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UNDERSTANDING RESISTANCE TO IS-RELATED CHANGE

Research Paper

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Abstract

When adopting and diffusing new Information Systems (IS) people often show signs of resistance and animosity when they are required to change their behaviour caused by the introduction and implementation of new digital technology in organisational settings. However, resistance may take many forms and may vary from stakeholder to stakeholder. Further, it may be very challenging to know how to handle and cope with different types of resistance. Understanding different types of resistance and how one will meet and experience them is an extremely important part of any digital transformation in order to make the wished-for change happen. In this paper we analyse 6000 Facebook postings that revolve around a new digital healthcare platform with more than 40,000 daily users that all were required to adopt and use the new healthcare system. We infer an overall typology of resistance to change (RtC) that enhances the understanding of the phenomenon and paves the way for new potential coping strategies.

Keywords: Resistance to change; Adoption and diffusion; Digital transformation; Information Systems.

1 Introduction

One thing is a constant in this world: it will change. Put even more concretely: the conditions that we live under will change, sometimes radically, sometimes incrementally, sometimes wanted, sometimes wanted by others. With an abundance of information bombardment caused by the explosion of the social media (SoMe) age, people are exposed to information that seeks to influence them one way or another. We are exposed, and in turn exposes, each other to feelings of change daily. It is almost universally accepted that the consequences and outcomes of change processes may feel unpleasant, and, as a result, may breed resistance. This phenomenon is called “resistance to change” (RtC) and has garnered quite a lot of attention, at least in the organisational change management field (Binci et al. 2012; Dent and Goldberg 1999; Smollan 2011). The central identify of the Information Systems (IS) field has also been proposed to focus on change, though in relation to the change as a consequence of technological artifacts (Benbasat and Zmud 2003). Ironically enough, the focus on change in terms of changing behaviour of users and accepting the technology has primarily been framed as an enabler of the change, while handling of RtC in relation to IS is less well understood. The explanation may be found in the IS research field traditionally focusing on variance factors that enabled the adoption and use of IS as cognitive and very individual phenomena with a strong focus on the attitudes and intentions to use technology (Davis 1985; Kettinger and Lee 1997; Rai et al. 2002). Research on expectations for example, shows that disappointment (Venkatesh and Goyal 2010) may hamper the attitude towards technology whether or not the performance experience was good or bad, whereas others denote the negative impressions as “cognitive dissonance” as a result of technology not being quite as good as initially expected (Rogers 2010). Later research has also included more social influences (Venkatesh et al. 2016).

Although a seemingly “old” topic in IS acceptance and use research, IS RtC overall seems to not have received as much attention compared to the acceptance side. This is important because technologies are changing, moving away from large and traditional technologies (such as enterprise systems) and the borders between organisationally mandated IS and personal, ubiquitous IS are becoming more and more blurry. As consumers expectations change towards looking at technologies as having continuous potential for development, so do the expectations toward traditional technologies. As a result, recent studies on RtC point to different relations in the IS implementation process, with examples of resistances and workaround activities (Ferneley and Sobreperéz 2006), resistance and lack of knowledge regarding the topic and procedure of the specific domain (Haag et al. 2013), or resistance at group/individual level (Bagayogo et al. 2013; Lapointe and Rivard 2005). It is only natural to move away from the “adversarial” aspect of RtC that seeks to eliminate resistance (Dent and Goldberg 1999; Waddell and Sohal 1998), and instead move towards treating resistance in a more dynamic and constructive manner (Binci et al. 2012; Smollan 2011).

The task of seeking out and meeting RtC head on is not easy, not even in “traditional” organisational change management, and only few studies have investigated the role of SoMe in organisational change implementations, and then only how it can support the change process. A lack of understanding the role of SoMe as a medium for RtC in organisational change implementations in general and IS project implementations in particular seems prevailing. Hence, there is a strong need to understand how resistance can manifest itself, especially in a globalised world where almost anyone is given a voice through SoMe. With large-scale IT projects having the potential of impacting millions of users, there is a need to first and foremost understand how the RtC process is voiced before being able to properly harness it. In 2017, Denmark implemented an electronic health record system called the Danish Healthcare Platform (HCP) in two regions of the country. This was an example of a large-scale IT investments in Denmark, one of the largest at the time with investments up to 2.8 billion DKK (close to 400 million Euros) and providing healthcare to 2.5 million citizens, nearly half of the Danish population. The ensuing impact of the nationwide implementation was met with many challenges and controversies; public press releases criticized the project for its delays and exceeding its budget (Rigsrevisionen 2018), as well as problems with the user-friendliness and functionality of the platform causing major changes in the workflows of the healthcare staff (Hertzum et al. 2022). These criticisms spawned a large SoMe group where citizens and users joined with critical accounts of resistance to the change that was caused by the HCP and through the implementation of the HCP. Based on the report from the state auditor (Rigsrevisionen 2018), the postings in the FB group, and the critical accounts of the HCP (Fleron et al. 2019; Røhl and Nielsen 2019), we formulated a research question that we will pursue in this paper: *How and in which form may one encounter resistance to change in IS-related mega-projects such as the Danish HCP?*

The remainder of the paper is structured in the following way. First, we present existing knowledge on RtC in an IS context. Then we present our research design and method on how we collected and handled data. Further, we present the results of our analysis in the shape of dimensions based on empirical accounts held up against existing knowledge. We then present our overall framework (a typology) on RtC that synthesises existing knowledge and the findings of our analysis. Finally, we discuss the implications and further research and present the answer to our research question.

