A VIRTUAL MEDIATED MAN, A NEW PERCEPTION OF DEMOCRACY?

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ABSTRACT

The Internet has been extensively addressed as having a large potential to promote democratic processes. Nonetheless, in this paper we argue that the contemporary studies about the relation between the Internet and democracy are not comprehensive. In the first part of this paper, we argue that the contemporary themes on the relation between the Internet and democracy primarily emphasize the direct functionalities of the Internet. The difficulty with this focus on functionality is that it does not include how the Internet mediates the individual normative perception of democratic values. In the second part we provide a theoretical understanding of this mediation. We discuss how the Internet amplifies our perception of control and present two case-examples how the mediation of control may influence democratic values. We conclude with four questions how designers could identify this mediation of democratic values in their design of e-democracy and e-government.

INTRODUCTION

Designers of Information Technology (IT) generally do not design specifically to promote democratic processes in society. However, even without the deliberate intention of the designers, IT definitely has a large influence on democracy. Designers of IT cannot help but shape our democratic actions and decisions in refined ways. Consequently, the impact of IT, and especially the Internet, on democracy has been discussed extensively. Many scholars view the Internet a boon to democracy. According to one popular theme, the Internet gives people power of information and communication that has hitherto been the preserve of the wealthy. Recently, the significance of the Internet on democracy and freedom for people has seen some clear examples. Frequently, the Arab spring is mentioned as an example

how social media and digital technologies in general can serve collective communication, coordination, participation and activism (Faris 2015, Khondker 2015). The extensive attention for the influence of the Internet on democracy is easily justified. Democracy is not founded by ideals, envisions and imagination alone. In the past and today, technological artifacts have made enormous contributions to democratic processes. The influences of technology on democratic processes are countless, but there are fundamental illustrations. One example is the development of printing in the 15th century and the vast introduction of newspapers in the 17th century. The triumph of democratic and parliamentary systems over monarchies in the 18th and 19th century was partially initiated because citizens had more relevant information (Hiebert 2005). Today, the Internet may be seen in the same scope as these examples as it may have an equal impact.

Because of this reason, the influence of the Internet on democracy is widely studied. Nonetheless, in this paper, we argue that the contemporary themes are not yet comprehensive in the analysis of the relation between the Internet and democracy. As significant and essential as they are, we will pose that the contemporary themes that study the relation between the Internet and democracy only assess this relation in terms of technological function. In the second part we will discuss a theoretical understanding how the concept of technological mediation can aid in our understanding of the relation between the Internet and democracy. We conclude with advice how designers could consider this technological mediation in their design.

THEORY: ON DEMOCRACY

In general, the term democracy refers to a method of group decision-making. In contemporary literature it has a number of different conceptions. In thinking about democracy, two related levels could be distinguished. The first is the descriptive and explanatory democratic theory. It relates to the moral actuality of democratic politics and the functioning of democratic societies (Christiano Fall 2008 edition). It studies (often empirically) the external conditions and outcomes that relate to a (well-functioning) democracy. For example, in his famous book Robert Putnam (2000) pictures civil engagement as public meeting attendance and serving

communities as an important aspect of a strong democracy and holds television and internet responsible for a strong decrease of civil engagement. In this sense the term democracy has different conceptions and is often seen as participation in social action. The descriptive and explanatory democratic theory describes citizen's opportunity of participation and outcomes of participation in a society. More opportunities for individual's in-group decision-making and social action imply a higher rate of democracy. As a citizen's life is deeply affected by the political system, a fair democracy provides recognition to citizens as such they have a say in the governments by which they are ruled.

