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## **Knowledge and Democracy in Cyberspace**

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### **1. Introduction**

As a result of the rapid development of modern Information and Communications Technology, the debate about the theory and practice of democracy has been revived. It is widely acknowledged that the Internet generates both unique chances and threats to traditional democratic institutions and practices. Contributors to the debates have all very different points of view, but all seem to acknowledge the fact that we are at the crossroads of two important developments: the decline of traditional democracy and the rapid growth of the new media.

At this intersection the GII holds of up a promise that we could increase the efficiency of our political decision-making, that we could increase the level of participation, that new forms of collective deliberation could be invented, that less mediation would also mean less bias, that services to the citizenry could be more effectively and efficiently provided. In short: ICT could be the wonderdrug for the democratic deficit that has been building up over the last decades. But many authors writing about the potential of ICT for revitalising our democracies now begin to put a sense of urgency to their analyses and recommendations. Their message is that we have to think about democratic institutions in cyberspace now and we have to get it right. Here are three examples:

Lawrence Grossmann in his book *The Electronic Republic. Reshaping Democracy in the Information Age*, states that "without conscious and deliberate effort to inform public judgement to put the new interactive telecommunications technologies to work on behalf of democracy , they are more likely to undermine the democratic process than enhance it" (Grossman 1995:31)

Benjamin Barber (Barber 1998:237) -a renowned scholar of forms of strong, participatory democracy states that "This may be our last opportunity to turn the technology of the new age into a servant of an old political ideal: democracy".

Authors who study the economics and dynamics of Large Technological Systems (LTS), such as nation-wide air traffic control systems, electricity networks, networked computer systems, large nuclear powerplants, state that a lack of knowledge and reflection "can set public organisations on path dependent directions that may be undesirable and difficult to change " (Demchak, e.a. 1998: 226). According to these studies "early technical decisions may set the structural and cognitive conditions for organisational effectiveness and ethics. Value choices underlying system designs and policies are not always readily apparent , but close attention to them is vital if these large technical systems are to be established and to function in ways to support democratic goals and practices" (ibid.). Deborah Johnson has carefully articulated in which ways the design of information infrastructures may be affected by value choices (Johnson 1998).

## **2. An Epistemic Conception of Democracy**

Apart from the sense of urgency that is apparent from these writings, another remarkable feature may be found in contemporary studies about democracy in an electronic age. It is the idea that democracy may be our only chance to get it right with respect to resolving the complex social problems of our increasingly complex societies. Grossmann observes (Grossman 1995) that: "American liberal philosopher John Dewey provided the contemporary rationale for American Society to view widespread civic participation and collective deliberation as high priorities. As in jury trials, truth has a better chance of emerging from group deliberation than from a single authority, Dewey said, no matter how expert, experienced and sophisticated that authority may be. Public decision making, he argued, achieves more than the sum of its parts, (... ) he insisted that inquiry and communication are the keys to a functioning democracy".

What is presented here in the context of an analysis of the

repercussions and possibilities of ICT is the sketch of a particular conception of democracy, which is most certainly congenial to a knowledge and information society, but is non-standard in the philosophy of democracy: It is a distinctively epistemic or cognitive conception (Cohen (1986) and Estlund (1993; 1997)). Democracy and democratic institutions are to be preferred to others because they are superior in their quality of *epistemic* practice. Democracy is about knowledge and learning according to this view. This type of justification shifts our attention away from a Kantian or Rawlsian justification of democracy which singles out the autonomy and equal worth of individuals as moral persons, *whatever the epistemic consequences*. According to the epistemic conception of democracy the primary reasons to prefer democratic arrangements is that they will lead us to the most adequate, intelligent or possibly even 'true' answers to our political questions, not that they promote fairness and justice.

Benjamin Barber observes: "Taking their cue from the eighteenth century Frenchman Condorcet, enthusiasts like Wriston, Toffier, Naisbett and Bill Gates have all composed odes to the emancipatory, democratic powers of the startling new technologies (... )" (Barber 1998:272) He could also have added names like Dyson, Negroponte, Barlow, Rheingold, Kelly, or other 'cyberlibertarians' as Langdon Winner has aptly called them.

