may prove the effects SDM can have on the satisfaction of patients and healthcare professionals, and regardless of the need for autonomy and the goal of empowering patients, the attitude towards novelty is a decisive factor for the implementation of SDM.

4.3 Trust and power

4.3.1 Power (im)balance in the patient-clinician relationship

In the course of all the research projects (P1 – P3), the perception about power relations in the relationship between patients and healthcare professionals has emerged as a major issue. Typically, this relationship is perceived as asymmetrical. Healthcare professionals are attributed power and patients are deprived of it. For patients is due to several factors. First, this relates to patients' self-image as a layperson and the perception of perioperative decisions from a biomedical perspective. In addition, clinics are perceived as unfamiliar territory. These are characterized by a closed system in terms of content, language, and process. This refers to the complexity of medical topics, the use of linguistic and terminological schemes and terms that are unfamiliar and the lack of knowledge about clinical treatment processes. All these aspects feed the perception of being a layperson and being dependent on healthcare professionals. At the same time, these constitute the basis for the attribution of power to healthcare professionals by patients.

These aspects also feed the self-image of healthcare professionals. For them, clinics are familiar territory. Content-related, linguistic, and procedural aspects are familiar and promote a powerful self-image. This is particularly potent in the biomedical perspective. This self-image of patients and healthcare professionals constitutes a barrier to SDM.

This contrasts with the biopsychosocial conception of the encounter between patients and healthcare professionals. This in turn does not necessarily mean that patients and healthcare professionals perceive themselves as equals. Rather, patients and healthcare professionals consider social and personal factors to be equally relevant to decision-making. For patients, this refers to the appreciation of their own wishes, needs and requirements. This is often shaped by the view that any perioperative measures are performed on them and entail an intrusion on their bodies and their daily lives. This provides the motivation for active discussion and participation in decision-making.

For healthcare professionals, the biopsychosocial conception refers to the perception that patients' wishes and needs, and their exercise of autonomy are essential factors for perioperative interventions. Similarly, patient participation is necessary to achieve a better understanding of patients' daily routine, the goals of perioperative interventions, and the compliance to those interventions.

Beyond that, particularly in the biopsychosocial conception, the asymmetries between patients and healthcare professionals are not evaluated as a basis for attributing power to healthcare professionals. Rather, this asymmetrical knowledge constitutes the basis for the need to meet at eye level and to mutually discuss, consider, and decide on individual measures.

4.3.2 Perceived influence on decision-making encounter

This factor is related to the perception of asymmetries and the attribution of power to healthcare professionals. These condition that healthcare professionals attribute themselves a great influence on decision-making – in the biopsychosocial as well as in the biomedical perspective.

Patients, however, are perceived as having little to no influence on decision-making. Even if patients believe that their needs, wishes, and demands are relevant, this relates to the expression of these. The influence on decision-making is considered to be low.

This represents a major barrier to the implementation of SDM. Given this constraint, it is essential to encourage patients to participate actively and to communicate to them that their opinions are valuable and influential in decision-making.

4.3.3 Trust towards healthcare personnel

This factor is also related to the attribution of power to healthcare professionals. First, this refers to the perception of being a layperson and the trust in healthcare professionals to make the right decisions and implement measures. This is reinforced by the fact that frail patients often perceive themselves as vulnerable and hope for salvation by healthcare professionals. The combination of perceiving themselves to be laypersons and perceiving themselves to be vulnerable are drivers for trust in healthcare professionals.

In addition, a distrust in ones' own decision-making ability was equally evident in the interviews and studies reviewed. This is characterized by the fear of making mistakes or making wrong decisions. According to one study, patients showed a preference for computerized decision-making instead of their own involvement.

4.3.4 Trust towards clinic

This factor is directly related to trust in healthcare professionals. The clinic as an institution is trusted to have the resources, competence, and approaches to support patients. This happens upon the premise that clinics are unfamiliar environments on which patients perceive themselves to be dependent.

4.3.5 Level of desired autonomy

For SDM, the encouragement of patient autonomy is a cornerstone. The involvement of patients in decision-making, the empowerment of patients to participate, and the exercise of autonomy are given priority. Patients' perceived need for autonomy has a significant influence on their willingness to participate in SDM.

It should be noted that self-determined refusal to participate may well be in the spirit of SDM. The self-determined recognition of a low need for autonomy in perioperative decisions can likewise be regarded as an expression of patient autonomy. In principle, a minor need for autonomy is neither to be understood as problematic for patients nor as a barrier to SDM – if this is expressed in a self-determined manner.

The exception lies in the expression of a minor need for autonomy due to the perception of a lack of medical competence and the fear of making a wrong decision. In these cases, patients need to be supported. The primary aim is to make them aware of the value and relevance of their personal feelings and needs. In addition, it is also about relieving their fears of making wrong decisions. Ultimately, SDM consultations represent the intersection of patients' personal requirements, needs and objectives and the medical requirements and possibilities of healthcare professionals. The exercise of autonomy is therefore not synonymous with the sole decision-making and responsibility for these decisions by patients.

4.4 Knowledge and communication

4.4.1 Knowledge about SDM

This factor addresses the available knowledge about SDM for the concerned parties. Particularly regarding patients, this factor depends on the information they receive about SDM. Healthcare professionals are the main source of information. Thus, this illustrates the influence healthcare professionals have on patients' knowledge about SDM. This was a topic during the interviews conducted. In the first interview it became apparent that most of the patients had never heard of this term, nor had they been informed about its meaning. The only information

that some patients had prior to attending an SDM consultation was that there would be a conversation with several healthcare professionals. It also became very clear that this information gap had a considerable impact on the conceptualization of SDM and the practical application of it. A low level of knowledge has proven to be an obstacle to the implementation and active participation of patients.

In the case of healthcare professionals, the studies and the interviews conducted revealed that they often have a broad information base about SDM. This refers to both the purpose of SDM and its practical implementation and benefits. Equipped with this information, the majority of healthcare professionals are open and receptive to the implementation and practical application of SDM.

4.4.2 Conceptualization of SDM

The addressed K*nowledge about SDM* has consequences for the conceptualization of SDM. Particularly during the practical observation of SDM consultations and subsequent interviews afterwards, it became apparent that patients perceive these consultations primarily as an information platform. They understand the purpose of these consultations as to be informed about the interventions. Their own participation, whether in thinking, asking questions, or even taking an active part in decisions, hardly ever came into play.

Although healthcare professionals are generally well informed about the purpose and implementation of SDM, it appears that even among them, the practical application is characterized by the idea of an extended informative conversation. Patients were mainly informed about their health condition, possible preparatory measures, and rehabilitation measures.

Conversely, there were also healthcare professionals about which it became very clear that they aimed at active patient participation. This was evident both in the manner of communication and in the specific involvement of patients. In some cases, patients were asked whether they understood the content and would like to comment on it. Elsewhere, patients were actively asked at the outset to state their perception of their health condition, and to state their wishes and preferences and their goal for the surgical procedure. Especially in these discussions, when patients were actively involved, there was indeed an exchange of information and integration of patients' needs, wishes, and preferences into decisions made.

Overall, it appears that SDM is mostly understood as a broader one-way informative platform for both patients and healthcare professionals. In this sense, lack of knowledge about

SDM and immature implementation of SDM should be understood as barriers to its practical application.

It should be repeated that patients' refusal to actively participate in decision-making may very well be in the spirit of SDM: The autonomous exercise of ones' own wishes, preferences and needs, even if this is a refusal. In most cases, however, it is not possible to speak of autonomous refusal here because patients have rarely been prepared for active participation in the sense of having a say and participating in decision-making.

4.4.3 Expectations of SDM

Knowledge about SDM and its conceptualization have an impact on expectations. Considering that most patients understood the SDM consultation as an extended informative consultation, their participation was correspondingly low. This became apparent not only in the course of the interviews, but also through the available studies. In this sense, it is important to improve the information provided to patients before conducting an SDM consultation and to ensure that they understand that their participation is crucial. If patients decide actively and autonomously against participation, it remains within the purpose of SDM. But this first requires information about the process, purpose, and goal of SDM.

Although healthcare professionals generally have the necessary information regarding the purpose, course, and goal of SDM, it has become apparent that they do not assume the active participation of patients but see them primarily as recipients of information. Thus, the perception of patients as laypersons and passive participants in perioperative care becomes manifest. Therefore, it is important not only to be informed about the purpose, course, and goal, but to actually understand the relevance of patient participation. It is important to understand that patients' daily life conditions, their expectations and goals, and their wishes and preferences must be reflected in the conversation between patients and healthcare professionals.

4.4.4 Beliefs on skills for conducting SDM

This factor addresses beliefs about the skills required to perform and participate in an SDM. This aims at the required medical and health knowledge in the first place. This aspect is again addressed separately, as it is prominent across all studies.

This factor reflects the implications of whether perioperative decisions are understood as purely medical decisions or whether social and personal components are considered equally relevant.

By their very nature, health-related and medical competencies are pivotal in understanding medical decision-making. In addition, knowledge of the treatment process and

specific interventions is also considered necessary. Solely considering these aspects is an obstacle to the implementation of SDM, since it lacks understanding the importance of patients' social and personal issues.

This perception is countered by the belief that all parties have all the required knowledge and skills. Although these may be located differently in the respective participants – healthcare professionals have specific medical knowledge and patients their personal day-to-day requirements and needs – they are nevertheless not a barrier to SDM but illustrate the necessity of it.

4.4.5 Health literacy

The subject of medical and health literacy is widely prevalent in the interviews and the studies reviewed. Here, this factor refers to existing and lacking medical and health competence of patients. The main basis for this factor is the widespread perception of perioperative decisions as medical decisions. Accordingly, the potential for participation in an SDM consultation is measured by medical and health literacy. In doing so, this factor usually emerges as a barrier to SDM, as patients are dismissed medical and healthcare competence. This can be seen, for example, in the fact that healthcare professionals perceive the provision of information to and involvement of patients as a considerable effort, because they generally do not have a highly developed health literacy and do not have any prior knowledge of the treatment process. The reasoning of patients parallels this: Lack of competence in medical processes and the health condition is considered a barrier to participation.

4.4.6 Knowledge asymmetries

Echoing the issues of *Beliefs on skills for conducting SDM* and *Health literacy*, knowledge asymmetries are essential. The perception and representation of this issue is divided into two camps. Patients and healthcare professionals point out that patients lack the necessary knowledge regarding perioperative processes, health condition, and therapeutic alternatives. At the same time, these competencies are attributed to healthcare professionals. Thereby, these competencies are also considered as a basis for the participation in an SDM. Accordingly, these asymmetries are understood as a key barrier to SDM implementation.

The opposite camp generally does not differ in terms of how these asymmetries are perceived. Here, too, medical, and procedural competence is attributed to healthcare professionals and dismissed to patients. The difference rather lies in the assessment of the consequences and the necessity of these competencies. These asymmetries are considered to be an essential basis for the necessity of SDM, since it can make a valuable contribution to the

resolution of these asymmetries. Furthermore, it is pointed out that patients also have knowledge which is relevant for perioperative decisions: Knowledge about their everyday life, their needs and their goals which are related to the surgical intervention. In this sense, knowledge asymmetry is not considered an obstacle to SDM, but as a justification for the relevance of SDM.

4.4.7 Value of SDM

The value of an SDM is also a matter of debate in this sense. Understood as an information platform, where patients as recipients are informed about their health condition and upcoming interventions, an information value is attributed to SDM. Understood as an information platform where healthcare professionals are also recipients, SDM serves to address a communication deficit. Thereby, SDM promotes healthcare professionals' understanding of their patients. Understood as a process of SDM, the emphasis lies on patient autonomy. Some healthcare professionals also consider their main role to empower patients. All these conceptions are understood as facilitating the implementation of SDM, albeit with varying application.