The second theory on democracy, normative democratic theory, deals with the moral foundations of democracy (Christiano Fall 2008 edition). Democracy is in itself a moral concept in the sense that it has underlying moral justification and moral values. In this sense morality is understood as an individual normative outline of rules setting the responsibilities a person has in society (Beauchamp 2001). Democratic theory is built on the idea that individuals are sovereign over themselves. Democratic values refer to the basic principles of democratic governance that allow distinguishing between democratic and non-democratic process. This implies that a majority support of these norms is a minimal necessity for a democratic state (Miklikowska 2012). The main intrinsic values of democracy are liberty and equality (Johnson 2009, Christiano Fall 2008 edition). Liberty can be distinguished in 2 different types: positive and negative liberty (Berlin 1969). Positive liberty means having the power and possibility to fulfill your own potential. It means being autonomous in the sense that a citizen can be self-governing and has control over certain acts within a political system. Negative liberty means the absence of limits and constraints forced by an external power. Equality means that a group of people has the same qualities in at least one aspect. It gives citizens an equal say in what to do in case of disagreement and thus an equal say in participation and decision-making (Christiano Fall 2008 edition).

The descriptive and explanatory democratic theory and the normative democratic theory are closely related. The first describes foremost the process and the outcomes of democracy. It handles participation and the influence of (fair) systems and procedures on how democracy is constructed in society. The second theory deals with the moral foundations of democracy. It studies the normative democratic principles that are needed to justify democratic procedures. This second aspect of democracy in particular, the moral foundations of democracy, has an essential psychological dimension. People are not born democrat. Certain psychological underpinnings are found to influence the degree of support for democratic values. Psychological inflexibility, i.e. the tendency to divide the world into friends and foes and closedness to information that may threaten internalized beliefs, relates negatively with the support of democratic values

(Peffley, Rohrschneider 2003). In accordance with previous literature, Miklikowska (2012) also finds that psychological characteristics relates to the support of democratic values. Among other underpinnings, she indicates empathy (the concern about others) and interpersonal trust (how soon you trust other people) as good predictors of democratic values. Morrel (2010) poses that empathy is necessity to support democratic values. Empathy leads to openness toward others, reciprocity, cooperation and fairness. According to Morrel, empathy leads to justified democratic decision-making that truly takes the interest of others in consideration. According to Morrel, we have a predisposition to empathy, but the process of empathy is also learned. It involves understanding a person's feeling without judging them or necessarily sharing them. Interpersonal trust means that a person relies on the actions of others. It indicates that people think that other people may be helpful in a situation or foremost look over themselves and that people may be fair in situations in which they could take advantage (Clark, Eisenstein 2013).

Two different levels in as many moral theories of democracy have been identified. First is there the system of democracy that relates to a functional and morally fair democracy. Second there are the moral and psychological underpinnings of democracy. Those human moral values that are needed *for a democracy to get support in the first place*. In the next section we will discuss more profound the contemporary themes in literature on the role of Information Technology to democracy.

THEORY: ON IT AND DEMOCRACY

In general, Information Technology is the use of computers to store, edit, sent and retrieve information and content, and covers both the use of a computer and the use of software applications and the Internet. As IT-technology encompasses an extremely vast amount of different concepts, in this paper we will specifically focus on the relation between the Internet and democratic values. The Internet is a network of connected computers that use the standard protocol suite TCP/IP. It contains many network possibilities like the World Wide Web, email and file sharing. Inherently, TCP/IP is very much democratic. It is remarkably decentralized and built precisely to avoid control by specific actors. But, in society, the use of the Internet may have profound influence on democratic processes as it alters the allocation of information. Access to the Internet allows users to discover all kinds of information using the World Wide Web and it allows users to visit interactive, open-source environments where multiple users can interact.

The enormous effect the Internet has on our lives and society has lead to a vast amount of scientific studies to its relation with democracy. Recurring contemporary themes in the analysis of the influence of the Internet on democracy include multiple factors as (1) decentralized information aggregation, dissemination and transparency effects, (2) the possibility to increased coordination and

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communication and (3) the external visibility provided by the Internet (Rhue, Sundararajan 2014, Etling, Faris & Palfrey 2010).