One could argue that that Barber is cutting historical corners here, but his remark is actually very much to the point, since it serves to draw attention to the epistemic conception of democracy we identified above. To fully appreciate Barbers remark we have to bear in mind that Condorcet's best known theoretical contribution to democracy theory is his proof of the so-called jury theorem, which roughly says that if voters are individually better than chance to get it right on some yes or no question, then under simple majority rule, they will collectively be infallible, provided that the group is sufficiently large. If you flip an unfair coin -let's say it is weighted in such a way as to produce 6 head to 4 tails every ten times it is flipped- it will only produce that ratio if you flip it a sufficiently large number of times. Now substitute the 60/40 heads tail chance by a 60 % chance to get it right on a given yes/no question and replace individual coinflippings by

individual votings. If the number of people who take part in a political voting is large enough, and the individual voters are competent, if only in a weak sense, i.e. more likely to get it right than to get it wrong, the democratic decision by simple majority vote will produce the right social preference. It will be clear that this establishes an important result for an epistemic conception of democracy. Simple majority rule as Ariadne's thread out of the political labyrinth, if its is only long enough.

The epistemic conception of democracy also gets support from other unexpected sides: economic modelling of scientific research, parallel distributed processing and artificial life research. Let's turn to a well known researcher in the A-life research and member of the legendary Santa Fe institute: Stuart Kaufmann. According to Kaufmann in his book *At Home in the Universe* " ( ) our theory of democracy takes little account of the unfolding, evolving nature of cultures, economies, and societies". (Kaufmann 1995: 299). In the introduction of his book he expands upon the relation between democracy and research in chaos theory and non-linear systems: "The edge of chaos may even provide a deep new understanding of the logic of democracy". (..) (I)n the following chapters we will find surprising new grounds for the secular wisdom of democracy in its capacity to solve extra hard problems characterised by intertwining webs of conflicting interest ( ) we will see hints of an apologia for a pluralistic society as the natural design for adaptive compromise. Democracy may be far and away the best process to solve the complex problems of a complex evolving society" (Kaufmann 1995:28).

And more cyber enthusiast now seem to be betting on this approach to democracy. In a contribution to *Network & Netplay, virtual groups on the Internet* (Sudweeks 1998), the authors take as their point of departure that the internet community is a society of distributed intelligent agents, which forms a large 'expert system with a scope and scale well beyond that yet conceivable with computer based systems alone'.

Recently, no one less than Harvard Philosopher Hilary Putnam has also defended the epistemic conception of Democracy which he refers to as Deweyan Democracy. A brief characterisation of Dewey's position according to Putnam could be summarised as follows:

Democracy is the form of Intelligent conduct of communal inquiry and not just one form of social life ( ) it is the precondition for the full application of intelligence to the solution of social problems" (Putnam 1995:180). This implies among other things; 1) the unimpeded flow of information and the most extensive freedom to offer and criticise opinions, 2) the absence of epistemic privileges, which as Putnam puts it, "inevitably produce cognitive distortion".

The following characteristics can be found in both Dewey's and Putnam's conception of democracy:

1. *Liberalism*; the most extensive scheme of information and communication liberties; don't block the road to inquiry!

2. *Cognitivism*; that is the view in this context that individual input in the democratic process consist of beliefs or opinions about what is the right thing to do.

3. *Objectivism*, at least a weak form of objectivism, that is incompatible with moral scepticism. Some objective standard (not necessarily an independent standard) of what counts as a satisfactory or correct solution to a social or political problem.

4. *Fallibilism*; the collectively endorsed outcomes of democratic processes are in no way indefeasible, or immune to revision.

5. *Instrumentalism*; the solutions that are reached have the status of hypotheses, which have to be implemented (Dewey calls this existential application) and revised if proven unsatisfactory in their consequences.