2 What we know about resistance to IS-related change

In the management literature, research on resistance tends to focus on groups. A 70-year old paper by Coch & French Jr (1948) was one of the first papers trying to formulate RtC as a theory of five concepts: “Job difficulty” (how hard the change is to do), “Strain avoidance”, “The goal of standard production” (here meant as achieving a goal), “Management pressure”, and “Group standards” (meaning that the social group that you feel you belong to can set a standard) that together are found to cover the main aspects of change. Within the social sciences Everett M. Rogers (2010) looked at social groups and identified five categories (groups) of adopters called innovators, early adopters, early and late majority,

and laggards. The late majority group can be perceived as resisting change, but in reality, they are waiting for the right opportunity to initiate change, such as when the existing solution at hand breaks down. They not only want to see the demonstrated advantages but are also seeking the right moment to initiate change. Rogers (2010) also found that certain innovations would be adopted and used more often when they contained either a relative advantage to the user, were compatible with other innovations and/or values, projected visible advantages and low complexity, and were easy and unbinding to try out. In a psychology study of 47 professors from Cornell University, Oreg (2003) used a measurement scale based on questions such as (Oreg 2003, Table 3): “I generally consider change to be negative thing,” and “I like to do the same old things rather than try new and different ones” to identify 17 factors that measure the expected level of individual RtC. Oreg found that those with higher resistance scores were less likely to use new technology for teaching (Oreg 2003, p. 688). Not long ago, Shimoni (2017) analysed RtC literature and identified three schools of thinking; (1) The individual’s psychological disposition; (2) The social context of the group, and (3) The social construction between the creator and the acceptors of change. Shimoni (2017) also suggested a fourth approach (based on Bourdieu’s (1989) action theory), the *habitus-oriented* perspective, which sees resistance as a social practice that has been institutionalised in the organisation’s social field and in the habitus of its social agents (Shimoni 2017, p. 267). This approach is in line with Smollan’s (2011) multi-dimension view of resistance, which considers observable behaviours as well as the underlying thoughts and emotions. Smollan (2011) showed that RtC is a multi-dimensional phenomenon with cognitive, affective, and intentional components that can manifest consciously or unconsciously. Management may perceive affective expressions of resistance as irrational, but they may have a rational basis from the perspective of employees experiencing change. Resistance can be active or passive, overt or covert, and visible or invisible, and can stem from a multitude of reasons. Both employees and management may resist changes, and resistance can occur at all levels of the organisation (Smollan 2011)

Studies of health information systems (HIS) in IS research often include the examination of user resistance and RtC as HIS implementations tend to have low success rates due to poor technology acceptance, sparse usage, or complete lack thereof (Sligo et al. 2017). The implementation of large-scale projects, such as health information systems, typically involves acquiring, configuring, and deploying packaged systems products within a sociotechnical context (Sawyer 2001). While the primary motivations for implementing HIS are cost, efficiency, safety, and quality, the evidence of effectiveness is generally inconsistent, and the technology often fails to meet expectations and deliver expected benefits, regardless of whether project success is evaluated based on the project product or process (Baccarini 1999). User resistance can hinder the implementation of new information systems, particularly if the functionality is poor, and if the technology undermines users’ perceived authority or professional autonomy (Sligo et al. 2017), or if they experience inadequate IT knowledge or skills (Haag et al. 2013). Conflicting goals between different organisational levels or misalignment between information technology and managerial teams can also impede successful implementation. (Sligo et al. 2017). Physicians’ resistance is a primary barrier to adopting IS in hospitals, while nurses’ RtC also plays a significant role influenced by the perceived value of the system, colleagues’ opinions, self-efficacy, and organisational support (Cho et al. 2021). However, RtC does not necessarily equate to resistance to the technology itself, so it is important to recognise that resisting change is not necessarily resisting technology, as loss of status, pay, or comfort can also contribute to resistance (Dent and Goldberg 1999, p. 26). Dent & Goldberg claimed that “The mental construct represented by resistance to change shapes the behaviour of people in organisations” (1999, p. 26), hence, when we talk about RtC, we create resistance. They conclude that a good strategy is a targeted strategy taking into account the specifics and contingencies of the change: “If [...] the change will result in the loss of jobs, that issue must be dealt with.” (Dent and Goldberg 1999, p. 40). Lapointe & Rivard (2005) and Bagayogo et al. (2013) criticise the common view of resistance to IT as an obstacle that needs to be removed for the organisation to benefit from the implementation of an IT system. They argue that this oversimplifies the complex nature of resistance and acceptance behaviours, which can “[...] have unexpected, or even not directly observable, impacts.” (Bagayogo et al. 2013, p. 4). Asserting that the impact of use and non-

use depends on the intent of use, and resistance to use an IT system can have positive organisational impact if the system is flawed.

The role of SoMe in the implementation of IS is an important but understudied area (Aslam et al. 2018). Previous research has focused mainly on how SoMe can support the adoption and implementation process, as well as its role in relation to RtC (Naeem 2020). However, little research has examined how RtC manifests itself using SoMe during large-scale IS implementations. Therefore, our study aims to fill this gap by exploring how RtC is encountered on SoMe in the context of a large-scale IS implementation.

3 Research Method

Early in the life-cycle we came in contact with the HCP project and decided to undertake a longitudinal case study (case details below). Our first aim was to follow and understand success – and eventual failure – of such a large project; a “mega-project” as Flyvbjerg (2014) calls it. We carried out two rounds of interviews and published a couple of papers (Fleron et al. 2019; Fleron and Pries-Heje 2021). In our search for empirical evidence about the case we found many critical newspaper articles about HCP and we discovered the previously mentioned Facebook page “HCP – No Thanks”. This FB page is dedicated to the resistance to HCP and its sole purpose is to get rid of the HCP system. That encounter led us to focus on RtC as expressed on SoMe. As the role of SoMe in the implementation of technology has not been widely studied (Naeem 2020), and mainly focused on how SoMe can support organisational change projects (Aslam et al. 2018), we argue that our case of the FB group adds to the understanding of RtC expressed in SoMe. The HCP project can be considered a single case and a unique one at that. As our research question deliberately focuses on how RtC is encountered in IT mega-projects, there really are very few cases to select, and even fewer with such a unique aspect that involves a large percentage of a population in an era where communication and influence(rs) also exist in other channels than the classic media. The uniqueness of a case can provide strong depth and understanding (Yin 1981) and we would argue that the scope would instantly become too broad if more cases were included. Furthermore, a single case can also be used to enable and build new theory (Eisenhardt and Graebner 2007) which we aim at with our research question. In this regard one can characterise our study as contributing to level 1 and 2 theory (Gregor 2006) that aims at analysing with the aim at explaining a phenomenon: in this case the resistance as a consequence of change expressed through SoMe.

