Discourse about Governmental eHealth Information Systems
– Jargon, Non-sense and Quasi-Rationality

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Abstract: Information systems have become an inseparable part of societies. Also governmental eHealth information systems are affecting more and more citizens instead of being only tools for practitioners and governmental officials. We claim that there is a growing need of participatory design and development of governmental information systems and that it should be based on rational discourse described by Habermas. However, the public discussion of governmental systems in many cases seems to be affected with selfish agendas and mere opinions of different interest groups instead of being rational discourse aimed on sustainable consensus. It this paper, we present example from Finland where the discourse about governmental health system together with whole healthcare reform is blurred behind political jargon and oversimplified and undefined arguments made in public discourse. This *quasi-rational discourse* should be guided towards more rational discourse. For this we need a ethical basis for the discussion and its context, such as the Four principles of medical ethics represented in this paper.

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Introduction

Information systems have become an inseparable part of modern society. Also in healthcare information systems have a major role and they have changed the way that healthcare functions. Also in the future, healthcare information systems (HISs) are a major factor changing how modern healthcare is operated. Despite the strong impact that information technology (IT) has on the healthcare, this issue seems to be poorly understood (Nguyen, Bellucci & Nguyen, 2014; Murray et al., 2011; Ammenwerth et al., 2006). Understanding the relationship between IT and healthcare is crucial, due to the potential risks that lie in the use HISs (Meeks et al., 2014; Larsen et al., 2017).

The change related to the technology is not deterministic – it can be unpredictable and have consequences that were not expected. Implementing or changing the information system in use, the whole organisation changes as well (Lyytinen & Hirschheim, 1988; Lyytinen & Newman, 2008; Luna-Reyes et al., 2005 & Mumford, 2006). These changes happen due to human beings interacting with the information systems, each other and the environment that the organisation is located - making the change unpredictable by nature and social system inseparable from the technical system. This unpredictable change means that the consequences are as well unpredictable (Mumford, 2006).

Technological products, such as information systems, influence their social context by either through affordances or through constrains, enabling or discouraging certain behaviour or use (Brey, 2017). Thus, the way that the information system is designed also plays an important role in this unpredictable interaction. One way to make these unpredictable changes more predictable is to involve the users of the information systems in the development process (Mumford, 2006). It has been also argued that all who are affected by the system change should be able to participate in the development to assure that their needs are met (Mumford, 1993; Heimo, Kimppa & Nurminen, 2014).

Governmental eHealth information systems are government issued information systems that are used by a multitude of different user groups such as healthcare professionals and citizens, who more often are just targets of these systems. Thus a governmental eHealth information system is a system that is developed and maintained by the government and the people who are affected by the change are often healthcare professionals and citizens.

The participatory development of a governmental eHealth information system with citizens is a challenging task for many reasons. For example, it is hard to gather representative group of citizens, since these changes often affect all of the population. Since, we should not guess the needs of individuals, all citizens should represent themselves in the discussion related to the governmental eHealth information systems. However, it is not likely that all

have the interest to do so or be capable of participating, but all willing parties should be offered an opportunity to participate in a critical discussion about the governmental eHealth information system. In the era of the Internet, when transferring information is easier than ever, the discussion could be easily had online so that the location of the participant or amount of them do not cause problems (Laaksoharju & Kavathatzopoulos, 2013)

However, so that this discussion would be beneficial some boundaries have to be applied to it. In this paper, we suggest that the discussion should be based on the ethical guidelines and more specifically it should follow the guidelines of Habermasian discourse (see Habermas, 1996).

The ethical guidelines or rules are not used or widely known by developers – or public discourse – of HIS's even though the IS field has developed the ethical codes of their (see e.g. Gotterbarn et al., 2017) and there has been great legislative effort for privacy by EU's General Data Protection Regulation (GDPR, 2016), which offers more mastery over data to the individuals themselves.

