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# ***More rational discourse for designing information systems***

*Possibilities and challenges*

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## **Abstract**

This article analyses the possibilities of using Habermasian rational discourse for designing information systems. We start by conceptualizing, how Habermasian rational discourse and participatory action research could be used for designing information systems. Then we question our initial concept based on our experiences and reflections from ongoing research project which aims to design new governmental information systems for parents of disabled children.

**Keywords:** Habermas, rational discourse, participatory action research, governmental information systems, design, parents, disabled children, children with disabilities, autism spectrum

## **Introduction**

Certain research streams in the field of information systems, such as social informatics, work informatics and participatory design, have been interested in studying and empowering the users of information systems for few decades. However, there is still a need to strengthen the citizens' perspective in order to develop governmental information systems which correspond to demands of the citizens (Axelsson, Melin, & Lindgren, 2010). To achieve this goal, we have started a research project to incorporate citizens' needs and opinions in designing governmental information systems. Our project also aims to engage governmental officials in designing governmental information systems, because their work conditions change when new governmental information systems are implemented (Bratteteig & Verne, 2012). Our project is grounded on Habermas' (1992)

idea of rational discourse and it aims to include representatives of both of these stakeholder groups in the design process.

In this article, we attempt to employ the idea of Habermasian rational discourse in real life scenario of evaluating and designing governmental information systems from the viewpoint of parents with disabled children. We have chosen this research context, because parents of disabled children represent one group of citizens who need to use and to apply different type of public services.

Our example expands the original purpose of rational discourse from making new laws or creating new norms to designing information systems. We see this expansion as appropriate, because governmental information systems and their development are ways of using governmental power. Hence, this context can be justifiably seen as public sphere where rational discourse is valid. Thus, the same premise that every target of legislation must be allowed to participate in discourse holds here even when the context is slightly different.

The example presented in this article is only a part of our ongoing research project. The officials, who offer services for disabled children and to their parents, represent professionals who need to work with governmental information systems. To create rational discourse between representatives of this groups and the parents of disabled children, we have planned our research project according to the guidelines of critical participatory action research given by Kemmis, McTaggart and Nixon (2014). We find critical participatory action research as suitable research approach for our purposes, because it is founded on Habermas' concepts of the communicative action and the public sphere.

While our proposition is grounded on the principles of rational discourse, we acknowledge that achieving rational discourse, fully, in reality is probably impossible. Thus, the aim of our research project is to increase the rationality of discourse which takes place while new governmental information systems are designed. One of the main principles of our project is that all those stakeholders, who would be directly affected by the new information system, should have their representation in the discourse – likewise Habermas required that all subjects of legislation must be allowed to participate in rational discourse. However, this requirement proposes a challenge to rationality of the discourse, because the participants would not be equals. In addition, they might possess different motives to engage in the discourse. Hence, our research question is, how people, who are not equal and do not have similar motives, can have rational discourse about designing governmental information system.

We approach this question by analysing the main characteristics of Habermasian rational discourse and critical participatory action research from the viewpoint of designing new information system. Then we present our proposition for designing new governmental information systems. We continue by reflecting the premises of our research project in relation to our experiences from conducting the first phase of our project and analyzing its results.

## **The characteristics of rational discourse**

Habermas (1992) presents the idea of rational discourse where all subjects of legislation are given the opportunity to take part in rational discourse. The Habermasian rational discourse is based on arguments which are evaluated as how convincing and plausible those are. Those arguments can vary depending on the issue at hand and they can be based on logic, ethics, or other justified basis. However, an argument does not necessarily require empirical evidence if the argument is strong and justified.

What is notable is that no strategic games are allowed in rational discourse. A strategic game is a way of influencing others where some participant is trying to bargain for some outcome by using something other than a better argument, and this is not allowed. Lyytinen and Hirschheim (1988) already noted that the Habermas's rational discourse is promising approach to gaining insight understanding social aspects of IS. Ross and Chiasson (2011) also noted that Habermas' work has been playing important role in IS development and has great potential to develop it further. Especially important is the idea that norms should be formed through discourse in which every stakeholder is given a possibility to be involved. Such participatory approach to norm formation is needed, because otherwise norms would fail to be legitimate in the eyes of those who should follow them.

The rational discourse is way to gain common ground where agreement or shared background cannot be seen as granted. Discourse has four criteria to be described as rational one. Those are clarity, truthfulness, correctness and appropriateness. In addition for those criteria, there certain ground rules. First, actor have possibility to participate discourse and express their arguments. Secondly, all actors need to accept the better and more rational argument over lesser one (Habermas, 1992). These four criteria are used as evaluator of rationality of critical participatory actions research we are turning in next chapter.