3.1 The Healthcare Platform Case

The HCP project was initiated in 2014, when two out of five regions (The Capital region and the Zealand region) decided to develop a common electronic platform for patient records and other health data with a go-live date in 2017. After a bidding process it was decided to buy a system based on Epic; a standard system developed in USA. Figure 1 illustrates the timeline of the HPC case. According to a report from the State Auditor (Rigsrevisionen 2018) the purpose of HCP was to:

- Merge approximately 30 IT-systems into one.
- Increase the quality of patient treatments i.e., by ensuring that the IT-system always follows recommended treatments from the Danish National Health Authority (“Sundhedsstyrelsen”).
- Make work procedures at hospitals more efficient, e.g., by letting doctors carry out data registration directly in the system.

The vision was to bring healthcare practices up to date and into the new digital age. Both regions wanted to expand the adoption of their healthcare services (expressed in an interview we had with the CTO) as part of their business case. However, the first region that implemented the HCP system was severely criticised for failing to assess and realise the benefits from their business case by the State Auditors (Rigsrevisionen 2018). In fact, only three out of eight areas in the initial tender criteria were identified as potential benefits (Hovedstaden 2015), as outlined above by having a more effective and stable IT operation and maintenance, better patient trajectory and treatment, and more efficient processes and workflows.

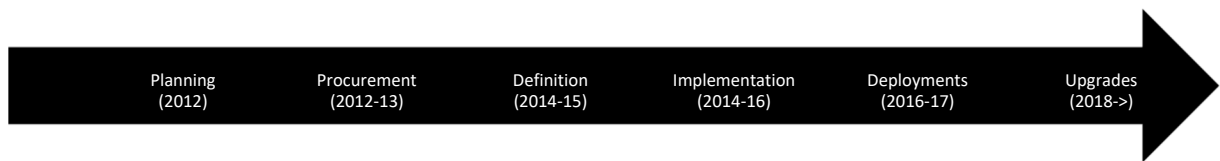


Figure 1: HCP case project timeline

The deployment of the HCP system was a ‘phased implementation’ with each of the five phases designated as a ‘wave’. The first wave would implement the HCP system in two hospitals in the Capital Region and only focus on a limited configuration and a functional system. The second wave implemented HCP in the largest hospital in Denmark and would draw from the experiences of the previous hospitals and only fix the most essential legacy issues. The third wave implemented HCP at the remaining three hospitals in the Capital Region. Wave four and five would draw on experiences from the Capital Region and implement the full HCP system in the psychiatric hospitals of Region Zealand first, then the remaining hospitals of the region (Fleron et al. 2019; Hovedstaden 2015).

Unsurprisingly, many problems and challenges were identified in the first implementation, and, as a result, in 2018 a new update would optimise the usability and stability of the HCP. Next, another large-scale upgrade in 2019 called “LPR 3” would be rolled out. This upgrade changed many of the things that had been problematic since the first implementation. In November 2019, a new IT-governance model was introduced to move from a monolithic update process to a more agile-inspired process from the up-and-coming SAFe approach (Leffingwell 2018; Pries-Heje and Krohn 2017). In early 2020 and into the beginning of 2022 the healthcare system was put under pressure by the Covid-19 pandemic. This account of the events stems from an interview given in 2021 with a key project and programme consultant that has followed the whole HCP project process from early on right up until deployment.

As an IT project implementation it could be viewed as successful (Fleron et al. 2019). However, as a digital transformation it was considered a failure (Bentzon and Rosenberg 2021). As mentioned earlier a Facebook group named “Sundhedsplatformen – Nej tak” (translated “HCP – No thanks”) was created and soon it had hundreds of members and thousands of postings against the HCP. The rationale given for the Facebook (FB) group was:

“We are concerned about the Health Platform's powerful, negative and persistent impact on the healthcare system in Eastern Denmark, with the consequences both for the employees and for the patients. Based on our concern, we have committed ourselves to a movement that with funds available for a citizen democracy seeks to achieve a concrete result: a phasing out of the Health Platform in favour for another electronic patient record system. We want a political decision that the Health Care Platform be replaced as soon as possible by a system that is well-tested and adapted to Danish conditions, preferably as part of a nationwide one system.” (Bestyrelsen 2018, October).

3.2 Gathering the data

From the Facebook-group “HCP – No thanks” we downloaded 6000+ public postings from the period of the beginning of the FB-group’s existence in 2016 and until December 18, 2020. These were all only original posts, so we had not included re-posting or comments to original post. The distribution of the different types of posts was as follows: Links 38%, Status updates 33%, Photos 23%, Videos (native, YouTube, and otherwise combined) 5%. The distribution of the posts during the period of collection was: 1189 posts in 2017, 2559 posts in 2018, 1886 posts in 2019, and 508 posts in 2020. Online data scraping has been a controversial subject in regards of research ethics. To cope with that we drew on Zimmer’s (2018) proposal of the Nissenbaum (2009) heuristic of “contextual integrity” to determine if our approach had potential to break the data ethics and privacy in the following way: The FB-group is denoted as a public group where anyone can view any content that is posted regarding the HCP. Users can view content anonymously but need to register to post content. Users can be anyone but are primarily concerned citizens who are politically active as well as healthcare users who are not afraid of voicing their concerns. Given this contextual integrity analysis one may conclude that producing research on the

phenomenon of the group and its content is acceptable, if the usernames are removed, and profiles are not used directly in the research results. While it may be possible to identify users based on snippets presented, the public availability and the explicit presentation the same will not incur any direct harm to the users.