Possibly the most significant argument of how the Internet contributes to democracy is (1) the decentralized nature of it. The Internet is particular acclaimed as providing alternative sources of political information to citizens (Norris 2000). The Internet ensures an important disruption from traditional media in favoring individual sovereignty in information over state controlled information. It allows individuals to be producers and distributers of information and provides access to many more sources of information (Johnson 2009). The Internet provides a variety of opportunities in which citizens can exercise their democratic right of free speech. This means that through social media citizens become able to distribute information and bypass traditional media. The freedom of media and information is often seen as a prerequisite for a well-functioning and strong democracy (McChesney, Nichols 2011). It entails the distribution of the power of media to all citizens. It includes, among other things, the right to have full access on information that concerns the citizens of a society. Democracy requires citizens capable of critical thinking, individuals who can argue about the issues of the day (Johnson 2009). The use of the Internet gives citizens the possibility to practice and develop their arguments and thinking. As the Internet opens up information, people are better able to make justified and well informed (political) decisions. Therefore, open and transparent public information provokes democratic behavior and participation of its citizens. Not only does the Internet provide the opportunity for horizontal information aggregation and dissemination. It does so in an extraordinary pace. The easy reproducibility allows people to gather information almost at real time.

(2) A second important effect of the Internet on democracy is the possibility for increased coordination and communication. The Internet facilitates low-cost, immediate and interactive connections between geographical separated citizens. The most prominent examples are the examples that discuss the possibility of increased coordination during a (nonviolent) revolution. The Internet enables a new public square in which ideas and coordination can be exchanged as it facilitates many-to-many dialog, creating a sense of community (Johnson 2009, Rhue, Sundararajan 2014).

A third (3), relatively new, theme may be seen as an extension of the second theme. Not only communication between citizens is encouraged. The Internet may also improve communication between citizens and government (Vragov, Kumar 2013). It may provide externally visible platforms for citizens to air their grievances and advance their agenda against the government (Rhue, Sundararajan 2014), but may also improve conversation between government and citizens as democratic systems have become increasingly decentralized by use of the Internet (Chadwick 2008). The relation between the citizens and the state will

therefore continuously develop by use of Internet communication. Bonson, Roy & Ratkai (2015) show that the use of Internet platforms initiated by local governments could lead to a higher citizen engagement when the provided content is considered relevant.

Above arguments, however, do not imply that the Internet is in itself inherently democratic. Johnson (2009) argues that, often, existing power structures are able to consolidate old associations and traditional hierarchies. The Internet has also given new power to the already powerful. The possibility of advanced surveillance lends itself for totalitarian control by a government and the algorithms behind search engines can be extremely powerful in ordering information. Etling, Faris & Palfrey (2010) conclude that scholars who have been most optimistic about the impact of digital tools have over-emphasized the role of information in democratic and political processes. In relation to the Arab spring, Faris (2015) and Khondker (2015) conclude that authoritarian rulers also use new media like social media as oppressive tools for their own advantages.

Above mentioned recurring themes on the relation between the Internet and democracy foremost studies how the functions of the Internet relate to democratic participation and how liberty and equality is allocated in a society. Among other topics, it entails how the Internet helps the distribution of information and how people gain access to information. Furthermore it deals with how the Internet influences participation and the opportunity of participation in a society. These topics are extremely important. The introduction of a new technology may change the allocation of information and should be severe evaluated in that sense. It may affect how citizens participate in society, how citizens evaluate political processes, how power is distributed and may be used for good or bad by the reigning government (and/or the opposition) and therefore could change a state's democratic course. The assertion of democracy is a continuous process that deserves to be evaluated and studied. Nonetheless, in our opinion, above-mentioned recurring themes only cover a specific part of the wide-ranging influence of the Internet on democracy, as they do not take into account how the Internet simultaneously constitutes our moral values concerning democracy. Many studies to the influence of the Internet do not take into account the influence on the normative democratic principles that are needed to justify democratic procedures. The risk of this extensive, yet unilateral, view on the functionality of the Internet on democracy is that we overlook how the moral playing field itself may change. In this case *our moral justification of democracy concerning our perception of liberty and equality*. Technologies as the Internet, and Internet-based applications as social media, should not be understood merely in terms of functioning, for this would limit us to seeing only how human intentions can be realized by technologies only as means of extension. They not only influence our actions and opinions, they also influence

humans in the sense that they constitute our perception of moral values (Verbeek 2011). For example they may expand our moral boundaries or make a moral reason disappear. For example, specific characteristics of the Internet have not only made us appreciate privacy more or less; it has also modified our perception of privacy. Therefore the moral significance of the Internet on democracy is not only about the direct functional influence on democracy concerning actions and opinions, but also how a user's democratic moral values are reshaped and perceived.