Even there is strong and viable academic discourse and community on IT-ethics it seems to been somewhat hidden in the main stream of the IS research field and this seem to have been situation for a while(see Mingers & Walsham, 2010; Bernroider, Pilkington & Cordoba, 2013). As Simon et al. (2017) notes there is a need to increase awareness, interest and action concerning the ISs and ethical dimension of those in academy and practice. They also noted the possibility of multidisciplinary dialogue that could promote greater audience for discourse. It is unfortunate that the public discourse about governmental IS's seems to miss the rationality – clarity, truthfulness, correctness and appropriateness (see Lyytinen & Hirscheim, 1988) – that should be the basis of real and ethical communication.

In the next section rational discourse as a way to the participatory development of governmental information systems is introduced. In addition, the line between rational and quasi-rational discourse is drawn.

In the third section, the case of Finnish eHealth information system is represented and it is analyzed as an example of how seemingly rational discourse can be easily turned to quasi-rational discourse. Finally, we conclude in the fourth section that although the rational discourse is an ideal, it should still be taken as part of governmental (eHealth) information system development.

Rational and Quasi-rational discourse

There is a trend of developing citizens-centred governmental information systems (ISs). Since, many of these ISs affect citizens directly, it has been suggested that citizens should be able to participate in the development. This means, that citizens should be acknowledged

and preferably also be part of development together with professional developers and researchers. (See Heimo, Koskinen & Kimppa, 2013; Rantanen & Heimo, 2014; Baskerville & Myers, 2015)

Finland together with other Nordic countries are devoted to support and commit to transparency of governmental actions and more widely transparency is now internationally regarded as essential to democracy (Bertot, Jaeger & Grimes, 2010; Virtanen, 2016). To highlight the importance of transparency many democracies have joined Open Government Partnership, which requires the participants to commit to making their governments more open, accountable, and responsive to citizens (Opengovpartnership.org, 2018).

For instance, in Finland current strategy is to aim at understandable communication that supports the possibility to citizen participation (Valtiovarainministeriö, 2017).

However, it seems that public communication about big changes in governmental processes and public information system development projects is at the best case confusing - even hard to understand by professionals - and at the worst case actually non-existing (Valtiontalouden tarkastusvirasto, 2017). Thus, it seems that there is no real transparency or possibility of rational discourse

Rational discourse in society should be a starting point and the target in aforementioned situations. Even though rational discourse may never be reached fully, we should aim at rational and open discourse. Now we are situation where we instead of rational discourse we have quasi-rational discourse – that we claim is more harmful than fairly admitting that we lack of rationality in our current political communication.

By rational discourse we are referring the public communication and structure of participation that Habermas (1996) is describing. Habermas was describing the legislative discourse (usually big changes in governmental processes are legislative ones) and we claim that those demands that are set for legislative discourse should also be followed in big governmental IS projects as they can have huge impact on society (see Lyytinen & Hirschheim, 1988).

There are several preconditions for rational discourse by (Habermas, 1996). First, all members and parties in society should have possibility to participate in discourse. This means that there must be a way to access the discussion and thus the transparency is actually mandatory. Secondly, all subjects of legislation – here also the stakeholders of processes and governmental ISs – must have possibility to see the implications of legislation and changes before they can have the agreement on it. Thirdly, the consensus is needed before the legislation/changes can be made. Fourthly, the strategic games are not allowed in rational discourse as those change the direct of discourse to be trade of choices where actors decide to accept some goals they do not agree, if they gain some other benefit. This changes

discourse from being based on "the best and most justified arguments aiming at mutual understanding" towards struggle between negotiation powers – which is not acceptable in Habermasian rational discourse. In reality, those precondition are impossible to reach totally and it has faced some criticism as Ross and Chiassson (2011) noted. However, they also underlined that Habermas' ideas are not naive. Instead, those are a constant guide towards critical action and those casts new light for participation for all. Thus, the idea of Habemassian rational discourse and requirements of it can – should – be used as indicator how rational is our discourse in society.