The purpose of using the FB posts was two-fold. First, we were interested in unfolding how resistance was explicated and responded to. Secondly, we were interested in exploring to which extent these FB accounts could provide an additional insight into RtC responses. We acknowledge that there might be absence of data, both based on the quantitative filtering process, as well as on the qualitative selection process, as absence of data can never be avoided (Kjær et al. 2021). Some responses may be missing, salient and even hard to spot, though we argue that the FB accounts still provide ‘a window’ for us to notice and reveal exact resistance-focused responses. Similarly, the FB group represents an echo chamber (where comments reverberate and are amplified), and therefore cannot be viewed as representative of all the 44,000 users of HCP, nor can we be certain that the posts are even posted by a person with direct access, knowledge or otherwise connection to the HCP system or project. However, the role of the FB post can still be considered as manifestations and accounts of resistance to the HCP and as such provides insights into how RtC may be expressed. This is furthermore an active acknowledgment that the very absence of data is an active co-creator of the findings and should not be disregarded as non-existent.

3.3 Coding the data

The complete dataset of Facebook postings was uploaded to NVivo™, which we used for coding the data. We followed a descriptive coding procedure inspired by constructivist grounded theory coding (Rieger 2019), which involves initial and focused coding. We employed a multi-view perspective (Avison et al. 1998; Lapointe and Rivard 2005; Wood-Harper et al. 1985) as our analytical lens for our case. Specifically, we undertook a discourse analysis of the Facebook postings to identify the rhetoric and action tactics used to promote opposition and resistance to the HCP. During the initial coding stage, we labelled the FB posts with codes, resulting in a list of 23 reoccurring codes and categories that formed four main types of resistance expressions based on the data from the FB posts: (1) ‘War’ stories (actions); (2) ‘Days of our lives’ (accounts); (3) ‘Call to arms’ (proclamations); (4) Endorsements (support) (Fleron and Pries-Heje 2021). Not all types of posts clearly reflect the message intended by the poster and not all posts are expressions of RtC and have not been included in the analysis of the data as they were excluded after the first initial coding stage. In the focused coding stage, we refined the list of reoccurring codes to 48, which revealed core clusters of different aspects in the expression of resistance. We then consolidated these codes into categories, which were divided into a primary category of types of RtC and secondary categories which makes up the characteristics of a resistance expression. Each FB post represents a main theme or type of resistance, with manifestations of resistance expressed as illustrated in Figure 3. We identified the focus object (i.e., competencies) of the resistance, the form in which it is expressed (i.e., speculation), and the specific target in mind (i.e., decision-makers/politicians).

We acknowledge that our study does not aim to develop a formal theory based solely on written posts from one Facebook group. However, through the coding and analysis, we became co-creators of the world made real by the words of the members of this particular FB group. Our analysis resulted in a key assertion (Erickson 1986) that describes the local context of a FB-group study. Our theoretical stance on RtC shows how specific types of RtC are expressed – in our case on SoMe – in terms of the object of the resistance, the form in which it is expressed, the type of expression typically in a temporal format, who the RtC expression is addressed to, and the contingency on which it is founded. This assertion attempts to progress from the particular to the general by inferring *transfer* (Saldaña 2021) and *predicting patterns* (Saldaña 2021) in similar contexts. In the remainder of the paper, we will elaborate on this key assertion.

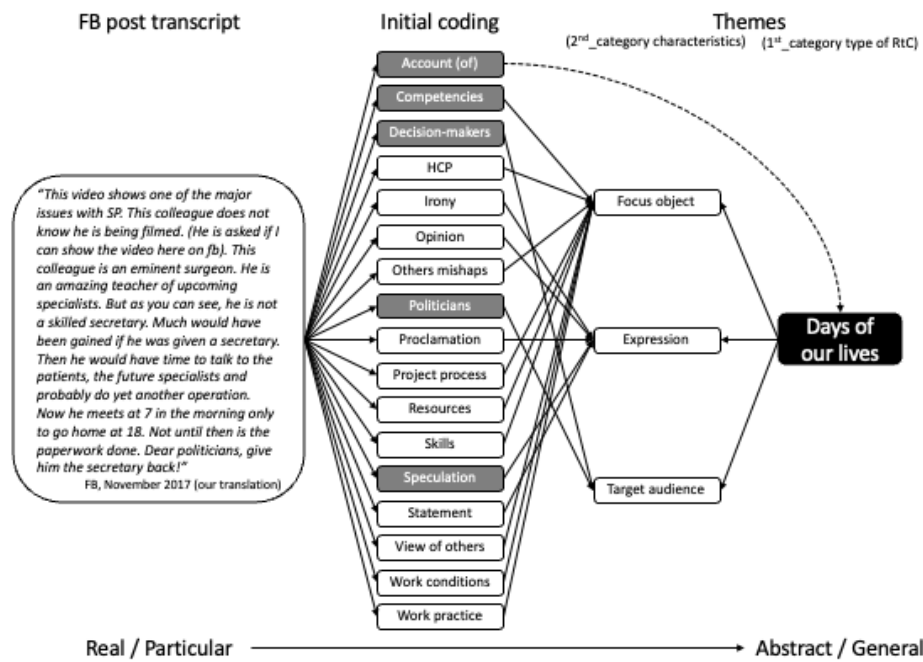


Figure 2: An example of the coding process of a FB-post leading to the 'Days of our lives' type

4 Synthesising the analysis of Resistance to Change

This section accounts for the synthesis of our analysis and how we developed our key assertion based on our theoretical stance and conceptual onset into a new framework for describing and understanding RtC as different forms and types of resistance accounts, the answer to our research question.