THEORY: THE MEDIATION OF MORALITY

In the discussion about the influence of contemporary IT on democracy, few scholars will disagree that the Internet is not morally significant as is has a clear morally relevant functional impact on society. As we have seen in the above-mentioned recurring themes, technologies help to shape actions, informs decisions, influences how we interact with other people and realize moral ends. However, we argue that this is just one side of the moral impact of the Internet on democracy as the Internet also has an indirect effect on democracy as it mediates *the perception* of our moral democratic values.

In the study on the general influence of technology on morality the concept of post-phenomenology analyzes the character of the relation users have with technology. It analyzes the ways in which technology mediates relations between users and the world. The main characteristic is that it analyzes how users experience their environment through a technology, and how users are practically engaged with it (Verbeek 2000). In this engagement, the characteristics of technology play an active part in the constitution of values concerning a technology. Ihde (1990) distinguishes four main types of relation between technology and user. These are 1) Embodiment, 2) Alterity, 3) Hermeneutic and 4) Background.

1) Embodiment implies that a user experiences their surroundings through a technological product and that the experience of the product itself moves to the background, there is a partial symbiosis; for example, a pair of glasses. We don't often pay attention to every move we make, or are we aware of its presence or importance. With the embodiment relation, Ihde points to the mediation of those technologies that alter a user's engagement with the world.

2) Alterity relation means exactly the opposite. A technology is seen as a being that is the *quasi-other*. We interact with a coffee machine to get our doses of caffeine in the morning; we interact with the satellite navigation in our car to get to the right destination. A technological product is not embodied; it is the technological product itself with whom we are interacting and it asks direct and focal attention. The technology should be interpreted and 'conquered'.

3) Hermeneutic relation implies that a technology represents a reality without being embodied. It involves reading and interpretation of technology and creates a reflection of the reality that could be interpreted. The analogy of the hermeneutic relation is between reading written language and reading the world through a mediating technology. Simple examples include a wristwatch, a thermometer and medical ultrasonography.

4) The final category Ihde defines is the Background relation. The background relation is understood as 'present absence'. There is no direct experience and is neither autonomous nor adaptable, yet it gives structure to experiences. Examples include the running refrigerator and the central heating that operates in the background.

Of the four relations Ihde (1990) distinguishes, two can be specifically considered mediation of perception. That is the 1) embodiment relation and the 3) hermeneutic relation. In the embodiment relation technologies are 'incorporated' by their users, establishing a relationship between humans and their world through the technological artifact. The artifact is not perceived itself but it helps to perceive the environment and it does so differently than it would be perceived without the technological artifact. The second mediation of experience concerns the hermeneutic relation. In this relation, technologies provide access to reality not because they are incorporated, but because they represent a reality that requires interpretation. With the embodiment relation and the hermeneutic relation, according to Ihde (1990), the alteration of perception involves amplification and reduction that restructures the representation and perception of the world. The technology itself has certain intentions (in the sense that it leads a user to a specific way) that play an active role in the relation between humans and their world (Verbeek 2011).

In general, the Internet may be seen as a multi-dimensional 'carrier' of what it represents in use. The device (e.g. a laptop or a smartphone) discloses our world in the sense that it is able to show the information that is presented by the Internet. The substance of this information enclosed by the Internet is always a specific representation of the world. This implies that the Internet is not interpreted for its own sake, *but rather for what it represents in a specific context*. The device could be seen as a portal to the Internet and, subsequent, the Internet offers a hermeneutic representation of the world that needs interpretation using a specific context. For example, friendship is represented by a friendly massage on Facebook and a specific Wikipedia page represents description of the world (Bakardjieva, 2005). As a scheme this hermeneutic relation of the Internet can be envisioned as:

$$I \rightarrow (Internet - World)$$

In the remaining of this paper by use of one dimension of amplification we discuss two examples in what way the Internet influences the perception of reality and how this affects the psychological underpinnings of liberty and equality.