However, it seems that public communication about governmental information systems and the development projects of those do not fulfil the demands of rational discourse as we show in the next section. Instead communication seems to be quasi-rational that do not even try to achieve the clarity, truthfulness, correctness or appropriateness that are preconditions for rational discourse (see Lyytinen & Hirschheim 1988). By quasi-rational discourse, we refer to a type discourse that is disguised as rational discourse, but actually does not meet the preconditions of rational discourse presented by (Habermas, 1996). We claim that this kind of discourse is harmful, since it does not allow participation and prevents achievement of governmental ISs that are accepted by citizens and thus, also prevents citizens from gaining a justified position in the society.

To summarise, we define quasi-rational discourse to be as following;

"a type of communication where one or more participants aim to convince the others with claims that seem to be justified arguments but are actually just covered ways to pull through the interest of specific individual(s) or group(s) instead of aiming the real, informed consensus between the participants of the discourse."

Case Finland: nationwide eHealth system and Health, social and regional government reform

In this section, we observe the discussion about governmental information systems in Finland especially in the field of eHealth. Finland can be seen as one of the pioneers of digitalized health care since Finnish public health care has been using solely electronic patient information systems (ePIS) since 2012 (Winblad, Reponen & Hämäläinen, 2012), adopted a nationwide patient information repository named Kanta in 2014-2016 (Kanta, 2018), and is currently attempting to digitalize healthcare more services and to connect governmental information systems with a national service path (Sosiaali- ja terveysministeriö & Valtiovarainministeriö, 2017).

Digitalization of healthcare is a part of larger reform that aims to make social services and healthcare more efficient and influential. This reform is justified with aging of the population, need for more personalized services, inequality of current services, inefficiency of the current system and economic situation Finland. The reform will rearrange responsibilities, services and processes of both social services and healthcare and is the biggest reform in the history of Finland if it is approved in the summer 2018.(Saltman & Teperi, 2016; Sosiaali- ja terveysministeriö & Valtiovarainministeriö, 2017; Valtiovarainministeriö, 2018) It must be noted that although the reform might not be conducted, still the digitalisation of the healthcare is one of the main projects of the Finnish government and it will be still be conducted (Valtiovarainministeriö, 2018).

Development of information systems has been a way to develop more efficient healthcare for decades, but so far, the development has concentrated on healthcare professionals and their work. This time, development affects citizens directly, since they are the ones that are assumed to use electronic information systems such as personal health records (PHRs) to collect information about their health, share it to get healthcare services and use these systems as their primary contact with healthcare (Sosiaali- ja terveysministeriö, 2014; Lähteenmäki, 2014 ; Sosiaali- ja terveysministeriö & Valtiovarainministeriö, 2017)

The digitalisation of healthcare is a rather large project that will affect citizens directly by changing the structure and nature of healthcare. From the perspective of information systems, it is a challenging and technologically deterministic endeavour, since it has been represented as a technical fix to a large problem without actual arguments of how the change will actually be implemented or what are the risks.

Finnish healthcare practitioners have started to demand better systems due the bad usability of the electronical patient information systems and argue for more participatory methods to ensure that the systems fit their purpose as their tools (Kaipio, 2017). Since, as this time the change will affect also citizens it would be only reasonable to hear both the practitioners and citizens. Although, thr digitalization of healthcare has repeatedly been represented as a customer or a citizens centred development (Sosiaali- ja terveysministeriö, 2014; 2016), it is still based on assumed needs. Moving towards the participatory approach would be beneficial, since it could help to avoid the most dangerous negative consequences that are not currently acknowledged and guide the development towards the actual needs of the people. Thus, healthcare practitioners and citizens should be able to participate in the rational discourse about the digitalization of healthcare as future users of the system.

Like mentioned before, traditional participating in the development of the governmental eHealth information systems is not possible due to practical issues, but the participating in the discussion could be arranged as online discussion. It should be possible to all the willing citizens to participate in this discussion and it should ideally be a rational discourse. Finnish

government has the means to facilitate such discussion: government has existing eDemocracy services (see Oikeusministeriö, 2016; Otakantaa.fi, 2018) to use as a platform and information could be easily distributed through some of various internet sites that government is updating on the regular basis. However, the problem is that these possibilities are not used to pursuing a rational discourse.