We found that the ongoing IS-related change, its processes and the technology, and the perception of how well or poor the change was perceived by the change recipients is moderated by four dimensions as shown in Figure 3.

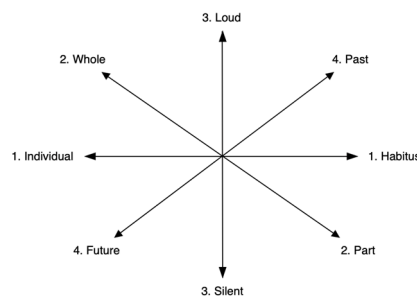


Figure 3: The dimensions of the difference framework of RtC

These dimensions are derived from both the coding of our empirical data and the conceptualisation of the exciting theory on RtC. The first dimension – individual-habitus - derives from the different approaches to studying RtC. It accounts for the different *conditions*, illustrating how RtC can be contingent of various conditions from an individual disposition perspective to a habitual perspective and how difficult it can be to assess which condition is prevalent. The second dimension is based on our empirical data and accounts for different *targets*, showcasing how RtC is linked to specific characteristics of the change spanning from a specific part to the whole of the change situation. The third dimension is different *expressions*, roughly in terms of RtC expressed in an explicit “loud” way or

in an implicit “silent” way. The fourth dimension is different *tenses*, highlighting that RtC has a temporal aspect to it and may occur at all times during the IS project and be expressed in terms of past experiences, present conditions, or future situations.

4.1 Dimension 1: Different conditions of RtC

The dimension of different *conditions* relates theoretically to the various perspectives of RtC that we have accounted for in our theory section. So when we talk about conditions resistance can be understood from the classical perspective of residing inside of the individual, e.g. in accordance to when Shimoni (2017) accounts that RtC is often depicted in terms of cognitive, emotional, and behavioural responses with the emphasis on observable behaviours (Smollan 2011). Cognitive responses can be seen as expressions of the understanding of and the agreement with the change. So, when a practitioner has written a feature titled “*Head physician: I am still wandering the valley of despair*” (Ockelmann 2018) it can be understood as a classic example of an affective resistance response (Smollan 2011); the physician ‘feels despair’. Empirically, this type of post belonged to a ‘days of our lives’ RtC type accounting for the present state of the change process in a temporal dimension (we will elaborate on the temporal dimension below) as the post describes an ongoing process; ‘still wandering’. Further, the post accounts for an affective expression, targeted at the decision-makers, the ones responsible for the current situation as could be interpreted from the poster’s perspective as in ‘help me with my unbearable conditions’. Equally targeting the change process which could be argued to cause the ‘unbearable situation’. Finally, the focus object of the post, which is the more elusive concept to grasp, could be understood as mentioned above from an individual perspective. However, pointing to the multitude of conditions of the RtC, from a social construction viewpoint this could be caused by the mutual interactions between management and project change agents and the end users and recipients of the change. Or it could be understood from a social disposition perspective where social practices and structures would cause the physician to experience despair because his habitus is challenged by the change in the social domain.

When the conditions of RtC are understood as contingent of the norms in the group of individuals exposed to the change, RtC is viewed as an obstacle of the social context which the organisation needs to rid itself of as “*[...] compensation or performance-appraisal systems make people choose between the new vision and their own self-interest.*” (Kotter 1995, p. 67). If we take the same feature as mentioned above by a physician, the RtC expressed could be understood as a matter of a social context issue leading to the situation of despair. One of the changes occurring as a result of the implementation of the HCP was the layoff of all the medical secretaries so the work of updating the electronic patient record fell on the physicians instead. Even though this change applied to current legislation the change in work practice changed the structures of the organisation which from a structure approach would be a matter of putting the employees into new contexts with new responsibilities and relationships (Shimoni 2017).

From a social construction point of view, it is still the situation of despair that seems to be the trigger condition. But contrary to the two previously mentioned approaches the social construction approach views the process of RtC as an interplay between the context and the individual instead of RtC as an either-or situation (Shimoni 2017). In our case with the physician, if we look at the metaphor ‘Valley of Despair’ it indicates the performance drop experienced after an IS implementation due to the changes required for that implementation (Lee and Lee 2004) based off of the Dunning-Kruger effect (Dunning 2011). From a management point of view this indicates the hurdles that the employees need to manage to get through the valley of despair and rejoice on the other side when they reach the plateau of sustainability, meaning having gained knowledge, competencies, and confidence in using the system and then all will once again return to a new status quo. However, in acting so, management, as representing the organisational structures, are in their management style effecting the individual’s dispositional resistance and moderating it through their actions and inactions towards the employees based on their managerial capabilities or lack thereof (Shimoni 2017). On the other hand, from the employees’ point of view, the capabilities of management in the ‘Valley of Despair’ example could be interpreted as managerial incompetence in managing the change process, not involving the employees

sufficiently in the implementation process, or ignorance of users' work practices leading to the employee being stuck in this 'despair' situation, and hence both parties are actors in socially constructing the resistance.