Opposed to this is the goal of tangible and identifiable health improvement. In this perspective, any medical process must have a clear and traceable impact on patient health. Here again, the evidence base remains thin and is repeatedly considered to be a barrier to SDM. Aspects such as the resolution of a lack of communication, patient autonomy, or even perceived well-being and satisfaction of patients do not find a place in this perspective. Basically, it became apparent how the conception of the value of SDM has an influence on the practical implementation of it. It affects the extent to which patients are exclusively informed or actively involved. It affects the extent to which patients participate or decline to participate. And it affects whether SDM is considered meaningful or an additional effort.

4.4.8 Knowledge about personal values and preferences

This factor addresses patients exclusively. The main issue concerns the value patients attribute to their personal needs, wishes and requirements and the extent to which these are considered at all.

It became apparent that most patients, across the reviewed studies, news media analysis and interviews examined, either consider the relevance of personal needs to be low or do not think about them at all. In line with the understanding of service provision by clinics and healthcare professionals discussed and a passive attitude, perioperative decisions are understood to be exclusively medical in nature. Accordingly, medical opinions and instructions must be followed.

Few patients understand their personal needs and wishes as relevant – regardless of the perception of their own health competence. These patients are characterized by an active engagement of their living conditions and a clear idea of the purpose of the surgical intervention – which is frequently quality of life.

Across the studies, it became apparent that patients who are aware of their personal needs, perceptions, and goals expect and, in some cases, actively demand greater participation in perioperative decision-making. Accordingly, this can be considered beneficial for the implementation of SDM and should be considered during implementation. In this sense, it is also important to encourage patients to discuss their personal needs and wishes and to show them that this is indeed relevant for perioperative decisions.

4.4.9 Communication style and terminology employed

This factor mainly concerns healthcare professionals. The impact and influence of the manner of communication and the specific use of terms are decisive determinants of this factor. It became apparent across all studies that the communicative ability of healthcare professionals to respond to patients contributes significantly to patients' acceptance or rejection of SDM. Patients generally have limited access to medical language. Beginning with the naming of medical conditions, and continuing with alternative measures and possible consequences, it is often difficult for patients to gain an understanding of the health condition and measures. Accordingly, this is understood to be a major barrier to SDM implementation.

At the same time, there are also numerous examples and approaches that illustrate that the use of everyday language and visual support have a lasting positive effect on patients' willingness to participate and active involvement. In this sense, instruments such as the graphic representation of measures and the drafting of brochures about the course of the treatment process are useful. In addition, the participation of a moderator, i.e., a person with medical knowledge but who is not actively involved in decision-making, is considered helpful. This person can assume a mediating function between patients and healthcare professionals.

4.5 Treatment organization and risk

4.5.1 Clinical funding

Clinics are economically oriented and must be organized in a correspondingly profitable way. Within the reviewed studies and interviews the perception of patient care as being subordinate to financial orientation has been expressed. This has an impact on day-to-day clinical practice, work structures and perioperative decisions. Day-to-day clinical practice and

work structures are affected insofar as all processes and measures are precisely defined and covered by a corresponding remuneration. This has a respective impact on perioperative decisions. As soon as patients receive a diagnosis, the upcoming measures are practically predetermined. As a result, there is little or no room for individual discussion with patients and the development of specific measures. Rather, the impression remains that treatment is significantly influenced by the related remuneration.

Ultimately, the discussion relates primarily to the German DRG (Diagnosis-Related Group) financial system, which is used to reimburse clinics for the treatment of inpatients. Depending on the symptoms, patients are assigned a code that represents the condition – in this sense, patients effectively become a number. One major concern is that the system may lead to 'upcoding', where clinics classify patients with more severe diagnoses in order to receive higher reimbursement rates. This can lead to increased healthcare costs and may also result in patients being placed in higher acuity levels than necessary. Additionally, the system may also create incentives for clinics to limit the length of patient stays and discharge patients sooner than medically necessary in order to maximize reimbursement. Especially related to frail patients it has been criticized, that the DRG system leads to underfunding of certain types of treatments and patients, such as those with chronic conditions or complex medical needs.

In sum, it became apparent that the clinical financing system is both a barrier to SDM and a rationale for the necessity of SDM and the alignment of interventions with patient needs.

4.5.2 Clinical workload

One of the main negative effects of clinic financing concerns the perception of work overload. Healthcare professionals perceive themselves as hamsters in a wheel. They are only concerned with following guidelines, plans and orders, without being able to deal with patients more deeply.

For these healthcare professionals, SDM is not only an alternative measure, but often also a way out of this system. SDM is considered a means to actually engage with patients, to address their concerns and needs, and to develop specific solutions.

4.5.3 Reinforcement and financial incentives

To reduce the negative impact of clinical financing and clinical workload on the implementation of SDM, financial incentives are referred to. Conceptually, this does not call for a fundamental change in the financing system, but only for an integration of SDM into DRG and clinical practice.

It is also pointed out that the respective SDM projects are funded for a certain period, but there are no elaborated approaches yet on how this could be transferred into clinical practice and financing.

4.5.4 Organizational routines, treatment practice and integration of SDM

Clinical routine is characterized by precisely defined processes, prevailing social structures, and routines. These are also characterized by financial incentives, underlying economic structures and workload. Organizational routines in clinics refer to the standard procedures and processes that are implemented to manage and deliver healthcare services. These routines include scheduling appointments, ordering lab tests, or documenting patient information and billing for services.

The implementation and practice of SDM was carried out in the scope of a project within all reviewed studies and also within the scope of the study carried out in this thesis. These projects were exclusively financed and designed for a specific period. A major issue related to these projects concerns the lack of integration of SDM within clinical routines. This refers to organizational and spatial aspects. For example, it became apparent that there are often only limited premises for the implementation of SDM consultations. In addition, SDM usually is carried out alongside the clinics' existing and established processes. This means that all potentially involved healthcare professionals usually follow their structured daily routine and SDM consultations have to be squeezed into these. This explains, for example, the low participation of surgical healthcare professionals. These are subject to highly structured procedures and are regularly firmly involved in operations, from which they cannot simply free themselves to participate in an SDM consultation.

An improved integration of SDM into the daily clinical routine is necessary for successful implementation. This refers to the allocation of premises as well as to the increase of staff and the mandatory participation of all healthcare professionals involved. To ensure the latter organizational structures and financing measures must be put in place to enable the involvement of healthcare professionals.

4.5.5 Impact of SDM on clinical treatment

Beyond the integration of the specific SDM consultation, the implementation of decisions, following an SDM consultation, is also essential. It became apparent, especially in the interviews with healthcare professionals, that some decisions do not become practically implemented. This is partly related to the partial integration of SDM, but also to lack of staff

and work overload. Here, too, it was pointed out that SDM is conducted as a project alongside the day-to-day procedures of the clinic and is thus hardly applied in practice.

This factor is particularly relevant since this often leads to demotivation among healthcare professionals. Aspects such as patient autonomy and the elimination of communication deficits are still considered a useful contribution. However, too often healthcare professionals have the impression that SDM is more like an advertising event than a genuine measure in the treatment process. In this sense, the lack of integration and execution of decisions made is a factor that endangers the willingness of healthcare professionals to participate.

4.5.6 Treatment setting and concerned procedures

This factor relates to the perioperative setting, the multimorbidity of patients and the associated complexity of the issues. The subject of perioperative decision-making concerns measures which are to be carried out before, during and after the surgical intervention. It is consistently assumed that this subject matter of decision-making requires medical and procedural knowledge. In addition, the complexity of this decision-making subject is also referred to. Given this, perioperative decisions are often judged to be inappropriate for SDM consultations.

Moreover, frail patients have a variety of pre-existing conditions. These patients correspondingly consume different medications and daily measures, which may have an influence on the surgical intervention. These aspects must be taken into account and – in combination with the perioperative decision object – lead to complex decision characteristics. Especially regarding patients, it became apparent in the course of the interviews that perioperative decisions are perceived as too complex. Frequently, this is also in stark contrast to the attitude of SDM consultations with primary care physicians. There, patients very often believe that they understand both the process and possible measures, and that they can actively participate in decision-making.

4.5.7 Standards and guidelines

Across the literature on SDM, there are multiple approaches and examples of SDM implementation. In the context of this project, the Three-Talk model was applied. Yet, these approaches are perceived as unspecific. Particularly in the initial phase, this has led to difficulties in implementation. This concerns questions about the duration of an SDM, the information basis for patients and the involvement of healthcare professionals. Regarding the core team, i.e., healthcare professionals who are regularly involved in SDM consultations, fairly

clear structures, processes and timeframes have been established. This resulted in a distinct process and defined timing and content of the SDM consultation.

Although this internal development of structures and procedures was transparent to healthcare professionals who were regularly involved, there was a regular difficulty to integrate healthcare professionals who rarely participate in SDM consultations. This is also related to a reluctance to dealing with the additional process steps involved in an SDM consultation.

In this sense, the lack of well-defined standards and guidelines for the initial phase as well as for the integration of irregular participants is considered a barrier for SDM.

4.6 Health and age

4.6.1 Memory and attention

The factor memory and the ability to concentrate appeared repetitively in all the studies. These factors are related to patients' ability to participate. By all participants, the ability to follow the content of the conversation attentively and, ideally, to actively participate in the discussion is understood as an entry threshold.

4.6.2 Health condition

Beyond aspects such as the ability to concentrate, the general health condition is also discussed. It is important to remember that this thesis empirically deals with elderly and frail patients who are multimorbid. Most of the health-related factors discussed are understood as barriers to participation in SDM. This refers to aspects such as mental and physical overload, being sick and tired, and suffering from pain. However, a good health condition is conceived as a basis for the ability to participate.

4.6.3 Demographics

This factor relates primarily to the construct of being old and is primarily understood as a barrier. The age group in focus here are patients at the age of 70 and above. This factor is closely related to elements identified in the *Attitude and Behavior* category. A main argument refers to the rejection of the new, due to being old and the associated overload to learn new skills. Here, 'traditional' ideas of the patient-healthcare professional relationship play an important role. This refers to the conception of service provision by clinics and healthcare professionals, the attribution of competence and responsibility to healthcare professionals, and the perception of patients as laypersons.

However, in some cases, there were results of studies and interviews with patients in which age was mentioned as a reason for willingness to participate. This refers to patients who have a solid understanding of their health and have determined for themselves that the surgical intervention concerns their quality of life. Thereby, age becomes a construct which is understood in the sense that patients do not have much time left in their lives and they want to enjoy this time as much as possible. Accordingly, these patients have a high willingness to participate – even if it is only in terms of being informed – to be aware of what is happening to their body, what consequences this implies and how this affects their quality of life.

5 Discussion and contributions

In this section, I would like to present the main contributions of the research projects (table 4). I refer specifically to P1 up to P3. These research projects have undergone a consolidation of findings in this synopsis. P4, has been sufficiently discussed in the related manuscript. P5 provided impetus to address and conduct an analysis to identify subjectively perceived enabling factors and barriers.

Table 5: Overview of contributions

	Research goal	Contribution to the thesis
P1.1 and P1.2	Provide an understanding, summary, and overview on methodological approaches on original studies dealing with shared decision-making for elderly and frail patients within the perioperative setting.	Gaining an understanding of obstacles and barriers that have already been explored and identifying research gaps or aspects that merit further consideration. The research approaches adopted were also methodologically reviewed. Substantially, it emerged that a qualitative analysis and the observation of the practical implementation of SDM are beneficial.
P2 and P3	Provide an empirically based exploration and understanding of frames shaping the acceptance of shared decision-making within the perioperative setting on the individual and societal level	P2: The analysis of news media discourses on SDM in the clinical setting served to identify media frames to which both patients and clinical healthcare personnel are subjected. This study provided an initial understanding of influential frames. Key subjects were the asymmetric relationships, institutional and resource barriers, and the improvement of patients' health literacy, largely as a result of digital technologies.
		P3: The purpose of this article was to explore the overarching research question. Insightful frames on the part of patients and healthcare professionals could be identified. Key issues addressed were asymmetric relationships, the understanding of SDM and perceived requirements, and the crucial need of patients to be informed.
P4	Investigate the conceptual landscape of frame research	P4: Elaborating an understanding of the landscape of the frame theory, epistemological, conceptual, and methodological principles. The latter was particularly instrumental for the implementation of the methodological approach of this thesis.
P5	Conceptualization and implementation of a research methodology to explore subjective perceived facilitating factors, and barriers.	P5: Discussion, conceptualization, and application of Rogers' (2003) model for the purpose of exploring individual characteristics affecting the diffusion of innovations.