Government has faced a critique about the reform in the media. Despite criticism presented by different professional the renewal is pushed forward by politics without attempts to engage in rational discourse. The politician has been giving the quasi-rational arguments where argumentation is usually based on the following idea: because of the economic pressure of the future we should reform our healthcare. Problem is that there is no consensus about what is going to be done and no evidences that the reform will bring any changes since governmental officials are mainly sharing jargon and non-sense to citizens. (see Yleisradio, 2015, 2016; Helsingin Sanomat, 2017a, 2017b, 2017c)

Rantanen (2017) studied the discussion about the digitalisation of healthcare and concluded that there are several problems that make the rational discussion impossible. First, the terminology used is not understandable to laymen, since the explanations of terms are not explicit and there is no mutual understanding or consensus about definitions (*jargon*). Second, the government official use terms that are made up without explaining them in any way (*non-sense*). For instance, term "infostruktuuri" (eng. infosructure) is used in several reports and documents, but is not explained. Third, documents that are about the digitalisation are published by several institutions and they are sometimes in contradiction to each other. This fragmented communication makes it even harder to form an understanding about the topic that is already aggravated by jargon and non-sense. Thus, the discussion is doomed to be quasi-rational and it prevents the participation of the citizens.

Shifting this kind of quasi-rational discourse towards rational discourse requires unambiguous and informative argumentation, which are still missing. Besides the requirements described earlier the shift also requires a shared view about values that are the core of healthcare. Currently the discourse is focused on assumed savings and actual values are rarely discussed. There are four principles of medical ethics that can be seen the commonly accepted (but not only ones) basis of medical ethics: respect for autonomy, beneficence, non-maleficence, and justice (Gillon, 1994; Beauchamp & Childress 2001; Beauchamp, 2003). These principles could be considered as a simplification of the codes of ethics for healthcare but also for eHealth developers – as a necessary but not as a sufficient condition (Koskinen, Heimo & Kimppa, 2012).

Discourse about digitalisation and reform of healthcare should concentrate on the core values of healthcare and the citizens, not the values of the government. If we think situation,

where reform of the healthcare system – including eHealth systems – in Finland is argumented by politicians with a statements like "we need it for saving money to cope with economical pressure" we see the problem. It is that those statements do not have any evidence but there has been severe criticism towards such arguments from professionals (Kangas & Kalliomaa-Puha, 2018 & Yleisradio, 2018) and thus it seems that the beneficence of the new system cannot be used as justification. Instead the possibility to have problems and rising cost indicates that we should not proceed with reform by current knowledge – based on the principle of non-maleficence. Likewise, it seems that if our political decisions are not based on rational discourse but a quasi-rational one, those decisions cannot be seen as just ones. It is hard to say anything about the autonomy of patient at this point as we do not have real comprehension what is the outcome of this reform. Thus, based on four principles we should evaluate more thoroughly the possible consequences of reform and digitalisation of the healthcare instead of pulling it through without real picture what it actually does.

Conlusions

Nowadays society lacks the rational discourse in a public level. Even professionals are bypassed because of the strategy games of political systems where good arguments are not truly respected. We need new indicators for our public communication about governmental IS development public the precondition of rational discourse should be used for that. In a general level we should demand clarity, truthfulness, correctness and appropriateness for public arguments. In addition to those, we should always evaluate the values and ethicality of discourse based on context we are discussing

Likewise we should also use indicators for those systems developed and for eHealth we could use the Four Principles of medical ethics as a starting point for rational discourse. Although rational discourse is an ideal that may never be met, it does not meant that it should not be aimed for. Principles of Habermas and Four principles of medical ethics serve as good template to move from quasi-rational discourse towards more rational discourse in eHealth development. However, we see that there is need for more research to find way to put these to practise. Nevertheless, this paper is a step away from harmful quasi-rational discourse towards more rational one – even it still is a tiny, tiny step for us and mankind.

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