The habitus-oriented approach by Shimoni (2017) provides an understanding of the conditions for the resistance process that takes into account the material conditions of the organisation in producing RtC. Habitus consists of a set of social dispositions not easily observable as they are adopted from the social structures of the social groups that the individual belongs to. This approach gives us a way to look at and understand the process of resistance and the resistance responses. We have to look for elements of common language, organising metaphors, power relations, and control over physical resources as these structures become part of the social agents' habitus, influencing their thoughts and behaviours (Shimoni 2017). So, with the habitus approach we would be looking at power relations and how social agents utilise power struggles through the capital they have. The power struggles take place in the specific field of the organisation according to its own rules directing what the social actors can or cannot do. Therefore, we will have to understand the field to understand the resistance of the social agents as they develop behavioural strategies to continue or change the field's rules and power relations to protect their own resources and keep or improve their position in the social field. This makes resistance a social practice embedded into the organisation and not simply a matter of reacting to a specific change effort (Shimoni 2017). If we look back to our physician's feature about the 'Valley of Despair' not easily understood from the habitus approach, it will require a more profound knowledge about the underlying habitus of the involved social agents, historically developed in the given social field. We would need to scrutinise the power relations and determine the central types of capital: human, symbolic, social, and cultural. With the implementation of HCP there is at least a power struggle related to the physician's skills, and expertise (human capital), the prestige as a physician and maybe even his reputation (symbolic capital) in terms of norms of what and how to conduct the profession of being a physician. But also, how to use capital of other social agents to promote one's own interests, hence, habitus is a matter of control over resources and position in the social structure of the organisation and not simply symbolic or normative rendering habitus both external and internal to the individual (Shimoni 2017).

So, the resistance has the same various traits expressed either silently in implicit ways or loudly and more explicitly. It is the underlying cause of the resistance that we focus on here. Hence, in the end different ways to approach, mitigate, and address the resistance that is contingent on different conditions. This indicates the difficulties of applying these different condition perspectives rendering this difference concept as an iceberg where only the top is visible, and the apparent approach to RtC risks becoming the go-to approach, neglecting the vast underlying iceberg of several other approaches which can lead to an unsuccessful IS project implementation as a result.

4.2 Dimension 2. Different targets of RtC

Our second dimension is about resistance and how it can be targeted differently depending on the characteristics of the change. Empirically, we found that resistance accounts are targeted towards a specific audience and focused on a specific object of the resistance as illustrated in Figure 3. Theoretically, the characteristics of change in terms of the different hierarchical levels at which change is understood in the organisation are between various internal and external stakeholders of the change. Here, Smollan (2011) refers to understanding as meaning derived from words which make sense through the discourses at play in the organisation. Hence, meaning is created on the basis of different and often contrasting views of the ongoing change leading to various views and understandings of RtC. For instance, in a link posted on FB it is stated by the management in Region Zealand that the HCP system will provide greater coherence in the patient trajectory, increased quality and safety in treatments, and new opportunities for patients and staff (FB, December 21, 2017). It is difficult to objectively oppose those outcomes so naturally change initiators would often understand RtC as negative and working against their goal. However, the comments accompanying the above-mentioned linked post were along the lines of "*Who would think that anyone would live up to that?*" and "*Lies and lies. Is that allowed. Can it be reported to the police?*" (FB, December 21, 2017). Clearly the FB posters are sceptical of the merits and feasibility of

the management's statement. Seldomly is RtC acknowledged as a reaction to poor management or as a reaction from middle management on aspects of a change. But in a post commenting on a local newspaper article with the headline "*Optimising the healthcare platform can be tough*" (sn.dk 2017) the poster states (FB, December 28, 2017. Our translations): "*Are you kidding me!!! Did the management know all along how difficult it would be at the same time that they demanded profit realisation almost from day one?!!!*" clearly dissatisfied with regional management the poster continues: "*This management has been the biggest flop to date, which posterity will probably show by the drop in productivity, economic crisis, and lack of valid guarantees in Region H / Sj. Now they also believe that the optimisation can be done alongside the profit realisation!*" showing his disbelief in the management's optimistic estimates and their perceived disregard for the turmoil that the employees underwent during the IS implementation. So, are the poster's utterances targeted at the IS system, the changed work practices, the regional management, or the decision-makers? The challenge with different targets of RtC is that resistance is seldomly understood in terms of whether it addresses a particular change or just any change. This lack of attention to detail can cause severe impact on the mitigation strategies as RtC based on distrust in the local change agent's abilities to manage the change calls for one type of strategy to mitigate whereas RtC based on poor system functionality requires a different type of strategy. This distrust is apparent in the part of the implementation that concerns the education of the clinical staff. A staff member posts about the attitude that she is confronted with during HCP support (FB, September 2018, our translation): "*[...] I had a number of points and especially many according to the difficulties of the medicine module. As always, I was first met with answers like 1) the system is not built for that at all 2) it is not possible to build it differently, you must learn to live with that 3) then it is probably because you do not comply with the rules 4) now I would like us to take on the "yes-hat" 5) well, you should not use HCP for that at all*". The poster manages to get the supporter to join her in the "real world" and see for herself the difficulties faced, and the poster continues: "*[...] she saw things she had never experienced in the "rehearsal environment", and the tonality changed: 1) it cannot fit 2) well, it does not work at all 3) it is completely unacceptable 4) it is dangerous to the patient 5) it has to be changed. Along the way, she also became a little insecure, and had to add "I do not like that we sit and work with a real patient" 😞 "Well, that's what we do every day" I said to her, and that's where the problems are!*". The poster seemed truly annoyed by the alleged patronising and insensible attitude that she encountered. The lack of genuine attention to the 'real world' problems from the HCP support seems to manifest itself in distrust in not only the functionalities of the HCP system but also in the capabilities of the HCP supporter and probably in the entire HCP project. Each of these aspects of RtC requires a different strategic approach, and unfortunately this kind of distinction between RtC is very rare, and the tendency for the managerial narrow-sided view seems to dominate (Smollan, 2011). An expression like: "*This is probably 40 hours of doctor-hours which are burned on non-medical work. [...] The madness has to stop now.*" (FB, October 2018, our translation) could easily be construed as yet another complaint from an employee who just refuses to be onboard with the change. However, it could also be understood as a concern for the quality of work under these conditions, and instead pointing towards management and the decision-makers for underfinancing medical hours. Or it could simply point to poor planning and execution of a further education initiative. All things considered, having a keen eye for the differences in the target for RtC may render an effective mitigation strategy and intervention quite challenging.