5.1 Contribution to research on shared decision-making

5.1.1 Empirical contribution

The main contribution to research on SDM, particularly for perioperative care and elderly and frail patients, consists of the empirical contribution presented in the results. Multiple interrelated categories and factors were identified and presented. Herein, I would like to elaborate on two themes that span many factors addressed: The biomedical and biopsychosocial understanding, and the asymmetrical relationship between patients and healthcare professionals.

Both the biomedical and biopsychosocial conceptions have profound implications for understanding SDM and the willingness to participating. Diametrical distinctions relate to understanding the object of decision, required knowledge, and role attributions. This refers, for example, to the self-concept as laypersons by patients and the attribution of competence and decision-making power to healthcare professionals. A great deal of emphasis is attributed to the medical component of perioperative decisions, undermining patients' personal experiences, wishes, and needs. Thereby, the biomedical understanding exclusively implies obstructive factors for the implementation of SDM. It can be concluded without ambiguity that the implementation of SDM requires all participants involved to overcome this understanding. If there is indeed a desire, particularly among policy makers and healthcare professionals, to implement SDM, there is no way around reinforcing the biopsychosocial understanding among healthcare professionals and patients.

The role of the asymmetric relationship between patients and healthcare professionals, particularly relates to power and competence asymmetries and is often argued to be a barrier to SDM.

It emerged that the social domain of clinics is and remains characterized by asymmetries between patients and healthcare professionals. This relates primarily to medical competencies, but also to the horizon of experience. In particular for persons assuming the role of patients, this is an unfamiliar social space, which is characterized by information and decision-making subjects, but also by behavioral patterns, which they are not familiar with in their regular everyday social life, let alone the identification and role as a patient. And these asymmetries have a considerable influence on the perception and attribution of decision-making authority. It is understandable that, concerning patients, a lack of medical competence, passive behavior, and the perception of healthcare professionals as providers of salvation are considered a major barrier. It is also understandable that, concerning healthcare professionals, paternalistic

behavior, speech patterns and a lack of engagement with the individual patient are considered barriers to successful implementation of SDM, in which patients and healthcare professionals can meet at eye level and mutually reach a decision. Consequently, it is equally understandable that measures to overcome these very barriers are demanded and strived for.

But overcoming these asymmetries should not be the goal of SDM and is not intended by patient-autonomy. In many interviews conducted here, it also became very clear that this is not desired at all by patients. SDM does not relate to equality in terms of competence and knowledge, but of equal rights. In order to accomplish this, it is crucial to acquire a thorough understanding of patients living conditions, their requirements and objectives, and to introduce measures to address these. It is therefore not a matter of equipping patients with medical and therapeutic competence so that they can meet healthcare professionals on an equal footing, but rather of equipping healthcare professionals and implementing structures for them to have room for understanding patients' circumstances, needs and reasons for seeking elective surgery. Ideally, then, the goal is to create a shared social space in which healthcare professionals and patients meet, not in equal competence and knowledge, but in equal rights, to gain an understanding of each other and the reasons for this encounter. And this is not only a task to be carried by patients and healthcare professionals involved, but also one of clinic management and financing of the healthcare system in the sense that institutional means must be created to enable such an encounter between patients and healthcare professionals.

And above all, before any patient participation in decision-making can take place, the demand to be informed on healthcare treatment must first be widely recognized and implemented. This is the alleged core need expressed by patients, and it does not require a revolution in the relationship between healthcare professionals and patients nor the implementation of an SDM.

5.1.2 Methodological contribution

The methodological contribution refers to a theory-based qualitative analysis and the implementation of an observational study.

Based on the scoping review (P1), it became apparent that the studies were based on little to no theoretical foundation. This was also considered since most of the reviewed studies implied a positivistic approach to research. However, the characteristics, facilitating and constraining factors for the implementation of SDM, which can be identified in interviews but also in observations, require a theoretical underpinning. The theoretical base shapes the analysis and the interpretation of the identified aspects. For instance, I referenced power asymmetries as

an essential factor. At what point is it appropriate to speak of power asymmetries? Partly, it can be referred to statements of patients and healthcare professionals and their considerations. Often, however, it is a matter of communication and behavioral patterns that are completely established and perceived by patients and healthcare professionals as 'normal' and not as power asymmetric. The qualification of the observable characteristics that can be determined in interviews or observations do not present themselves objectively but require theoretical interpretation and qualification by a researcher. This enables not only a profound analysis, but also an external accountability. The theory of frames employed in this thesis and the application of frame analysis enables scientists and other interested parties to understand which epistemological reasoning and which interpretative approach underlie this thesis. Accordingly, this provides the opportunity for a discussion and critique of the selected conceptual and methodological approach which shape the results.

Beyond this, the scoping review (P1) also demonstrated that no study dealing with frail and elderly patients had conducted observational research. The practical application, everything that has been spoken and practiced in SDM consultations remains unknown. This also applies to possible discrepancies between interviews and observations of practice. Through the observations of SDM consultations, an attempt was made to close this gap. However, the need to extend observation studies is also emphasized at this point.

5.2 Contribution to research on social innovations

5.2.1 Conceptual contribution

At the outset, the need for an explorative approach for identifying characteristics shaping the acceptance of SI was considered. This relates to the issue on appropriateness and reproduction of characteristics derived from research on technological innovations, although SI research is not saturated and an exploratory approach therefore appropriate. SI, which, as in this case, imply a change in social practices, are characterized by aspects such as collective values, behavior, and relations as well as role ascriptions and power asymmetries, which are still to be further explored.

Further, theoretical issues of prevailing approaches and models to explore individuals' characteristics for the acceptance of SI were considered, arguing for an insufficient consideration of how the social environment shapes an individuals' characteristics, values, norms, and expectations. Thereby, the frame analysis was introduced as a conceptual contribution and empirically implemented. The aim of this study was to conduct and present an approach to identify individuals' belief systems, capturing values, norms, and logics of action

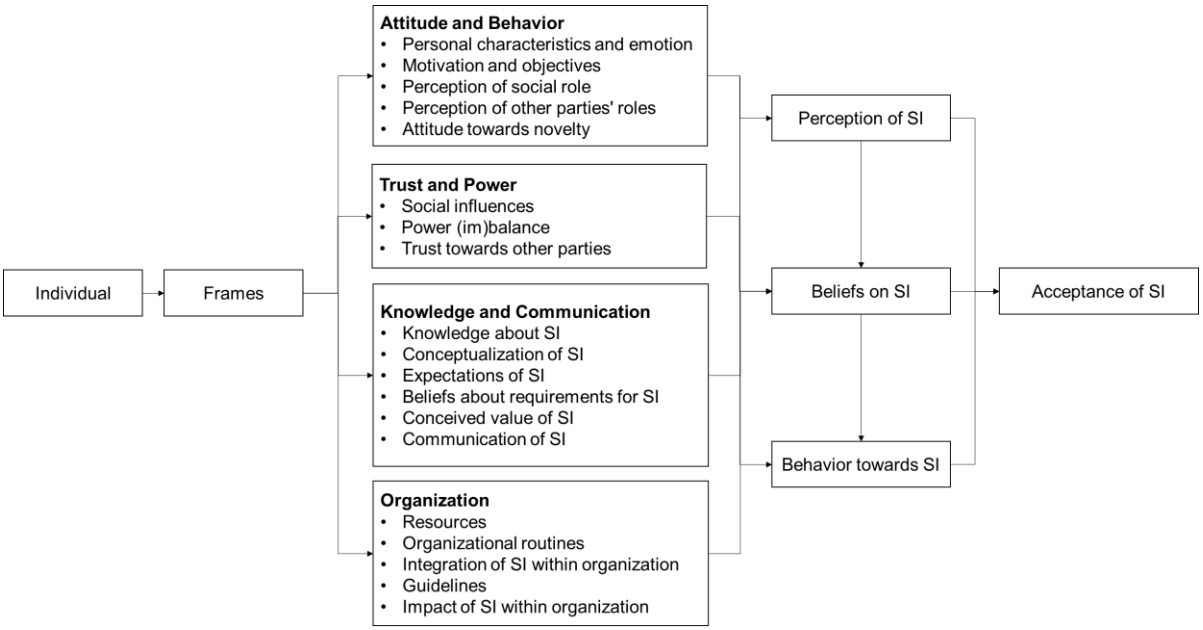
affecting their attitudes toward participation in SDM within perioperative care. The identified frames provide the main empirical contribution for this purpose.

Conceptually, reference is made to the individual as an inherently social being. Beliefs, norms, and logics of action are not understood as subjective in the sense that they exclusively concern one individual, but in the sense that they are learned and practiced within the individuals' social environment and acquired in relation to others. Thereby, especially the empirical findings on the relationship between patients and healthcare professionals, prevailing paternalistic role models as well as power and competence asymmetry provide insights on this matter which could inform further research on SI relating to changes of lived practice and social behavior. How concerned individuals perceive themselves and envision their part within the novel praxis and interactions is shaped by and depends largely on the underlying relations. Beyond this, issues on organizational routines and processes, are valuable for understanding how the perceptions on roles and scope of action is affected by organizational structures, routines and lived practice – and how implementing the SI is challenged by but also challenges these practices. Taken together, it becomes very clear that the successful introduction of a SI cannot be located mainly at the level of concerned individuals but is closely related to perceived constraints of scope of action by organizational, structural and financial factors.

5.2.2 Empirical contribution

Empirically, the results of the studies reviewed (P1) and empirical research (P2 and P3) constitute the basis for the development of a model of relevant categories and factors for the implementation of SI (figure 4).

Figure 4: Overview of conceptual results for research of social innovations



A major contribution of this model lies in the consideration of frames and the exploration of individual values, norms and belief systems shaping how SI and related factors are perceived.

Further, four categories were developed: *Attitude and behavior*, *Trust and power*, *Knowledge and communication*, and *Organization*. These are based on different factors. *Attitude and behavior* concerns factors such as *personal characteristics and emotion*, *motivation and objectives*, and perception of the role of self and others. *Trust and Power* refers to *Social influences*, as well as power and trust relationships. *Knowledge and communication* implies *Knowledge about SI*, related *Expectations of SI* and *Communication of SI*. The category *Organization* concerns the provision of *Resources*, established *Organizational routines*, as well as the *Integration of SI within organization*.