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SYNTHESIS: TWO EXAMPLES HOW THE INTERNET AMPLIFIES CONROL AND THUS OUR MORAL REPRESENTATION OF REALITY

In the hermeneutic constitution between human and technology, the essence is that some characteristics of reality are amplified and some characteristics are reduced by a technology. Reality is co-shaped by the technological instruments with which it is perceived. Perhaps the most relevant dimension that is simultaneously amplified and reduced because of the Internet is the *perception of control over our surroundings*. Although in this paper we will emphasize on the amplification of control, it is essential to mention that the Internet may also strongly reduce our perception of control on several levels. For example, everyday people receive dozens of messages through social media and email and often the emotional interpretation of how these messages are exactly meant remains difficult without the aid of physical cues. Frequently, these text messages are open for multiple interpretations and the technology may be perceived as a filter between people and their social environment. Also, it has become very difficult to monitor what happens with your data in the public sphere. Privacy has become a difficult subject, as you never know who is watching your steps on the Internet.

Together with this reduction of control, simultaneously the Internet may increase our perception of control over our environment as we can influence and change important aspect of it. The control a person has over the virtual surroundings is unmatched in 'real' material life. For example, our smartphone with Internet can be seen as a multi-dimensional portal to the world. First, it opens a primary territory, a place where the owner has exclusive rights. In addition, it also opens a secondary territory, a semi-public place where a person interacts with friends and family as well as a public territory where everybody is allowed for temporary access for example to retrieve information (Gifford 2007). The semantic web and web 4.0 makes it easy to personalize your virtual surroundings. After purchasing, not one smartphone is alike. We may change its wallpaper, organize our apps and systematize our information flows e.g. using Twitter. Without the need of advanced program skills, people can easily personalize information channels and social peer groups. We can access vast amount of information, interact with friends on the other side of the world and create a personal avatar transferring our identities from our bodies to the Internet (Ward 2013). The Internet is non-normal in the sense that it is multi-dimensional as it provides access to primary, secondary and public places. It is omniscient as it contains almost total human knowledge. It is omnipresent in the sense that it is accessible from a small device you carry with you everywhere you go. And it is unobtrusive; it waits for you till you need it. Together these qualities may lead people fail to realize that the Internet has become an autonomous entity in people's life and may lead to the perception of increased ownership over its content, e.g. information (Ward 2013). People fail to distinguish information stored online and information stored in their own minds and they fail to distinguish between internal and external influences on performance. When people use the Internet, they may take ownership of both Internet-related outcomes (e.g. retrieving specific information) and Internet-related attributes (e.g. possessing the capacity to remember and process information) (Ward 2013). An Internet search may often be faster than searching one's own memory; as a result using the Internet to look up information may cause people to confirm that they know what the actually never knew. The high control over our Internet surroundings may blur the distinction between the internal and external memory leading to a higher self-perception of information and knowledge. It leads to a higher cognitive self-esteem and predictions of gaining and utilizing future-knowledge, even without the help of the Internet. In an experiment, Ward (2013) showed that people who used the Internet to retrieve information were more likely to expect a high result for a next trivia quiz, even without using Internet than people who were not able to use Internet in the first place.

A second consequence of this increased control over our surroundings is that it becomes very easy to exclusively view like-minded information and discussion groups (Sunstein 2008). With this strong increase of control and a greater power to personalize your surroundings comes an increase in the range of actual choices. Those choices mean, in many cases, that people will try to find information and social peer groups that suit their own interests best. This may enhance a phenomenon called group polarization (Sunstein 2008). Sunstein (2008) defines group polarization as:

"*The idea that after deliberating with one another, people are more likely to move towards a more extreme point in the direction to which they were previously inclined, as indicated by the median of their predeliberation judgments*".