4.3 Dimension 3: Different expressions of RtC

The third dimension of resistance that we see emerge from the literature is linked to the way resistance is expressed. Much of the literature on RtC focuses on the immediate observable behaviours of resistance expressions, though resistance seems to be related to cognitive, affective, and intentional components (Smollan 2011). Hence, Smollan (2011) shows that resistance is multi-dimensional in terms of how conscious, or deliberate responses are to changes. In many cases, the cognitive responses were often consciously expressed in the FB posts and regarded the inadequacy of the HCP. However, the affective and behavioural responses manifested themselves as anxiety, denial, and inertia, at times more

subconscious though the emotional affect explicit which played a very significant role. ‘Silent’, in the context of the FB group, more relates to what is written between the lines, what is inferred from the main message in that many things and experiences must have come before them. More subtle behaviours such as reluctant compliance, hesitation, or forgetfulness are signs of passive resistance which at times may even be mistaken for support for change by management. Conversely, middle managers tend to resist in a more silent passive manner instead of loudly voicing their dislike or rejection of the change, they abstain from championing the change or facilitating its implementation (Smollan 2011). Other concepts used to describe the type of expression of RtC as overt and covert resistance which can be either visible or invisible. Covert resistance is concealed behaviour and hence difficult to observe in the data set of FB posts as they would rank as overt resistance. However, visible covert resistance can be seen as suggestions, boxes, wilful destruction, SoMe posts where the sender’s identity is unknown, and the likes (Smollan 2011). Overt resistance is openly expressive behaviour like when a clinical physician writes a comment to an article in a magazine (Medicin 2018) written by the group managing director for Region Zealand and further posts it on FB stating: “*In addition to making me furious [...]. The health platform BREAKS THE IT WORKING ENVIRONMENT ACT - BIG TIME!*” (FB, October 2018, our translation). In full, even though these are separate constructs they do overlap (Bovey and Hede 2001a; Bovey and Hede 2001b). All in all, the different expressions may overlap and not all are easily perceptible to others or even acknowledged by those resisting (Smollan 2011).

4.4 Dimension 4: Different tenses of RtC

The fourth and final dimension of our difference framework concerns the temporal aspect of RtC. While it might be a given that resistance can occur at any time related to an ongoing change, the literature does not mention much about this and focuses more on what resistance is, who resists, why they resist, and which form resistance may take. However, from our data of the FB accounts of resistance, our typologies form a temporal pattern wherein the ‘war stories’ account for past actions taken (or not taken) to mitigate the wrongdoings of the HCP project. In more general terms, the ‘war stories’ account for that which already has or could have happened, past experiences, past actions, past deeds, alternative circumstances, and the likes. Like when a post refers to the situation where engineering students were tasked with helping the staff to navigate and operate the HCP system by claiming that “*Epic would NEVER have been purchased with the above mentioned as known prerequisite.*” (FB, February 2018, our translation). This quote can be understood as a war story in terms of referencing past actions taken by decision-makers, resulting in the poor situation of which the poster has faced. We can argue that the poster sees the current situation as not making sense so to make any sense of the current moment the poster must hypothetically look into the past (as if the system had never been purchased) first and then compare with the existing today situation to assess which would have been better.

The ‘days of our lives’ type on the other hand is representing accounts of current experiences of undergoing the change process. These accounts are portrayals of the daily life during the change process in terms of work conditions as they may change and, hence, the accounts portray the considerations that some of the practitioners in our case expressed about their new work conditions with HCP system; “*This colleague is a brilliant surgeon. He is a fantastic educator of future medical specialists. But as you can see, he is not a very good secretary.*” (FB, November 2017, our translation). These types of accounts illustrate a resistance to the change brought about by the change as well as a concern about the effectiveness and quality of work and others’ (and own) job satisfaction and performance.

The ‘call to arms’ type represents the future. In our case the posts in this category were mainly the ones that incite actions of fellow FB group members and on a large scale to the whole of Denmark as the movement want to engage people on a national level. In more common terms the ‘call to arms’ type is about what could be or what is yet to come; future hopes or fears, future actions, future plans or possibilities. As when in the request to “*Enlist under the banner for our next 2nd wave of flyers. National Hospital; Let us shake the foundation of the electronic patient records...*” (FB, October 2018, our translation). This quote incites action but could also be argued to carry hopes for a different future than the path of the current situation (wanting to shake the foundation).

The ‘endorsement’ type is a series of posts cheering, appreciating and appraising fellow members for their support and engagement. This type of posts also seems to help build and maintain the community. What we saw in our FB posts were just small posts here and there like the “*Damn, how good cool and great. Thanks to 71 lovely physicians. Thanks a million. Thanks 10mill ...*” (FB, December 2017, our translation) post endorsing the 71 physicians for their feature in the newspaper. Or like the celebration of the community itself with posts that indicates gratitude and encouragement for the members of the FB group “*A fucking great New Year to all 3888 and thank you for your fantastic support!*” (FB, December 2017, our translation) and “*4000!!!!!! 4000 thanks! It is just wonderful with so many supporting our cause. In the end it will become a sandstorm that destroys HCP!*” (FB, September 2018, our translation). Or where the posts are even forward looking in anticipation of what might hopefully come one day “*I am sure that your efforts will be remembered. And believe me: When the Healthcare Platform is but a saga, the contribution of this group will weigh heavy in that story as it deserves.*”. Generally, the ‘endorsement’ type seems to be timeless or spanning across the past, present, and future.

Central for the tenses of the RtC change is that the events in which new posts react to are only peripherally connected. The tenses seemingly occur in a parallel temporal dynamic and virtual dimension, where the initial use of a tense always seem to be initiated by or relate to the real world, but from there it is represented in a different physical space.