Most of these factors have already been discussed in existing literature, mainly related to technological innovations. This refers in particular to the categories *Attitude and behavior* and *Knowledge and communication*. Factors such as *Personal characteristics and emotion* (Choi et al., 2011; Fishbein & Ajzen, 1975; Raffaelli et al., 2019; Rogers, 2003; Triandis, 1977; Venkatesh et al., 2003), *Motivation and objectives*, *Perception of social Role*, *Perception of other parties' roles* (Triandis, 1977) and *Attitude towards novelty* (Davis, 1989; Fishbein & Ajzen, 1975; Rogers, 2003; Triandis, 1977) thus affect acceptance - regardless of whether the innovation is social or technological. *Knowledge and Communication* is discussed primarily in Rogers' (2003) exposition. The *Expectations of SI* (Rogers, 2003; Triandis, 1977; Venkatesh et al., 2003), *Beliefs about requirements* (Venkatesh et al., 2003) and *Conceived value of SI*

(Triandis, 1977), can be understood as equally relevant to SI. In the category *Trust and Power*, the factor *Social influences* is equally discussed (Demirel & Payne, 2018; Małecka et al., 2022; Rogers, 2003; Triandis, 1977; Venkatesh et al., 2003). In more recent studies (Gefen et al., 2003; Małecka et al., 2022), the factor *Trust towards other parties* is also considered. The factors *power (im)balance* and *trust towards other parties* play a prominent role in SI, which is why they are explicitly mentioned in this thesis. Likewise, it can be assumed that previous models also conceive of organizational factors, although these are not explicitly named (Venkatesh (2003) and Triandis (1977) refer to 'facilitating conditions' and Rogers (2003) to 'previous practice'). Further, Pak et al. (2019) examine the "relationship between readiness factors" (2019, p. 552) of organizations and individuals. The subjective perception of organizational factors, as *Resources, Integration within organization, Guidelines, Organizational routines* and *Impact of SI within organization* are attributed a more prominent role in the developed model.

In summary, it is apparent that essential factors discussed with regard to technological innovations are also relevant for SI. In this respect, these have been consolidated and expressed in the respective model. In addition, the factors *Power (im)balances* and *Trust towards other parties*, as well as the subjective perception of organizational factors are assigned a more prominent role. Likewise, the exploration of frames, to understand the values, norms, and belief systems which significantly influence the qualification of the discussed factors is a major contribution of this thesis.

In following the individual factors will be presented and discussed. Since the presentation of these factors is of theoretical nature and the transfer to different fields of application of SI is of course imminent, the factors will be illustrated by fictitious examples for illustration. In doing so, I refer to two examples: The implementation of an open innovation process, of an arbitrary organization. The SI consists of employees being encouraged to develop and communicate innovative product ideas on an online board and being financially compensated for this, should their idea be applied. The second example concerns new waste management and recycling regulations of an arbitrary organization. The SI is that members of this organization are expected to adopt and apply new regulations for the disposal of the waste produced.

I am aware that any fictional exposition has its limits and may also entail cursory elements. In this sense, this is to be understood only as an attempt to inject a practical spirit into the theoretical discussion.

5.2.2.1 Attitude and behavior

5.2.2.1.1 Personal characteristics and emotion

Personal characteristics and emotions associated with the SI play a critical role in the SI process. This might include a wide range of aspects. Specifically, this refers to factors such as demographics, social status, and personal background. Furthermore, this refers to characteristics regarding the environment of the SI. On the example of waste management, the personal association of individuals with the subject of recycling and the private approach to handling waste could be relevant issues. On the example of the open innovation process, the personal association with participation can be discussed here. Is participation perceived as motivating or does it trigger pressure among the participants?

5.2.2.1.2 Motivation and objectives

Motivation and objectives are critical for the SI process as they provide direction and purpose – or simply not. It is crucial to have a distinct comprehension of the issue at hand, along with an outlined objective for the intended result, for guiding the development of effective solutions. Without an understanding of the problem and a defined goal, the SI process can lack focus and direction, making it difficult to measure progress and determine if the desired impact is being achieved. Additionally, motivations and objectives ought to be explored to ensure that the SI is aligned with the values and priorities of the community and stakeholders, and it is being done in a way that is aligned to the perceived needs and requirements of the stakeholders. Taking waste management as an example, the extent to which the stated corporate goals appeal to employees and whether they perceive the goals as motivating or inappropriate could be determined. With regard to the open innovation process, the question arises as to whether monetary compensation provides a basis for motivation or whether other incentives are required.

5.2.2.1.3 Perception of social role

How somebody perceives their social role within the SI process can have a significant impact on their perceived ability to contribute to and benefit from the process. For example, if an individual perceives themselves to have a leadership role, they may be more likely to take initiative, propose solutions and mobilize others to support the cause. On the other hand, if an individual perceives themselves to have a more passive role within the organization, they may be less likely to take an active role in the process. Additionally, if an individual perceives their

role to be limited by their social status, they may be less likely to engage in the process and benefit from the solutions developed. By understanding and addressing these perceptions, factors, related to attitude and behavior of the stakeholders can be determined and solutions implemented. This concerns implementing a process which is inclusive and equitable, and in which all stakeholders perceive to have the opportunity to contribute and benefit from the process.

Taking the open innovation process as an example, the question arises as to what role the participants assign to themselves. Do they conceive of themselves as leaders and innovators and are highly motivated to participate? Or do the participants consider themselves to be passive actors, who primarily want to do their work in peace without being involved any further?

5.2.2.1.4 Perception of other parties' roles

This factor is related to the perception of the social role of other participants. This involves discussing the function attributed to other participants regarding the implementation of the SI. An assessment of the perception of the roles of others facilitates conclusions to be drawn about the participants' own role. This constitutes the basis for pursuing approaches to involve all the concerned participants.

On the example of the open innovation process, it might be of relevance to consider which roles an individual ascribes to others in the open innovation process. If the individual perceives themselves as introverted and reserved in relation to other participants, active participation will presumably be attributed to other participants.

5.2.2.1.5 Attitude towards novelty

Attitude towards novelty plays a crucial role in the SI process as it determines the willingness of individuals and organizations to embrace new ideas and ways of doing things. A positive attitude towards novelty can lead to the identification and exploration of new opportunities, the experimentation with new solutions, and the acceptance of new practices that can improve the current state. On the other hand, a negative attitude towards novelty can hinder the ability to adapt to changing circumstances and can lead to resistance to new ideas. The attitude towards novelty should therefore also be considered, as it has a decisive influence on the implementation of a SI. Therefore, fostering a culture of openness and curiosity, and encouraging individuals and organizations to take risks and embrace change, is essential for promoting SI.

This applies equally to the open innovation process and waste management: What is the attitude of the individual towards new processes? Do these processes encounter individuals who fundamentally perceive innovations as burdensome and unnecessary, or do the individuals perceive innovations as opportunities?

5.2.2.2 Trust and power

5.2.2.2.1 Social influences

Social influences play a significant role in shaping the SI process. Social networks and communities can provide individuals and organizations with access to resources, knowledge, and support that can facilitate the development and implementation of new ideas. Social norms, values, and beliefs can also shape the acceptance and adoption of new practices. For example, if a new practice is perceived as aligning with social norms and values, it is more likely to be adopted by individuals. Conversely, if a new practice is perceived as conflicting with social norms and values, it is less likely to be adopted. Therefore, understanding and leveraging social influences can be critical for promoting SI and for ensuring that new ideas and practices are adopted and integrated.

Taking waste management as an example, it is important not only to discuss individual attitudes, but also to consider these attitudes as part of a network of colleagues. It can be assumed that these influence each other. If it is a group in which many influential individuals have a negative attitude toward waste management, this might lead to a rejection of the SI within the entire team.

5.2.2.2.2 Power (im)balance

Perceptions of power asymmetries are important for the SI process related to the participation of stakeholders and the attribution of power related to defining and shaping issues and solutions related to the SI.

As with the perception of ones' own social role, the perception about power relations holds a pivotal influence on participation and agency. In this sense, assuming a position of power might be associated with having significantly more influence and decision-making power – shaping the participation of an individual.

However, this can also lead to rejection. If a problem definition or solution is perceived as being imposed by a powerful group, it may be met with resistance or lack of buy-in from those who feel they have been excluded from the process. On the other hand, if a solution is

perceived as being co-created and inclusive, it is more likely to be met with support and buy-in from a wider range of stakeholders.

Further, when certain groups or individuals are perceived to hold more power, their perspectives and experiences may be privileged over those of others, leading to a narrow definition of problems and a limited range of possible solutions. Additionally, perceptions of power asymmetries can also affect how solutions are received and implemented. Therefore, understanding and addressing perceptions of power asymmetries can be crucial for creating solutions that are truly inclusive and effective, and for ensuring the successful implementation of those solutions.

Using the example of the open innovation process, it should be determined whether the participants believe that their actions have a sufficient radius of influence. Do they consider themselves to be relatively powerful or rather silent followers? And what role does the SI play here? Does it promote existing power relations, or is it perceived as disruptive in this respect, expanding the personal radius of action?

5.2.2.2.3 Trust towards other parties

Trust carries a dual role and needs to be explored with respect to the SI.

Trust towards other stakeholders is crucial for the SI process because it enables effective collaboration and cooperation among different groups and individuals. Without trust, it can be difficult to build the relationships and partnerships needed to generate and implement effective solutions. Trust is especially important when working with stakeholders who have different perspectives, experiences, and priorities, as it allows for constructive dialogue and helps to overcome potential conflicts. Trust can be built through effective communication, transparency, and a willingness to listen and learn from others.

Beyond that, trust can also be the cause of low participation and submissiveness. In this sense, individuals or institutions are trusted to integrate ones' needs, desires and demands. Ones' own participation and expression of those needs, desires and demands are neglected.

This aspect is particularly relevant in the open innovation process. Does SI lead to a competitive mindset in which each individual hides their own ideas from others? This could have a negative impact on collaboration and the working atmosphere beyond the open innovation process. Or do people trust others enough to share their own ideas with them? Alternatively, it can be explored whether individuals trust the organization to compensate them for their ideas or whether there is mistrust of the organization in this regard.

5.2.2.3 Knowledge and communication

5.2.2.3.1 Knowledge about SI

This refers to knowledge about the features, characteristics, implications, and goals associated with the SI. This factor lays the cornerstone on the conceptualization and expectations of SI. Accordingly, the communication channels and the processing of knowledge about the SI are relevant.

Using the example of the open innovation process and waste management, it is important to consider the level of knowledge that individual employees have about the SI. This relates to both the goals and the implementation of the SI. On this basis, a reconciliation with the goals and objectives on the part of the organization could also be considered. If there are major discrepancies, communication measures must be taken to counteract these.

5.2.2.3.2 Conceptualization of SI

Based on the transmitted knowledge about the SI, each individual develops a unique understanding of it. This may be very consistent among all those concerned, but it may also be very divergent. Therefore, it is important to capture and categorize these conceptions to promote certain concepts and develop measures (including communicative ones) to counteract others.

In the case of open innovation processes and waste management, it is important to reconcile individual conceptions with overarching organizational orientations. This refers above all to the understanding of the characteristics and goals of SI, as well as the practical implementation of these.

5.2.2.3.3 Expectations of SI

Expectations about the SI process are important because they shape how individuals and organizations approach and engage with the process. Clear and realistic expectations can help to focus efforts, set goals, and measure progress. On the other hand, unrealistic expectations can lead to disappointment, frustration, and a lack of engagement. Its' important to consider the expectations of all stakeholders, including those who may be affected by the problem and solution, as well as those who will be involved in implementing the solution. Setting realistic expectations can help to build trust, buy-in, and support among stakeholders, while managing and aligning expectations can help to prevent misunderstandings and conflicts. Furthermore, expectations can also help to shape the design and implementation of solutions, making sure that they are tailored to the specific context and capabilities of the stakeholders involved.

Overall, managing and aligning expectations is essential for ensuring the success of the SI process and the effectiveness of the solutions proposed.

Taking the example of the open innovation process, the expectations of the participants should be explored. Do participants expect a transparent process in which their ideas have a great opportunity to be implemented and they can expect substantial financial compensation? Or do participants expect that awareness about their ideas will be slow and that they will hardly be compensated financially? Both will have an impact on their initial willingness as well as their long-term motivation if they experience negative adverse outcomes relative to their expectations.

5.2.2.3.4 Beliefs about requirements for SI

Beliefs about the requirements for SI can shape how individuals and organizations approach and engage with the process. These beliefs can include assumptions about what resources, skills, and capabilities are needed to generate and implement solutions to social problems. These assumptions can be influenced by personal, cultural, or societal factors. For example, some may believe that SI requires large financial resources, while others may argue that it can be done with minimal financial investment but with a focus on community engagement and empowerment. Similarly, some may believe that the solutions to social problems require the expertise of specialized professionals, while others may advocate for community-driven approaches that tap into the skills and knowledge of those most affected by the problem. Additionally, beliefs about the requirements for SI can also shape how solutions are perceived, received, and implemented. Therefore, understanding and addressing underlying beliefs and assumptions about the requirements for SI can be crucial for creating solutions that are inclusive, effective, and sustainable.