With respect to the Internet, this implies that, because of group polarization, people will end up in thinking the same but in a more extreme form. Group discussion between like-minded persons lead to more extreme perceptions. Especially in homogenous group discussion, members acquire greater learning of arguments favoring one attitude, and less exposure to opposing arguments, naturally leading to greater attitude strength. When arguments seem convincing, a perception may move to the most persuasive position defended within the group. In addition, homogenous group members perceive their perceptions as normative, and thus socially validated and reinforced. Therefore, they adhere to their perceptions more strongly (Bishop, Myers 1974, Downing, Judd & Brauer 1992). The action of moving to the dominated opinion in a homogenous group is a human consistency, but because of the atypical information-control by the Internet this consistency may be amplified. Group

polarization is occurring everyday on the Internet. The Internet may serve as an accelerator for extremism, precisely because like-minded people are deliberating with one another (Sunstein 2008). A crucial factor here is that this does not mean that individual perceptions move, within a certain range, to the 'average' opinion. Group polarization implies that, within homogenous groups, both the average and range of the group perceptions move to more extremism.

SYNTHESIS: THE RELATION BETWEEN INCREASED CONTROL AND PSYCHOLOGICAL UNDERPINNINGS OF DEMOCRACY

The increased control the Internet offers changes our perceptions of the world. In this paper we have discussed both a higher cognitive self-perception and group polarization as effects of the non-normal dimension of the Internet. The Internet is multi-dimensional, omniscient, omnipresent and unobtrusive and these characteristics may influence our cognitive self-perception and group perception and may therefore influence, both positively and negatively, our individual moral foundations of democracy.

A higher self-perception may have a negative influence on democratic values because it may lead to increasing individualization. When people fail to distinguish between internal and external cognition people fail to have insight into what they individually do know and what they do not know. Overestimation of your cognitive capabilities may lead to avoidance of new information. Ward (2013) mentions two reasons why people pursue information: to reduce uncertainty (Alba, Hutchinson 2000) and/or as a result of curiosity (Menon 1999). Cognitive overconfidence may reduce these needs for uncertainty and curiosity reduction. In addition, cognitive overconfident people may have the incorrect believe that they have high levels of individual knowledge; they also fail to process new information. When people think they are highly knowledgeable they may attend less to new information (Ward, 2013). Therefore, ironically, omnipresent information may lead to relatively less need and scrutiny to acquire new information and increased individuality. It may have an effect that people become relatively more interested in their own position leading to less commitment to society. Cognitive overconfidence may increase the feeling that you are capable of doing everything yourself and are less dependent from society indicating less psychological empathy which may lead to less support of liberty and equality. Simultaneously, a higher cognitive self-perception may lead to increasing support for democratic values. When people have an increased cognitive self-perception they may feel more equal to others in society. The decentralized nature of information ensures that the information gap between doctor and patient reduces (a little). It ensures that scientific information is distributed for a larger group of people. Because of this increased cognitive possibilities and self-perception, people may

feel more equal to other people, and simultaneously perceive equality a more important value. This effect may be stronger with people who had a lower social status first place improving their sense of trust in society and others and therefore improve their perceptions of democratic values.