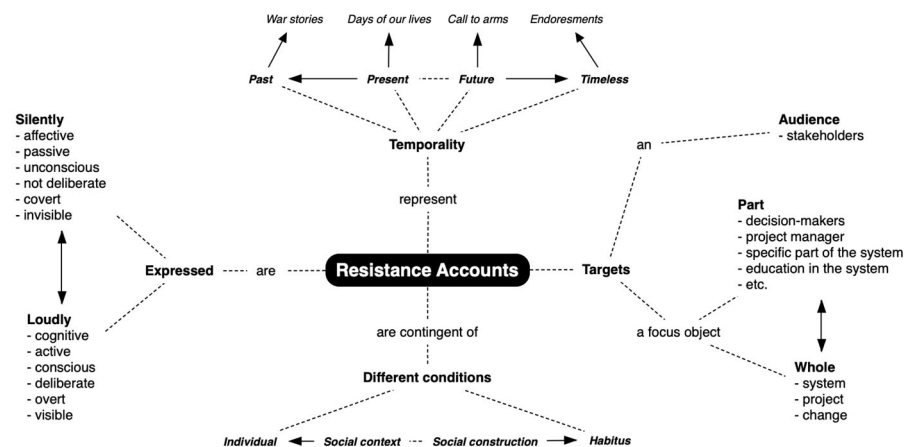


Figure 4: The difference framework of RtC

In summary, RtC is different and relates to conditions, targets, expressions, and time. These are intertwined and interrelated concepts where one may affect the other and vice versa. The different conditions are contingent on the approach to RtC and it can be difficult not to just look at the top of the iceberg. The targets may during various incidents concern the whole change itself, the change agent, or maybe just a part of the new system, and the way resistance is expressed can vary as well, from being loud, visible, and intended to silent, convoluted, and passive all happening on a temporal scale throughout the lifespan of the change process.

5 Result: The difference framework of RtC

We have now accounted for how we developed the four dimensions of RtC that is included in what we will call the “difference framework of RtC”. Figure 4 illustrates how accounts of resistance are to be understood according to our difference framework. To explain the details of the difference framework shown in Figure 4 let us take an example to elaborate on our key assertion: “*For me, it is an indisputable fact that HCP is a sick poorly dysfunctional destructive IT-system.*” (FB, November 2017, our translation). We know that accounts can differ in response but let us deem this one what we have termed ‘loud’ (cognitive, active, conscious, deliberate, and overt and visible). We could argue that the account

is what we have labelled as a ‘days of our life’ type reflecting a current situation (anno 2017) from a temporal perspective. Now, according to our framework we know that our resistance accounts also consist of a focus objective and a target. In order not to clutter the concept, as a focus object is targeted at something (the whole change being the project process of HCP as well as the project product, the IT-system, and the resulting changed work practice) from anywhere between the whole of HCP to maybe just a part of it. In this case it seems to be focused on the HCP system itself as “*a sick poorly dysfunctional destructive IT-system.*”. Looking at the ‘target’ as a category from the coding process, it may as well be more precisely termed ‘stakeholder’ as the target is a specific audience. It may not be obvious who is the stakeholder(s) in this quote, but we assume that the poster is addressing more than one stakeholder. We can view or interpret this post as a way of gaining sympathy and support among fellow users. Or it could be used as a scolding of management for implementing a system of perceived poor quality. Lastly, this could be understood as contingent of multiple conditions. On an individual level, we could argue that it is as an expression of lack of IT skills and competencies, just pointing the finger at a system that one knows nothing about. Or we could understand this as a condition so critically transforming the habitus of the poster that not only a matter of human capital is on the line here. The “*sick poorly dysfunctional destructive*” condition may be addressing the symbolic, social, and cultural habitus as what this system implementation may lead to is change in reputation, power struggles, or cultural norms at work.

We emphasise that we have produced a framework, which by itself cannot be defined as theory, though a framework may be used to ground future studies in to more easily produce theory. In this case our contribution rests on the types of theory that relate to explanation and analysis (Gregor 2006). In this sense our contribution is that of adding an additional area of how resistance accounts can be encountered through SoMe.

Conclusion

The framework developed above is the answer to our research question, *How and in which form may one encounter resistance to change in IS-related mega-projects such as the Danish HCP?*

Our study shows that in the case of a large-scale IS implementation project with multiple stakeholders the change organisation and the project managers risk the use of SoMe platforms turn into an echo chamber for RtC expressions about the project. Thence, the key assertion (Erickson 1986) – our difference framework – of this study is: *Social media platforms serve as a repository for RtC accounts that exhibit a distinct structure composed of four dimensions. These dimensions are contingent of different conditions to understand the outset of the RtC, which is expressed in terms of a focus object, and addresses specific stakeholders. Additionally, they are conveyed in a particular manner and incorporate a temporal aspect that classifies them into specific types of accounts.* The assertion proposes a summative, interpretive description of the local context of our FB-study as put forward in this paper.

We developed the framework with four moderating dimensions, and we called it the “difference framework of RtC”. This framework is a contribution to the academic knowledge base of IS. Furthermore researchers studying IS mega-projects, IS success and implementation, or organisational change can use the difference framework to better understand how RtC in IS-related projects can be encountered specifically on SoMe. Practitioners may find even more value in our difference framework. Project managers that hope to lead their projects to success will become aware of RtC and the many forms and combinations of the four dimensions of differences it can take.

The limitations of our study are linked to the research question we have answered in this paper as it is mainly about understanding and descriptive. Further, we cannot put forward a theory based on the empirical data we have ascertained as our study is solely based on FB-posts which are a limited type of resistance data. Prospectively, there is clearly a need for some more research (a) on how to cope with the four different dimensions of RtC in practice, and (b) based on more empirical data besides the FB-posts.

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