The open innovation process also entails issues related to the competencies, skills and characteristics that individuals consider to be important. Further, it raises the question of whether individuals ascribe these skills to themselves. Do individuals believe that they must have extensive competencies about the production process or do they believe that this SI is directed only at employees with an entrepreneurial mindset and creativity? Do employees feel included or excluded because of these assumed competencies, skills and characteristics?

5.2.2.3.5 Conceived value of SI

This factor is based on knowledge and the bundled expectation about the SI and beliefs on the requirements. Based on this understanding, a particular value is attributed to the SI. This

can be both collective and individual. In any case, this attribution of value determines the individuals' motivation and willingness to participate. In this sense, it is necessary to address the individually conceived value.

In the open innovation process, it can be explored which value individuals attribute to the SI. Does the financial compensation matter to them or is the mere participation in an innovation process considered valuable and promotes acceptance?

5.2.2.3.6 Communication of SI

An essential aspect of any SI is to understand it as a communication process. This refers both to the communication of the content of the characteristics, goals, and implementation of the SI and to the means and style of communication.

Regarding the characteristics, goals and implementation, it is important to bear in mind that these have a significant influence on the conception, expectation and attributed value of the SI. This also refers to the alignment between communicated issues and the perception of practice.

Regarding the means and style of communication, it must be considered that these can have both an inclusive and an excluding effect. This refers to both the articulated content of the SI and the linguistic approach. Are the characteristics, goals, and implementation presented in a way that is comprehensible to all participants, or are certain participants already linguistically being excluded? And in what form is the SI communicated? Is this done via an email memo to all employees or do the respective team leaders explain the SI in a team meeting?

These factors have implications for the open innovation process and waste management examples. For example, if the open innovation process is communicated via email and requires online participation, but the organization has 30% production employees who rarely use email and digital tools, this will impede the implementation of the SI.

5.2.2.4 Organization

5.2.2.4.1 Resources

This refers mainly to the provision of resources for the implementation of a SI. This can involve both financial resources and time as a resource. This is relevant on the assumption that

changes, including social ones, are first of all associated with an additional effort – both financially and temporally.

Using the example of the open innovation process, it can be explored, whether employees are allocated working time for the development and communication of their ideas. If no time is allocated to this process and it therefore must be carried out in addition to the working hours, this might have a negative impact on the willingness to participate. Taking waste management as an example, it can be explored whether financial resources are provided for the establishment of infrastructures and disposal costs, or whether this must be provided by the financial resources of individual teams.

5.2.2.4.2 Organizational routines.

Any organization, whether formal or informal, implies behavioral routines. These may be formal or may have developed over many years. In either case, these routines will correspond to the daily patterns of action of individuals. The SI will not correspond to some of these organizational routines.

Given this, it is also important to understand the structure of these routines, to understand to what extent the SI can be integrated into them or disrupt them, and how these routines are perceived by the individuals. Particularly in cases where a SI significantly interferes with organizational routines and these are perceived as useful by the concerned individuals, it can be assumed that considerable resistance will arise. This resistance may be expressed openly or may simply result in old routines being retained. Accordingly, communication of the value and goals of the SI and the integration of relevant individuals are of utmost importance.

The example of the open innovation process can be considered here to determine the extent to which an open and participatory structure fits in with existing organizational processes. In the case of a relatively small organization, with flat hierarchies and open communication processes, the SI would correspond to already existing structures and routines. A hierarchical organizational structure, with restrictive communication processes would presumably imply barriers related to the willingness of participation, since the employees are not used to participation and open communication.

5.2.2.4.3 Integration of SI within organization

Organizational routines also concern the issue of how the SI is integrated. As the case study illustrated, the integration consisted of a project outside of regular practice. There is reasonable doubt as to whether implementation in a separate project is conducive to integration, or even whether it can provide any insight at all into what this SI might entail when transferred

to regular practice. The case study demonstrated that although the SI met widespread acceptance, there is much doubt about whether it can be implemented in day-to-day practice. Based on this example, partial integration can thus provide valuable indications of potential acceptance but requires full implementation to enable conclusive findings on acceptance.

Using waste management as an example, it can be discussed here whether the SI will be introduced across the board in all areas of the organization, or whether this will only apply to certain departments. If only certain departments, for example the production units, are affected, this can lead to the rejection of SI, due to the perception of unequal treatment.

5.2.2.4.4 Guidelines

The primary goal of guidelines is to provide a common understanding of the requirements and implementation of the SI. Particularly regarding changes in existing routines, these can be considered necessary in order to provide a common and articulated basis for the activities of all stakeholders concerned. The categories *Attitude and behavior* as well as *Knowledge and communication* demonstrate that the perception of a SI and the interpretation of ones' own role are based on numerous interpretations and attitudes. In these cases, a guideline can facilitate clarity regarding the goals, the measures and the role of groups and individuals.

5.2.2.5 Impact of SI within organization

Lastly, it is also important to analyze the effects of a SI in its practical implementation. This refers to both intended and unintended effects. Intended effects correspond to the goals and instructions and therefore do not need to be discussed further. Non-intended effects, on the other hand, should be given a great deal of attention. These can refer to effects that were not conceived for implementation but are positive. In addition, there may be numerous negative effects that need to be addressed. This can refer, for example, to the morale within teams, the motivation of individual participants, or the organizational disengagement of groups and individuals as a result of the rejection of the SI.

Taking the open innovation process as an example, participation may lead to greater identification with the organization – this would be a positive and possibly unintended effect. However, this process can also lead to increased competition between employees. It is therefore important to assess the effects – intended and unintended – during the implementation of a SI.

5.3 Boundary conditions

The aim of the thesis was to develop a conceptual and methodological approach to explore the factors that shape the acceptance of a SI. Subsequently, this approach was implemented on a case study, for the explorative research and the identification of relevant factors. Ultimately, these were conceptualized. Still, this approach employed in this thesis bears limitation which need to be considered. Further, some issues have come up during this thesis, which extend the scope of it, but require further attention.

The theoretical and methodological grounding in frame theory *frames* this thesis. It conditions the interpretation, qualification, and categorization of what has been read and said and what has been observed. In this sense the conviction in the benefits of frame theory shaped my perception, my interpretation, and my conception of this thesis. Analogous to frames of patients and healthcare professionals influencing the acceptance of SDM, my frames influenced the acceptance and implementation of frame theory. This is an issue that needs to be considered, since it shapes the findings, interpretation, and qualification of the results from P2 and P3 in particular.

Further, and addressed in the results section, the relationships between single factors remain unresolved. A qualitative order in categories was carried out. In the narrative presentation of the factors, reference was also made to the qualitative relationship between single factors. Nevertheless, it must also be noted here that this was only partially undertaken, and an explicit study of these relationships exceeds the scope of this thesis. The study of the relationships requires further empirical research.

In P4, the variability and dynamics of frames were emphasized. In P3, this idea was adopted and implemented. It was explored to what extent the participation in an SDM consultation had an influence on the frames of the participants. Solidifications, modifications, and transformations were identified. Solidification means that a frame was identified in both the first and second interview. Modification means that a frame was identified in both the first and second interview. Thereby, alterations were identified, which are expressed, for example, by patients questioning beliefs that are crucial for a frame. Transformation refers to complete changes in frames. This refers to the identification of a frame in the first interview but not in the second interview, and vice-versa. However, I consider this study only as a first approach, which requires further empirical research. Relevant prior work refers to Klein und Amis' (2020) conceptualization and analysis of frame dynamics.

I consider the resolution of frames to be an important issue that transcends the scope of this thesis. This concerns how certain frames that have been identified can be resolved. Relevant

prior work includes the article by Almashat et al. (2008), who addresses decision-makers' situational reasoning approach, and Hodgkinson et al. (1999), who investigated the method of cognitive mapping. Almashat et al. (2008) refer to rhetorical tactics to achieve reflection and deconstruction of frames. In the cognitive mapping method, the subjective perspective and approach to understanding problems is mirrored (Hodgkinson et al., 1999). Both approaches are text-based and qualitative-exploratory. Likewise, both approaches are based on a self-reflection of frames, as a starting point for their resolution.

Further, the Causal Layered Analysis, a semantic and heuristic approach, constitutes another avenue. Thereby, the deconstruction of language is intended to enable a reflective analysis of prevailing interpretive hierarchies and conceptions (Inayatullah, 2004). The aim is to provide insights into subjective values, attitudes, and powerful metaphors. Linked to the identification of implicit assumptions, values, and attitudes, the approach integrates discursive measures (i.e., through experimental workshops) to confront the participants with their own frames, to challenge and deconstruct these.

Beyond these examples, considering different approaches to reflecting on and deconstructing frames provides the opportunity to integrate these insights into future decisions. This is based on the assumption that reflection and deconstruction of frames may influence attitudes and perceptions about SI. As a marginal note: Although I sympathize with critical voices raised on the resolution of frames – implying this to be potentially manipulative –, I do not consider the resolution of frames necessarily as a manipulative act. Rather, I believe that engaging with ones' frames and deconstructing these enables each individual to develop a better understanding of their own landscape of beliefs. Therefore, the purpose of this process is to achieve an awareness of ones' own beliefs and ultimately to achieve a high level of conscious and autonomous decision-making, rooted in beliefs one wants to commit to and freed from beliefs that burden oneself.

6. Conclusion

The findings, interpretations, and proposals provided in this synopsis represent my current understanding of the issues shaping perception, judgment, decision-making, and acceptance of SI, particularly SDM.

This synopsis is an undertaking to present the major findings and experiences. Concurrently, this synopsis also serves as a reflection on my basis of insights. Although in most instances this has been accomplished, I am aware that further personal experiences have shaped my thoughts and conclusions, which are not readily grasped and expressed. This relates, among other things, to my first visits to the clinics, my impressions, and experiences. In addition, I personally visited most of the patients at home at least twice. Beyond the specific subject of the interview, this gave me numerous impressions about their everyday life, perceived life situation and hopes, which influenced my thoughts and actions. Although I have recorded these in a research diary, I am aware that these experiences also shape me implicitly and probably do not find expression in this synopsis. With this in mind, I would like to summarize insights that I am aware of and present an outlook for practical implementation and research on SI.

6.1 Research implications and outlook

In the course of the studies conducted, research methods and empirical findings were analyzed, exploratively discussed, and synthesized. The result is both a model developed specifically for SDM and a generic model for studying the acceptance SI, which could inform future research projects.

In particular, the model developed for SDM is comprehensive and includes context-specific categories and factors. I consider the overarching aspects of power and competence asymmetries, the understanding of roles and the understanding of SDM and the requirements to be particularly important. In my conception, these aspects are relevant in and of themselves, but they also have a significant impact on other factors.

I also consider the generic model for SI to be comprehensive. Analogous to the SDM model, I also consider power and competence asymmetries, the attribution of roles to oneself and to others, and the understanding of the SI and the associated requirements to be essential. This could be explored in further studies.

However, the need for contextual exploration remains. As this case also shows, there are categories and factors that are context-bound. In this case, the category *Health and age* was introduced for SDM but not proceeded in the generic model on SI. That is because I understand the identified factors of this category to be contextual. The same relates to factors like

Considerations on improvement of care and *Health literacy*. Although I consider the generic model as comprehensive, it is likely that context specific factors and categories are still relevant, which are not covered here. This should be kept in mind for future research.

Moreover, the generic model on SI is informed by the studies conducted here. Given this, I also consider it reasonable to integrate it with findings from studies conducted in other settings. In doing so, both a generic model can be further developed, and contextual factors complemented.