## **Critical participatory action research**

Kemmis et al. (2014) explain that critical participatory action research is not solely a research methodology but it is also a way to bring people together to reflect their actions together. Through reflection people may start understanding their practices and the conditions under which they practice better. This may lead to questioning the legitimacy of current practices and the innovation of new practices. To facilitate the discussion which is necessary for reflecting current practices, critical participatory action research strives to create the public sphere where participants are be able to openly share their ideas and to find their shared concern. Shared concern should be something that all participants are ready to investigate and act on.

The public sphere is originally conceptualized by Habermas and it is closely related to the Habermas' definition of rational discourse. In the context of critical participatory action

research, Kemmis et al. (2014) define that public sphere is constituted for communicative action as well as for public discourse. Public spheres are also voluntary, self-constituted, and autonomous. Kemmis et al. (2014) define communicative action as “that kind of action we take when we engage one another in genuine, open dialogue or (better) conversation”(Kemmis et al., 2014). To achieve that the discourse is not turning on strategic games that Habermas was against we need some ‘house rules’ for discussion. We see that the four criteria - clarity, truthfulness, correctness and appropriateness - from Lyytinen and Hirschheim (1988) are good and simple enough to be used in analysis of discussions and empirical material, and thus can be used as skeleton of participatory reflection.

From a more concrete perspective, critical participatory action research can be seen to be construed from cycles which follow each other by creating a spiral. First cycle has following steps: planning, acting and observing, and reflecting. This will lead to new cycle including the same steps, except that planning is now referred as re-planning (Kemmis & McTaggart, 2005). Critical participatory action research, comparably to other participatory research approaches, uses mainly same research methods, such as focus groups, other qualitative research methodologies, but these methods are used in collaboration with the participants of the research (Cornwall & Jewkes, 1995). Between all of those cycles the overall rationality should be checked against aforementioned criteria to check and ensure/improve the level of rationality in later research cycles

## **Research design**

To study, how rational discourse could be used in designing information systems, we have planned a critical participatory action research project. In this project we will facilitate the development of the public sphere between the citizens and the officials. With citizens we refer to parents of disabled children and with officials we refer to those workers of public organizations who offer services to disabled children and to their parents.

To realize this project, we have identified a local organization which represents disabled children and their parents in Finland. With the help of this organization, we have been able to present our research topic and our project plan to parents of disabled children. In the discussion following our presentation, parents expressed their interest to join our project.

Our project has three main phases which construe the acting part of the first cycle of our critical participatory action research project. After enacting each phase we will analyse our findings and reflect our experiences before we decide how to pursue. The first phase of our project is an event, where parents of disabled children can talk with each other about the governmental information systems they have used. The main purpose of this event is to empower the parents and to prepare them for openly expressing their experiences and opinions for the official.

The second phase of our project is an event, where we will invite officials, who work and represent local public organizations. In this event, officials are encouraged to discuss about those ideas and opinions, which were mentioned by parents in the first event. Officials will also be given time to discuss about important topics for themselves, as long as they are related to governmental information systems and to services for families with disabled children. One purpose of this event is to help officials to be responsive for the comments that the parents might say to them in our third phase. Another purpose is to collect information about the need and demands of the officials for new governmental information systems.

The third is event is meant for both the parents and the officials. The aim of the event is to create the public sphere where parents and officials can engage to communicative action with each other. To facilitate the dialog between these groups, few discussion topics are chosen from those issues that both groups did discuss during previous events. To ensure that the discussion is open and respectful, the event will be facilitated by the first author of this article. The facilitator will redirect the discussion toward communicative action if participants are not listening nor respecting each other. In addition, facilitator reminds the participants that strategic action is not allowed in this situation if someone is trying to pursue their personal goals during the discussion.

## **Description of the first phase**

The first phase of this project took place in October 2016. We organised an event where parents of autistic children, who represented the parents of disabled children, could come to discuss about their experiences of public services, governmental information systems and their ideas for new digital services. To encourage the parents to join the event, we organised simultaneous event for their children in collaboration with students of special education.

Five parents, four mothers and one father, joined the event which aimed to create public sphere among the participants. From methodological viewpoint the event resembled focus groups where participants were encouraged to discuss with each other but the discussion was facilitated by the first author of this article. Although, focus groups are not often used as primary data collection method in the field of IS, they are suitable for exploring the socio-technical nature of IS and to emancipate the research participants (Stahl, Tremblay, & LeRouge, 2011).

In the beginning of the discussion the facilitator introduced herself to the participants and gave them few instructions. She told the participants that their experiences were valued during the discussion and everybody should respect each other's opinions. After starting the introduction, she asked everybody to tell something about themselves and about their family. Then she continued by asking about the services which were used in each family and which were related to the autistic child in the family. To both of these questions, each participant answered independently, except one mother and one father, who were married to each other, and talked together about their family. However, the next question about

services, which each participant was planning to apply, led the participants to discuss with each other instead of answering to the questions of the facilitator. From this question forward, the event resembled more discussion and less interview session.