6. *Deliberativism*: to make full use of information, insights and the wisdom of others, people ought to be constantly in communication and discussion about their ideas on what is the preferred course of action.

7. *Meliorism*; that is the belief that our societies may change for the better if we conduct our business in an intelligent way.

8. *Holism*, that is the idea that the unit of intelligence is the community,

the social system as a whole, and that this whole is more than the sum of its parts.

*9 Epistemic Egalitarianism:* there are no epistemic privileges, which as Putnam stated 'inevitably produce cognitive distortion'.

### **3. Some problems with epistemic egalitarianism**

Now I would like to focus on this last characteristic -the radical epistemic egalitarianism which Putnam seems to think is an extremely important element of Deweyan Democracy and discuss two epistemic phenomena which may cast doubt upon its viability, both off and on-line.

The first is connected with what John Hardwig has called 'epistemic dependence' or deferral to experts or epistemic authority and the second is related to what Goldman has called 'epistemic paternalism', or filtering of information or exercising control over communication channels. Both phenomena relativize cognitive self-sufficiency and intellectual autonomy of individuals. And if these phenomena should prove to be justifiable in addition to being massively endorsed, then this would suggest that some of us ought to be seen as more equal than others from the epistemic point of view. The question should therefore be addressed whether these forms of epistemic inequality are co-tenable with the epistemic conception of democracy and its implied epistemic egalitarianism.

#### **3.1 Epistemic Dependence**

We live in a complex world and science has progressed to the point where we can no longer hope to be intimately acquainted personally with the evidence for our claims to know. If we say that we know that smoking causes cancer we are not able to produce the histological or epidemiological evidence for that claim ourselves; we rely upon the experts. And in supporting policies directed at banning tobacco advertisements, we simply assume that it's true. Due to a rapid division of intellectual labour, we are becoming more dependent and less epistemically self sufficient. This not only applies to lay people,

but to scientists as well. In large collaborative research projects like the human genome project or in elementary particle physics, scientific publications are sometime co-authored by hundreds of researchers, and for each of them individually holds that they are unable not only qua time, but also qua expertise - to evaluate the research results of a large part of the colleague researchers in that project.

The principle of justification which seems to lie behind our endorsing the practice of deferring to experts, was I think correctly identified by John Hardwig as the principle of epistemic dependence: If I have good reasons to believe that Einstein had good reasons to believe that  $E=mc^2$ , then I myself have good reasons to believe that  $E=mc^2$ .

When we rely on the judgement of others in complicated matters, will we always be able to give independent reasons for thinking that our judgements are correct? Will it still be the case as Putnam puts it that the autonomous persons can no more imagine giving up his autonomy, his capacity to think for himself and his habit of exercising that capacity, than he can imagine submitting to a lobotomy.

I think the answer is 'No'. Inquiry, scientific and non-scientific, contrary to what Putnam may want us to believe, forms a delicate fabric of deferral, epistemic dependence and trust where individual scientists have given up on pursuing the enlightenment ideal of thinking through everything all by themselves. Some sources are taken much more serious than others. The Internet and WWW only exacerbate this tendency to defer and rely.

### **3.2 Epistemic Paternalism**

The second phenomenon, which has to be addressed by the defenders of epistemic democracy and its implied egalitarianism is what Alvin Goldman has called epistemic paternalism. Ordinary paternalism is defined as restraining someone's freedom or interfering with someone's liberty and justifying it by appeal to the best interest of the persons thus restrained. In epistemic paternalism B may prevent A from receiving or accessing information with the justification that access to that information by A would make it more unlikely that A would come to have true beliefs than when not having access to that information. A case in point is Rule 403 of the USA

Federal Rules of Evidence which states that:" Although relevant, evidence may be excluded if its probative value is substantially outweighed by the danger of unfair prejudice, confusion of the issues, or misleading the jury". The judge may for example decide to keep certain probabilistic information from the jurors because he knows that according to some well established theory of cognitive psychology they are more likely to get it wrong when they use it in their reasoning and deliberations. Again the Internet and WWW only increase the opportunity and incidence of this type of control over communication channels.