For group polarization, a negative effect on the psychological underpinnings of democracy is that it may lead to stronger internal group cohesion but weaker external group cohesion. With internal cohesion the exclusive collective identity is emphasized. The homogeneity of the group and the loyalty between members are strong. External cohesion emphasizes the relation between groups. It's about the solidarity between groups and bridging different groups with different codes of conduct, ideologies and perceptions (Schnabel, Bijl & Hart 2008). Although both types of cohesion are essential for a society, a high internal cohesion (and a high level of trust between homogenous members) is often related with mistrust to other groups and outsiders. It stimulates thinking in terms of friends and foes (Schnabel, Bijl & Hart 2008) and therefore increases psychological inflexibility to others. Kugler, Bornstein, Kocher & Sutter (2007) found in an experimental setting that groups are often less trusting than individuals towards other groups and individuals. Therefore, group polarization may lead to less interpersonal trust in not-like-minded people as a result of social conflict and may decrease the perception of the essence of equality in society. When you are highly convinced of your own truth, sometimes it is difficult to appreciate the right of others to have their opinion. On the Internet it is difficult to stay neutral. Simultaneously, group polarization can also have positive effects on democratic values. It may lead to the idea that your ideas are valuable and that you have the right to discuss these ideas with other members of society. Halpern and Gibbs (Halpern, Gibbs 2013) show that Facebook expands the flow of information to other networks and enable more symmetrical conversation among users compared to the more anonymous YouTube. The idea that you have the right to be part of a group and have the right to express your opinions may enhance the feeling that you are part of a democracy that respects your liberty. It may enhance interpersonal trust in others when they use the same set of rules to discuss different polarized perceptions in society.

CONCLUSION

IT, and more specifically the Internet, has a clear moral aspect that concerns democracy. Its multidimensional functionalities inform people and help to shape actions and participation. Rightly so, many scholars have studied how the Internet directly affects democracy and democratic processes (e.g. the influence of information aggregation and increased coordination). However, in this paper we have argued that these themes only cover a specific part of the wide-ranging influence of the Internet on democracy, as they do not take into account how the Internet simultaneously constitutes our moral perception

concerning democratic values. The Internet constitutes the relation between humans and their world by amplifying and reducing certain characteristics of reality and may hence modify our moral perception of democratic values. It does not dismiss our basic human psychological underpinnings, neither does it give rise to new ones, but it modifies how people perceive their world and how people practice moral codes of conduct. It could shift our moral boundaries and codes of conduct. As of this reason it is important not only take into account the direct functionality of the Internet on democracy, but also on how it alters our moral playing field.

By use of mediation theory, we have discussed in what way one important dimension, the amount of control over the environment, is amplified by the Internet and how this characteristic may influence three important underpinnings of democratic values, being psychological inflexibility, empathy and interpersonal trust. We have argued that both the enhancement of cognitive self-perception and the development of group polarization may both positively and negatively constitute the psychological underpinnings of democratic values.

A remaining question is: why should a certain assessment be of any importance for designers? An overly simple answer to this question is: because their designs change our perception of the world.

However, the influence of technology on society is so overwhelming and difficult to grasp that designers, naturally, are not solely responsible for all the direct and indirect consequences of technology. Often the consequences of technological implementation is unforeseen and a combined action of many processes. Nonetheless, their designs may have substantial influence on both our actions and our values. With regard to democratic values an important distinction should be made between general IT designers and designers who design specifically for e-democracy and e-government. Especially for designers of e-democracy and e-government it is important to broaden the ethical assessment of a design. These designers should be aware of the multiple levels of interaction between IT and democracy. Therefore, this assessment should not only consider how a design influence democratic actions but also how we may perceive democratic values through it. For this assessment, as a first step, we pose four basic questions that could help designers of e-democracy to identify how their design mediates democratic perceptions:

- In what way does your design constitute control over people's surroundings? E.g. does your design serves as an extension of possibilities that were already possible, like reporting a broken playground, or does it add a new dimension in the possibilities of people, like insights in information that were not accessible beforehand?

- If it adds a new dimension in the possibilities of people in relation to democracy, in what way does this new control amplifies or reduces certain aspects of reality? Does it solely give more information or does it create public spaces in which people can deliberate about society and government?
- How can you relate the change in control to empathy, psychological inflexibility and interpersonal trust in others and the government?
- Do (minor) improvements change the impact of control and generate a more desirable outcome?

It is important to emphasize that these questions do not replace a general ethical assessment of the functionality of a design but should be co-applied in that sense. When it can be expected that a design for e-democracy change the allocation of information, and different people may 'win' and 'lose' power, the main ethical question remains if this new allocation of power is just. However, this new design may also change the perceived control people have over their surroundings, which can have an additional affect on people's democratic values.

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