I also consider further research on the relationships between factors to be worthwhile. Although this has been partially addressed qualitatively in this thesis, there remains a need for further research.

Regarding the consideration of frame theory, this also applies to the dynamics and variability of frames as well as their resolution. Although the variability has been empirically conducted in P4, the findings require further empirical exploration. Approaches to the resolution of frames were also presented in the boundary conditions. These approaches, as well as others, can provide the basis for empirical research on frame resolution. In my view, the primary goal of these approaches lies in reflecting on and deconstructing our own frames and becoming aware of their influences on our perception and decision-making. To reflect on and deconstruct these can provide an opportunity for better decision-making.

It must also be acknowledged that the pursued approach entails limitations. The studies conducted here are characterized by the exploration and analysis of the individual - namely patients and healthcare professionals. This refers in particular to research packages P1 and P3, where studies were conducted at the micro level. Although this approach has its justification – since ultimately individuals accept or reject the SI – and provides essential insights and factors, meso and macro approaches remain in the periphery. While structural, organizational, and financial factors could also be identified, these remain bound to the perceptions and perspectives of patients and healthcare professionals. At this point, further studies are advisable. More simple: While this thesis pursued to understand what shapes the acceptance or rejection of SI of individuals, it would also be worthwhile to consider factors shaping the acceptance or rejection on the organizational level. This refers, for example, to the analysis, comparison and evaluation of policy, regulatory and organizational measures, and projects.

6.2 Practical implications and outlook

In the course of this thesis, numerous findings and factors were identified that influence the acceptance of SDM. Individual factors as well as structural and organizational factors were identified.

In particular, I would like to emphasize the issue of asymmetries - particularly competence and power asymmetries - between patients and healthcare professionals. These asymmetrical relationships often constitute the basis for the rejection of SDM, as these asymmetries are claimed to be too significant and would impede the implementation of SDM. In my understanding, these asymmetries are in turn not a primary barrier, but emphasize the need for SDM. It is not a matter of eliminating these asymmetries, but of considering different conditions, perspectives, and competencies as equally important.

The influence of healthcare professionals' behavior must also be taken into account. Through their language, their behavior, and their interaction with patients, they have a considerable influence on the acceptance of SDM. It should be emphasized that clinics are typically an unfamiliar environment for patients, in which issues are discussed and a language and terms are employed to which they have no exposure in everyday life. Actively engaging and involving patients can promote overcoming these barriers.

However, the organizational and financial conditions of healthcare professionals also became apparent. In this sense, it is not only necessary to look for opportunities and measures to promote patient participation on the part of healthcare professionals, but also to create the organizational and financial basis for this. At the political level, this relates in particular to the valorization of patient autonomy, financial compensation for preventive measures, and the transfer of SDM to standard care. Funding of preventive measures was a recurring issue during the interviews with healthcare professionals, since SDM also encompasses preventive measures. In this sense, the transfer to standard care is considered necessary.

I further assume that elements of the insights provided in this thesis could also contribute meaningfully to other settings. This refers, for example, to digitalization and telemedical advancements in healthcare. It is reasonable to assume that these will have a significant impact on the relationship between patients and healthcare professionals. In the course of this thesis, it became apparent that vulnerable patients perceive themselves to be highly dependent on healthcare professionals and experience a great need for affection. It also became apparent that, particularly in these cases, the cultivation of a personal and caring relationship, and above all trust in healthcare professionals, has a significant positive influence on the patients' well-being, satisfaction, and willingness to engage in treatment. In this sense, these factors are essential for

the relationship between patients and healthcare professionals and must also be integrated into advances in digitalization and telemedicine.

Beyond the healthcare context, fictional examples were also touched upon in the empirical contribution for SI. Ultimately, these remain relatively cursory. Nevertheless, these examples could provide a glimpse of the directions in which these findings could lead. Further studies are needed to explore this.

And finally, I also consider the potential of applying the results in fields that do not primarily concern SI. In P3 (page 6), I wrote that the implementation of SI is related to "attaching novel ideas to their existing thoughts, beliefs, and conceptions of how things are and should be, as well as their perceived notions of how things could be". In this sense, I have dealt extensively with individual conceptions of present realities and future developments and changes. As a former student of future studies, I consider there to be value in transferring these insights to research projects that are related to these topics.

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Appendix 1: Related publications and conferences to the period of this thesis

Related to the research project on shared decision-making as a social innovation

Vogel, A., Guinemer, C., & Fürstenau, D. (2022, April 11). Barriers and facilitators to shared decision-making for frail and elderly patients within the perioperative setting: A scoping review protocol. https://doi.org/10.17605/OSF.IO/8FJNB

Vogel, A., & Fürstenau, D. (2022). Shared decision-making: A vehicle for participation and individualized clinical care pathways? A Scoping review on patients' and physicians' perceived facilitators and barriers for shared decision-making for frail and elderly patients in the clinical setting. International Journal of Integrated Care, 22(S3), 31. https://doi.org/10.5334/ijic.ICIC22012

Vogel, A., Guinemer, C., & Fürstenau, D. (2023). Patients' and healthcare professionals' perceived facilitators and barriers for shared decision-making for frail and elderly patients in perioperative care: A scoping review. BMC Health Services Research, 23(1), 197. https://doi.org/10.1186/s12913-023-09120-4

Vogel, A., & Fuerstenau, D. (2021). Towards Patient-Centeredness? Media Frames on Shared Decision-Making for Healthcare Treatment. *Academy of Management Proceedings*, *2021*(1), 11549. https://doi.org/10.5465/AMBPP.2021.11549abstract

Vogel, A., Balzer, F., & Fürstenau, D. (2021). The social construction of the patient-physician relationship in the clinical encounter: Media frames on shared decision-making in Germany. *Social Science & Medicine*, *289*, 114420. https://doi.org/10.1016/j.socscimed.2021.114420

Vogel, A., Borchers, F., Balzer, F., Spies, C., Gersch, M., & Fuerstenau, D. (2023). Exploring the Role of Individual Beliefs and Social Factors in Adopting Social Innovations. *Academy of Management Proceedings, 2023(1),* 10028. https://doi.org/10.5465/AMPROC.2023.10028abstract (Zugriff über: https://www.researchgate.net/publication/371947465_Exploring_the_Role_of_Individual_Beliefs_and_Social_Factors_in_Adopting_Social_Innovations)

Vogel, A. (2023): On the origin and diffusion of frames: Theoretical review of frame research and future directions from a network perspective. 38 Seiten. http://dx.doi.org/10.17169/refubium-38499

Further

Afraz, F. C., Vogel, A., Dreher, C., & Berghöfer, A. (2021). Promoting Integrated Care through a Global Treatment Budget. International Journal of Integrated Care, 21(4), 27. https://doi.org/10.5334/ijic.5940

Fürstenau, D., Klein, S., Vogel, A., & Auschra, C. (2021). Multi-sided platform and data-driven care research: A longitudinal case study on business model innovation for improving care in complex neurological diseases. Electronic Markets. https://doi.org/10.1007/s12525-021-00461-8

Appendix 2: Publications included in this thesis.

P1.1 Vogel, A., Guinemer, C., & Fürstenau, D. (2022, April 11). Barriers and facilitators to shared decision-making for frail and elderly patients within the perioperative setting: A scoping review protocol. https://doi.org/10.17605/OSF.IO/8FJNB

P1.2 Vogel, A., Guinemer, C., & Fürstenau, D. (2023). Patients' and healthcare professionals' perceived facilitators and barriers for shared decision-making for frail and elderly patients in perioperative care: A scoping review. BMC Health Services Research, 23(1), 197. https://doi.org/10.1186/s12913-023-09120-4

P2 Vogel, A., Balzer, F., & Fürstenau, D. (2021). The social construction of the patient-physician relationship in the clinical encounter: Media frames on shared decision-making in Germany. Social Science & Medicine, 289, 114420. https://doi.org/10.1016/j.socscimed.2021.114420

P3 Vogel, A., Borchers, F., Balzer, F., Spies, C., Gersch, M., & Fuerstenau, D. (2023). Exploring the Role of Individual Beliefs and Social Factors in Adopting Social Innovations. Academy of Management Proceedings, 2023(1), 10028. https://doi.org/10.5465/AMPROC.2023.10028abstract. (Zugriff über: https://www.researchgate.net/publication/371947465_Exploring_the_Role_of_Individual_Beliefs_and_Social_Factors_in_Adopting_Social_Innovations)

P4 Vogel, A. (2023): On the origin and diffusion of frames: Theoretical review of frame research and future directions from a network perspective. 38 Seiten. http://dx.doi.org/10.17169/refubium-38499

P5 Afraz, F. C., Vogel, A., Dreher, C., & Berghöfer, A. (2021). Promoting Integrated Care through a Global Treatment Budget. International Journal of Integrated Care, 21(4), 27. https://doi.org/10.5334/ijic.5940

Appendix 3: Summaries in Englisch

Barriers and facilitators to shared decision-making for frail and elderly patients within the perioperative setting: A scoping review protocol

This protocol discusses the process of a scoping review of shared decision-making (SDM) for elderly and frail patients in perioperative care and constitutes a preliminary review. The review aims to provide a comprehensive overview of original studies on facilitating factors and barriers to SDM. The review thereby targets the subjective perceptions, experiences, and understandings of healthcare professionals and patients.

The first purpose is to capture the facilitating factors and barriers to SDM and to understand how these are perceived by elderly and frail patients and healthcare professionals. This second purpose is to examine and classify the underlying approaches and methods used in the identified studies.

The scoping review is based on the databases MEDLINE, Embase, CINAHL, and Web of Science. Results are reported according to the 'Preferred Reporting Items for Systematic Reviews and Meta-analyses extension for Scoping Reviews'. To organize the data extraction, we created a taxonomy that includes the following aspects: Attitude and Behavior, Trust and Power, Knowledge and Communication,

Health and Age, Treatment Organization and Risk.

This is the first review to address PEF for elderly and frail patients in perioperative care settings. A preliminary search was conducted, and after removing all duplicates, 984 results were identified. We concluded that there is sufficient literature to conduct this review.

Patients' and healthcare professionals' perceived facilitators and barriers for shared decision-making for frail and elderly patients in perioperative care: A scoping review

Shared decision-making (SDM) is an organizational approach to establishing dialogue and decision-making between patients and healthcare professionals. The purpose is to enable patient-centered care and tailoring of care to individual patient needs. Elderly, frail patients suffer from multimorbidity and increased vulnerability to surgical intervention and require individualized care. However, little is known about facilitating factors and barriers to implementing SDM in perioperative care for the specific needs of frail and elderly patients.

The first purpose of this study is to identify facilitating factors and barriers and provide an overview. We refer to the subjective perceptions about facilitating factors and barriers by patients and healthcare professionals. In addition, we seek to identify conceptual approaches and methods employed in determining and analyzing these enabling factors and barriers.

The review is based on the databases MEDLINE, Embase, CINAHL, and Web of Science. The identification of relevant studies is reported under the Preferred Reporting Items for Systematic Reviews and Meta-analyses extension for Scoping Reviews. A total of 984 results were identified and 13 studies were subsequently selected for the review.

A key finding relates to patients' desire to be substantially informed about their health and forthcoming therapeutic interventions. Furthermore, the results suggest that patients are receptive to SDM. SDM is also preferred compared to a decision made exclusively by healthcare professionals. Significant barriers relate to communicative barriers (i.e. medical terminology) and the perception of asymmetric power relations between healthcare professionals and patients.

Regarding the methodological approaches employed, it was determined that primarily surveys and interviews were conducted. No observational studies were conducted, which could serve to address applied practices. Furthermore, most of the articles are not based on a theoretical approach to discuss, interpret and discuss the results.