## **Reflecting the experiences from the first phase**

While analysing the event which was organised during the first phase of our project, it became clear that this event as a whole could not be described as rational discourse. This was somewhat surprising conclusion to us, because we believed that rational discourse could have been possible, because there was no formal power relations between the participants. However, it is possible that the participants assimilated each other to different groups because some of them were friends to each other and two participants were married to each other. Another reason could have been, that two participants are activists in the local NGO which represents autistic people and their families, where as one participant did not have any affiliation to this NGO.

Although, the relationships between the participants and their affiliation to the local NGO probably affected the discussion to some extent, we assume that they are not sole reasons why rational discourse was not possible throughout the event. Our initial analysis reveal several challenges in analysing the discussion between several participants from the viewpoint of rational discourse and also some reasons, why participant were not able to continue rational discourse throughout the event.

The first reason relates to our understanding of rational discourse. Rational discourse is something where all the arguments should be rational or aim to be rational. During the event, participant often discussed without making rational arguments, although some of these comments cannot be classified as irrational neither. The large amount of such argument is probably related to the way the participants were prepared for the discussion. In the beginning of the discussion, the facilitator encouraged the participant to share their own opinions and experiences and to respect each other's opinions and experiences. As a result, many comments and arguments cannot be analysed through the criteria for rational argument which includes clarity, truthfulness, correctness and appropriateness of the argument.

One example is the situations where participant refers to their feelings which they had experiences in certain situation. Although, these feelings might have seem irrational to the other participants they did not question them. We have also decided to interpret these expression as subjective interpretations of the individual, and we do not classify them either as rational or irrational, except if the person expressing the feeling is obviously lying. The criteria for rational discourse was also difficult to employ in analyses of experiences which participants shared with each other. However, in those rare occasions where one participant questioned the experience of the other participants, it was sometimes possible to analyse the truthfulness of the experience in question.

Time to time participants referred to their feelings which they had experiences in certain situations. Although, these feelings might have seem irrational to the participants of the event or to the person analysing the discussion, they should be respected as subjective interpretations of the individual. As such, the expression of these feelings cannot be analysed through the criteria for rational argument which includes clarity, truthfulness, correctness and appropriateness, as long as the person saying them is not obviously lying.

On the other hand, the participants sometimes said things which were not clear, truthful, correct or appropriate. We classify these claims as irrational arguments. Irrational arguments did appear during the discussion and in these situation the rational discourse ceased. The reasons behind using such arguments need more profound analyses of the research data and we might not be able to explain it completely. However, it seems to us that sometimes irrational arguments were used to win an argument with another participant. In other situations, person saying the irrational argument might have been protecting their self-image by using this style of argumentation. Despite the reasons, behind these action, we have classified them as strategic actions.

## **Discussion**

In this article, we have conceptualized, how rational discourse could be a part of designing new governmental information systems. We founded our concept on the work of Habermas and methodological literature on critical participatory action research. From these bases, we propose a model which could be employed in designing governmental information systems in collaboration between different stakeholders. Essential part of this model is the focus groups among representatives of each stakeholder group. These focus groups are used for three purposes: gather user requirements from one particular group of stakeholders, empower the participants, and to encourage the participants to listen the opinions of the other stakeholder groups. After the representatives of each stakeholder group is given a possibility to discuss with their peers, they are invited to event which is meant for representatives of different stakeholder groups.

Critical issue for our project is to enhance rationality of the discourse. Even in the first focus group, where all the participants were peers, we noticed the ‘hardness’ to achieve ideal rational discourse that Habermas was describing. The simple and usable tool is to use four criteria from Lyytinen and Hirschaim<sup>6</sup> to evaluate discussions and redirect it if necessary. If this ad-hoc readjustment is not possible those criteria still can be used for next time and ensure the more rational discourse in the next phase or in whole new research cycle. Likewise, these criteria are good way to analyze the gained written material in research project and encourage researcher to seek rationality in research process. Instead of accepting any view by default, because it was expressed by parents, governmental officials, politicians or software designers, rationality demands that all real claims must be well argued or they should be neglected as examples of strategical games. Understood from this perspective, rationality gives more objective position for researcher when analysing research data.

While creating dialogue by emphasizing rational discourse between parents of disabled children and governmental officials is in the focus of our research project, we acknowledge that there are other stakeholder groups who should also be included in designing governmental information systems. Two important groups are software designers and politicians. Thus, it would be important to expand our project to include them. However, there is one more stakeholder group which should be included in the dialogue. This group is disabled children, who are not necessarily using the governmental information systems by themselves, but whose information will be shared through these systems. We find it important to include representatives of this group in designing governmental information systems, although, we are not sure which would be the best way to engage them. For this reason, there is a need to study from theoretical and empirical viewpoint how disabled children could be involved in designing of governmental information systems.

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