Overall, the results do not provide a conclusive basis for understanding patients' and healthcare professionals' perceptions on facilitating factors and barriers to the implementation of SDM in perioperative care. In our opinion, further comprehensive empirical studies are needed. This also refers to the application of theory-based studies, which provide information about facilitating factors and barriers to the implementation of SDM as well as external accountability of the study, interpretation, and results. Further, we consider the employment of an observational study of SDM consultations to be valuable to understand the specific practices of healthcare professionals and patients.

The social construction of the patient-physician relationship in the clinical encounter: Media frames on shared decision-making in Germany.

Shared decision-making (SDM) is a practice that emphasizes dialogue and interaction between patients and healthcare professionals. Its aim is to promote patient autonomy and individualization of therapeutic measures. Pilot projects are being introduced and implemented in Europe as well as in the USA. Nevertheless, implementation and introduction into healthcare care remains fragmented and practical application inconsistent.

This study concerns the exploration of the societal discussion on PEF, in Germany. The purpose of the study is to explore underlying assumptions, views and understandings about PEF and the dialogue between patients and healthcare professionals promoting and preventing the implementation of PEF. For this purpose, the frame theory is employed. Empirically, an exploration of the media landscape in Germany is conducted.

Three facilitating and three impeding frames for the implementation of PEF were identified. A major obstructive frame relates to competence asymmetries between patients and healthcare professionals. Thereby, medical competence is understood as an essential attribute for participation in PEF. Furthermore, the general rejection of novel decision-making approaches plays an important role. In contrast, the belief in the necessity of patient empowerment and the exercise of patient autonomy represents a facilitating frame for the implementation of PEF.

How Beliefs and Social Influences Affect the Acceptance of Social Innovations: A Frame Analysis on Organizing Shared Decision-Making.

Over the past decades, research on the acceptance of innovations has developed numerous concepts and models addressing individual characteristics. Although these have been primarily studied and developed in the context of technological innovations, they are also widely applied to social innovations that affect changes and novelties in social interactions. Research on individual characteristics that shape the acceptance of social innovations continues to require exploratory research. The deductive reproduction of existing models and characteristics implies the risk of missing relevant issues. Further, extant models lack sociological conceptualization of the individual. Thereby, the individual is conceptually isolated and the implication in social influences, which shape norms, views and the behavior of the individual, is not sufficiently explored.

In this study, an exploratory and sociological approach is employed to identify individual characteristics that shape the acceptance of social innovations. Thereby, this study is based on Frame Theory, a sociological approach to understanding and analyzing perceptual and action guiding belief systems, norms views, and behavior of the individual.

Empirically, this study explores the acceptability of shared decision-making (SDM) for elderly and frail patients in perioperative care. SDM is conceived of as a social innovation in which patients, family members, and healthcare professionals participate in dialogue and decision-making on perioperative measures. Interviews were conducted with 18 patients, four relatives, and five healthcare professionals. Further, five SDM consultations were attended in a non-participatory observational study.

As a result, six frames were identified that shape the acceptance of SDM. Major issues relate to perceptions of existing power and competence asymmetries, self and others' attribution of role with regard to perioperative decisions, and the understanding of the individual scope of agency. The main obstructive frame for implementing SDM implies the conception of perioperative decisions as purely medical, which results in considerable competence asymmetries. Furthermore, structural, and financial factors are understood as decisive, which considerably limits the perceived scope of action of patients and healthcare professionals. Facilitating frames imply the need for autonomy in decision-making and the value of considering patients' circumstances, wishes, and social needs in understanding perioperative decisions.

On the origin and diffusion of frames: Theoretical review of frame research and future directions from a network perspective

Research on frames has been characterized by a broad landscape of incoherent and divergent concepts. This leads to the attribution of a wide variety of characteristics and functions, as well as divergent conceptualizations about the origin and diffusion of frames. While there are reviews mapping the variety of approaches, modes and properties of frames, there is yet to be a review on the origin and diffusion of frames. In turn, this is relevant since the scope of a frame is determined, only if we understand where it first emerged, where it becomes linguistically and conceptually tangible, and the power structures that underlie its diffusion.

This paper is primarily concerned with exploring the theoretical underpinnings of research on frames, particularly with regard to their origin and diffusion. Based on this review, an attempt is undertaken to expand the theoretical scope on the origin and diffusion of frames by addressing potential contributions of network theory. This research is employed using the databases ProQuest, EBSCOhost, and ScienceDirect and 75 articles were selected.

The employed concepts on frames are wide-ranging. These are related to cultural, organizational, collective, and subjective levels.

With respect to the origin and diffusion of frames, these concepts result in a variety of approaches. However, a major research stream implies a hierarchical understanding on the origin and diffusion of frames. Cultural and organizational frames, encompassing political, media, and organizational instances, constitute the origin. Another research stream is characterized by a reciprocal approach. Here, too, media and political instances are understood as the primary source of frames.

A network perspective on the origin and diffusion of frames is introduced as a complementary approach. The emphasis lies on the individual and their network. A process-sociological approach to the conceptualization of frames is proposed. This shifts the origin and diffusion of frames to the center of concern. This also implies a consideration of the underlying power relations that shape the scope of a frame.

Promoting Integrated Care through a Global Treatment Budget

As of 2003, it is possible to establish a Global Treatment Budet (GTB) between healthcare providers and health insurers within the German psychiatric care system. The GTB is an innovation that provides funding for psychiatric and psychotherapeutic care through fixed budgets, enabling adaptation of care to regional needs and promoting cross-sectoral treatment. Through this funding, the GTB implies a shift from case-based therapeutic care. Although pilot projects demonstrate improved patient care, the GTB has not diffused significantly. The purpose of this study is to explore the diffusion of RPB and identify facilitating and constraining factors.

Based on Rogers' *paradigm of the adoption of an innovation by an individual within a social system*, interviews were conducted with 19 experts from nine regions involved in the regional implementation of GTB. Subjective perceptions of the GTB and the innovation system were explored.

Regarding the GTB, observability is considered to be favorable and conducive to implementation. In contrast, factors such as trialability and reversibility are considered obstructive. These imply risks in the implementation of the GTB and lead to a hesitant implementation. Regarding the innovation system, multiple individuals and interest groups are affected by the implementation of the GTB. In this sense, the implementation of the GTB is considered to be complex. Consequently, the regional presence and monopolistic position of psychiatric clinics is considered to be conducive. This also applies to regions in which a health insurance company holds a monopolistic position. In addition, the legal framework, which limits the duration of model projects, is an impeding factor. The resolution of the multi-actor structure and an adjustment of the legal framework are conceived as crucial steps to promote the implementation of the GTB.

Appendix 4: Zusammenfassungen auf Deutsch

Barrieren und förderliche Faktoren für die partizipative Entscheidungsfindung bei gebrechlichen und älteren Patienten im perioperativen Umfeld: Ein Scoping Review Protokoll

Dieses Protokoll erörtert das Verfahren einer Übersichtsarbeit (Scoping Review) zur partizipativen Entscheidungsfindung (PEF) für ältere und gebrechliche Patienten in der perioperativen Versorgung und bildet eine vorläufige Untersuchung. Die Übersichtsarbeit zielt darauf ab, einen umfassenden Überblick über originale Studien zu förderlichen Faktoren und Barrieren für PEF zu erhalten. Die Untersuchung zielt dabei auf die subjektiven Wahrnehmungen, Erfahrungen und Verständnisse von Angehörigen medizinischer Berufsgruppen und Patienten ab.

Der erste Zweck besteht darin, die förderlichen Faktoren und Barrieren für PEF zu erfassen und zu verstehen, wie diese von älteren und gebrechlichen Patienten und medizinischen Berufsgruppen wahrgenommen werden. Zweitens sollen die zugrunde liegenden Ansätze und Methoden, die in den identifizierten Studien verwendet werden, untersucht und eingeordnet werden. Weitergehend basiert die Untersuchung auf den Datenbanken MEDLINE, Embase, CINAHL und Web of Science. Die Ergebnisse werden gemäß ‘Preferred Reporting Items for Systematic Reviews and Meta-analyses extension for Scoping Reviews’ berichtet. Zur Organisation der Datenextraktion haben wir eine Taxonomie erstellt, welche folgende Aspekte umfasst: Haltung und Verhalten, Vertrauen und Macht, Wissen und Kommunikation,
Gesundheit und Alter, Organisation der Behandlung und Risiken,

Dies ist die erste Übersichtsarbeit, die sich mit PEF für ältere und gebrechliche Patienten im perioperativen Umfeld befasst. Es wurde eine vorläufige Suche durchgeführt, und nach dem Entfernen aller Duplikate wurden 984 Ergebnisse ermittelt. Wir sind zu dem Schluss gekommen, dass es genügend Literatur gibt, um diese Übersichtsarbeit durchzuführen.

Barrieren und förderliche Faktoren zur Implementierung der partizipativen Entscheidungsfindung aus Sicht von Patienten und Angehörigen medizinischer Berufsgruppen: Ein Scoping Review.

Die partizipative Entscheidungsfindung (PEF) ist ein organisatorischer Ansatz zur Einführung eines gleichberechtigten Dialogs und Entscheidungsfindung zwischen Patienten und Angehörigen medizinischer Berufsgruppen. Dies zielt darauf ab, eine patientenzentrierte Behandlung und eine Anpassung der Versorgung an die individuellen Bedürfnisse der Patienten zu ermöglichen. Ältere, gebrechliche Patienten leiden unter Multimorbidität und einer erhöhten Anfälligkeit für chirurgische Eingriffe und benötigen eine individualisierte Versorgung. Es ist jedoch nur wenig über förderliche Faktoren und Barrieren bekannt, die die Umsetzung von PEF in der perioperativen Versorgung für die spezifischen Bedürfnisse gebrechlicher und älterer Patienten betreffen.

Der erste Zweck dieser Studie liegt in einer Ermittlung förderlicher Faktoren und Barrieren und diese in einer zusammenfassenden Übersicht zu kommunizieren. Dabei beziehen wir uns auf die subjektive Wahrnehmung über förderliche Faktoren und Barrieren von Patienten und Angehörigen medizinischer Berufsgruppen. Darüber hinaus wollen wir konzeptionelle Ansätze und Methoden ermitteln, die bei der Bestimmung und Analyse dieser förderlichen Faktoren und Barrieren eingesetzt werden.

Der Übersichtsarbeit liegen die Datenbanken MEDLINE, Embase, CINAHL und Web of Science zugrunde. Die Ermittlung relevanter Studien wird unter dem Preferred Reporting Items for Systematic Reviews and Meta-analyses extension for Scoping Reviews berichtet. Es wurden 984 Ergebnisse ermittelt und abschließend 13 Studien für die Übersichtsarbeit ausgewählt.

Ein zentrales Ergebnis bezieht sich auf den Wunsch von Patienten weitgehend über ihren Gesundheitszustand und anstehende therapeutische Maßnahmen informiert zu werden. Ferner deuten die Ergebnisse an, dass Patienten einer PEF gegenüber aufgeschlossen sind. Eine PEF wird auch gegenüber einer ausschließlich durch Angehörige medizinscher Berufsgruppen getroffenen Entscheidung bevorzugt. Wesentliche Barrieren beziehen sich auf kommunikative Hindernisse (u.a. medizinische Fachausdrücke) und die Wahrnehmung asymmetrischer Machtverhältnisse zwischen Angehörigen medizinischer Berufsgruppen und Patienten.

Bezüglich der angewandten methodischen Ansätze konnte ermittelt werden, dass primär Umfragen und Interviews durchgeführt wurden. Es wurden keine Beobachtungsstudien durchgeführt, welcher der Erörterung angewandter Praktiken dienen könnten. Darüber hinaus liegt den meisten Artikeln kein theoretischer Ansatz zur Erörterung, Interpretation und Diskussion der Ergebnisse zugrunde.

Insgesamt ermöglichen die Ergebnisse kein eindeutiges Verständnis über die Wahrnehmung von Patienten und Angehörigen medizinischer Berufsgruppen über förderliche Faktoren und Barrieren zur Implementierung von PEF in der perioperativen Versorgung. Nach unserer Auffassung sind weitere umfassende empirische Studien erforderlich. Dies bezieht sich auch auf die Anwendung theoriebasierter Studien, welche sowohl Aufschluss über förderliche Faktoren und Barrieren zur Implementierung von PEF ermöglichen als auch eine externe Nachvollziehbarkeit der Untersuchung, Interpretation und Ergebnisse ermöglicht. Weitergehend erachten wir die Anwendung einer Beobachtungsstudie von PEF-Konsultationen für sinnvoll, um die konkreten Praktiken von Angehörigen medizinischer Berufsgruppen und Patienten nachzuvollziehen.

Die soziale Konstruktion der Arzt-Patienten-Beziehung: Medien-Frames zur partizipativen Entscheidungsfindung in Deutschland.

Die partizipative Entscheidungsfindung (PEF) ist ein Verfahren, welches den Dialog und Austausch zwischen Patienten und Angehörigen medizinischer Berufsgruppen in den Mittelpunkt rückt. Es hat dabei zum Ziel die Patientenautonomie und Individualisierung therapeutischer Maßnahmen zu fördern. Dabei werden sowohl in Europa als auch in den USA Modellprojekte eingeführt und umgesetzt. Dennoch verbleibt die Umsetzung und Einführung in die Regelversorgung fragmentarisch und die praktische Anwendung uneinheitlich.

Diese Studie besteht in der Untersuchung der gesellschaftlichen Diskurse zu PEF, in Deutschland. Der Zweck der Studie besteht in der Erörterung zugrundeliegender Annahmen, Ansichten und Verständnisse über PEF und dem Dialog zwischen Patienten und Angehörigen medizinsicher Berufsgruppen, welche die Implementierung von PEF fördern und verhindern. Theoretisch wird hierfür auf die Frame Theory Bezug genommen. Empirisch wird eine Untersuchung der Medienlandschaft in Deutschland durchgeführt.

Dabei wurden drei förderliche und drei hinderliche Frames für die Implementierung von PEF identifiziert. Ein wesentlicher hinderlicher Frame bezieht sich auf Kompetenzasymmetrien zwischen Patienten und Angehörigen medizinischer Berufsgruppen. Dabei wird medizinische Kompetenz als wesentliches Merkmal zur Befähigung an PEF begriffen. Weitergehend spielt auch die grundsätzliche Ablehnung hinsichtlich neuartiger Verfahren zur Entscheidungsfindung eine Rolle. Dagegen stellt der Glaube an die Relevanz der Ermündigung von Patienten und der Auslebung der Patientenautonomie einen förderlichen Frame zur Implementierung von PEF dar.

Wie Überzeugungen und soziale Einflüsse die Akzeptanz sozialer Innovationen beeinflussen: Eine Frame Analyse zur Organisation partizipativer Entscheidungsfindung.

Die Forschung zur Akzeptanz von Innovationen, hat in den letzten Jahrzehnten zahlreiche Konzepte und Modelle entwickelt, welche individuelle Charakteristiken betreffen. Wenngleich diese primär im Kontext technologischer Innovationen untersucht und entwickelt wurden, finden diese ebenso weitläufig Anwendung bei sozialen Innovationen, welche Veränderungen und Neuheiten sozialer Interaktionen betreffen. Dabei Bedarf die Forschung zu individuellen Charakteristiken, welche die Akzeptanz sozialer Innovationen beeinflussen, weiterhin explorativer Forschung. Die deduktive Reproduktion bestehender Modelle und Charakteristika impliziert dabei das Risiko relevante Aspekte nicht zu untersuchen. Weitergehend mangelt es bestehenden Modellen an soziologischer Konzeptionalisierung des Individuums. Dabei wird das Individuum konzeptionell isoliert und die Einbindung in soziale Einflüsse, welche Normen, Ansichten und das Verhalten des Individuums prägen nicht ausreichend untersucht.

Im Rahmen der vorliegenden Studie wird ein explorativer und soziologischer Ansatz verfolgt, zur Ermittlung individueller Charakteristika, welche die Akzeptanz sozialer Innovationen beeinflussen. Dabei basiert diese Studie auf der Frame Theory, einem soziologischen Konzept zum Verständnis und der Analyse wahrnehmungs- und handlungsleitender Glaubenssysteme, Normen Ansichten und des Verhaltens des Individuums.

Empirisch wird dabei die Akzeptanz der partizipativen Entscheidungsfindung (PEF) für ältere und gebrechliche Patienten in der perioperativen Versorgung untersucht. PEF wird dabei als soziale Innovation begriffen, bei welcher Patienten, Angehörige und Angehörige medizinischer Berufsgruppen gleichberechtigt am Dialog und der Entscheidung zu perioperativen Maßnahmen teilnehmen. Dabei wurden Interviews mit 18 Patienten, vier Angehörigen und fünf Angehörigen medizinischer Berufsgruppen geführt. Weitergehend wurden fünf PEF-Konsultationen in einer nicht-partizipativen Beobachtungsstudie begleitet.

Im Ergebnis wurden sechs Frames identifiziert, welche die Akzeptanz der PEF beeinflussen. Wesentliche Inhalte beziehen sich auf die Wahrnehmung über bestehende Macht- und Kompetenzasymmetrien, der Eigen- und Fremdzuschreibung der Rolle hinsichtlich perioperativer Entscheidungen und das Verständnis des persönlichen Handlungsspielraums. Der wesentliche hinderliche Frame für die Implementierung des PEF implizieren das Verständnis perioperativer Entscheidungen als rein medizinische, wodurch diese erheblich durch Kompetenzasymmetrien bedingt sind. Weitergehend werden strukturelle und finanzielle Faktoren als maßgeblich begriffen, wodurch der wahrgenommene Handlungsspielraum von Patienten und Angehörigen medizinischer Berufsgruppen erheblich eingeschränkt wird.

Förderliche Frames implizieren die Notwendigkeit der Autonomie bei Entscheidungen und die Wirksamkeit der Einbeziehung der persönlichen Lebenssituation, von Wünschen und sozialer Bedürfnisse der Patienten in das Verständnis über perioperative Entscheidungen.

Über die Entstehung und Verbreitung von Frames: Theoretischer Überblick über die Frame-Forschung und künftige Schwerpunkte aus einer Netzwerkperspektive

Die Forschung zu Frames eine weite Landschaft an inkohärenten und abweichenden Konzepten gekennzeichnet. Dies führt zu einer Zuschreibung unterschiedlichster Merkmale und Funktionen, sowie zu abweichenden Konzeptionalisierungen über den Ursprung und die Verbreitung von Frames. Es bestehen zwar Reviews über die Definitionen, Arten, Merkmale und Funktionen von Frames, aber ein Review über die Konzeptualisierungen bezüglich des Ursprungs und der Verbreitung von Frames steht noch aus. Dies ist wiederum vor dem Hintergrund relevant, dass der Geltungsbereich eines Frames jedoch erst dann bestimmt werden, wenn wir verstehen, wo dieser zuerst auftaucht, wo er sprachlich und konzeptionell greifbar wird und welche Machtstrukturen der Verbreitung zugrunde liegen.

In diesem Beitrag geht es in erster Linie darum, die theoretischen Grundlagen der Forschung zu Frames zu untersuchen, insbesondere hinsichtlich der Entstehung und Verbreitung von Frames. Auf der Grundlage dieses Überblicks wird der Versuch unternommen, den theoretischen Rahmen für die Entstehung und Verbreitung von Frames zu erweitern, indem auf potenzielle Beiträge der Netzwerktheorie eingegangen wird. Ein theoretisches Review wurde mit Hilfe der Datenbanken ProQuest, EBSCOhost und ScienceDirect durchgeführt. Insgesamt wurden 2805 Artikel ermittelt, 164 Artikel wurden vollständig überprüft, und 75 Artikel wurden ausgewählt.

Die angewandten Konzepte zu Frames sind weitreichend. Diese sind sowohl auf kultureller, organisatorischer, kollektiver und subjektiver Ebene zu verorten. Hinsichtlich der Entstehung und Verbreitung von Frames resultieren diese Konzepte in unterschiedlichste Verständnisse. Dennoch ist eine wesentliche Strömung festzustellen, welche ein hierarchisches Verständnis des Ursprungs und der Verbreitung von frames impliziert. Dabei bilden kulturelle und organisatorische frames, mit politischen, medialen und organisationalen Instanzen den Ausgangspunkt. Eine weitere Strömung ist durch einen reziproken Ansatz geprägt. Aber auch hier werden mediale und politische Instanzen als hauptsächlicher Ausgangspunkt für frames begriffen.

Ergänzend wird eine Netzwerkperspektive auf die Entstehung und Verbreitung von Frames eingeführt. Dabei stehen das Individuum und dessen Netzwerk im Zentrum. Hierbei wird ein prozesssoziologisches Verständnis der Konzeptionalisierung von Frames vorgeschlagen. Dadurch rücken die Entstehung und Verbreitung von Frames in den Vordergrund. Dies impliziert ebenso den Blick auf zugrundeliegende Machtverhältnisse, welche den Geltungsbereich eines Frames beeinflussen.

Förderung der integrierten Versorgung durch ein regionales Psychiatriebudget

Seit 2003 besteht im deutschen psychiatrischen Versorgungssystem die Möglichkeit ein Regionales Psychiatriebudget (RPB) zwischen Leistungserbringen und Krankenkassen zu vereinbaren. Das RPB wird dabei als Innovation begriffen, durch welche die Finanzierung psychiatrischer und psychotherapeutischer Maßnahmen durch festgelegte Budgets abgesichert und an den regionalen Bedarf angepasst wird und die sektorübergreifende Versorgung fördert. Durch diese Finanzierung impliziert das RPB eine Abkehr der fallbezogenen therapeutischen Versorgung. Wenngleich Modelprojekte eine verbesserte Patientenversorgung nachweisen, hat sich das RPB kaum verbreitet. Das Ziel dieser Studie besteht in der Untersuchung der Diffusion des RPB und der Ermittlung förderlicher und hinderlicher Faktoren.
Basierend auf Rogers‘ *paradigm of the adoption of an innovation by an individual within a social system* wurden Interviews mit 19 Experten aus neun Regionen durchgeführt, welche in die regionale Umsetzung des RPB involviert sind. Dabei wurden subjektive Eindrücke zum RPB und zum Innovationssystem untersucht.
Hinsichtlich des RPB wird die Beobachtbarkeit als gut und als förderlich für die Implementierung begriffen. Dagegen werden Faktoren wie Erprobbarkeit und Reversibilität als hinderlich begriffen. Diese implizieren Risiken in der Implementierung des RPB und führen zu einer zögerlichen Umsetzung. Hinsichtlich des Innovationssystems sind von der Umsetzung des RPB zahlreiche Individuen und Interessensgruppen betroffen. In diesem Sinne wird die Implementierung des RPB als sehr komplex begriffen. Dadurch werden die regionale Präsenz und Monopolstellung psychiatrischer Kliniken als förderlich begriffen. Ebenso betrifft dies Regionen in welcher eine Krankenkasse eine monopolistische Position inne hat. Darüber hinaus stellt der rechtliche Rahmen, wodurch Modelprojekte zeitlich begrenzt sind, einen hinderlichen Faktor dar. Die Auflösung der Multi-Akteurs-Konstellation und eine Anpassung des rechtlichen Rahmens werden als wesentliche Ansätze begriffen, um die Implementierung des RPB zu fördern.

Declaration of Authorship

I certify that this work contains no material which has been accepted for the award of any other degree or diploma in my name, in any university or other tertiary institution and, to the best of my knowledge and belief, contains no material previously published or written by another person, except where due reference has been made in the text.

Berlin, April 11, 2023

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Amyn Vogel