#### **4. Problems.**

Although these inegalitarian epistemic practices of deferral and paternalism may be locally justified, we feel a moral uneasiness with endorsing them on a global level and making them principal moral policy and the cornerstones of new political institutions. Our scepticism in this case may be analogous to our doubts about Millian plural voting schemes. The reasons for scepticism are clear: there are questions about identifiability of expertise (who knows who the knowers are?), there are questions of the stability and moral trustworthiness of those endowed with epistemic authority, probably questions about equal opportunity to learn for those who are supposed to be epistemically less qualified. And probably also questions about how this may affect person's basis for self-respect.

So the epistemic defence of democracy and its implied epistemic egalitarianism seem to have to either rule out these uneven distributions of epistemic authority or make allowance for them. If it does not make allowance for them it seems to fly in the face of massively endorsed epistemic practices, if it does make allowance for them it has to do so in a way that would not betray its central egalitarian idea and answers the skeptical questions that can be raised in connection with the role of experts in democracies. There may be a third response, simply saying that the epistemic gains of local epistemic inequalities outweigh the global gains of not having them. But that may be hard to prove outside limited and highly specialised areas of expertise.



Let us suppose that the advocates of an epistemic conception of democracy would try to accommodate epistemic inequalities, how could they do that so as not to produce obviously unacceptable moral results.

Putnam mentions the fact that Dewey did consider the idea that those without expertise are required to defer to the authority of experts, but that he rejected this for *empirical* reasons (Putnam 1995: 188). But if we would limit ourselves to empirical reasons, there is no independent standard of justice to keep this natural process of 'growing' political truths in societies of minds, in check. Putnam acknowledges in passing that like all consequentialist views, Dewey's has trouble doing justice to considerations of right (Putnam 1995: 190), although he does not draw further consequences from that.

Bertrand Russell as early as 1909 already saw what the potential problems could be with such a view: According to Russell standards of justice should not be the effect but the cause of the wishes of the community. Pragmatism begins with liberty and toleration, develops, by inherent necessity, into an appeal to force and 'the arbitrament of the big battalions'. I think Russell correctly identified this as a crucial problem for an epistemic and consequentialist idea of democracy.

## **5. Epistemic checks and moral balances**

I think that if Putnam and the cyberlibertarians want their idea to work as a full-fledged conception of democracy that may provide guidance in the design of political institutions of the 21 century, they need to address these issues. They may for example want to say that epistemic inequalities -epistemic dependence and epistemic paternalism - are justified only if:

1) They occur in a community the epistemic practices of which satisfy certain standards for epistemic success. E.g. the one's identified by Alvin Goldman (1992) and applied to the Internet by Paul Thagard (1997) :

a) Power of an epistemic practice: its ability to help users find true

answers to the questions that interest them

b) Fecundity of a practice: its ability to lead to a large number of true beliefs for many users

c) Speed of a practice: how quickly it leads to true answers

d) Efficiency of a practice is how well it limits the cost of getting true answers

e) Reliability of a practice: measured by the ratio of truths to the total number of beliefs

fostered by the practice.

2) They occur in a community that is well-ordered, that is effectively regulated by a set of (e.g. Rawlsian) principles of justice held in wide reflective equilibrium, which would among others things imply that the inequalities are to the advantage of those who are worst off in the community.

Putnam's rather one-sided epistemic interpretation of Deweyan democracy does probably no justice to Dewey's philosophy of experience, the individual and moral value. Philosophers like Rorty and Putnam -be it for quite different reasons have embraced what they take to be the anti-metaphysical tenets in Dewey's pragmatic political philosophy, and leave out of consideration his metaphysics of the person.

Recently Festenstein (1997) and Westbrook (1991) have shown that Dewey's political philosophy and his epistemic conception of democracy are supported by a particular view of human flourishing, which gives a central role to personal experience, individual choice and equality of opportunity. If the idea of the unique moral worth of individuals and standards of social justice which are based upon them, would be absent from Epistemic Democracy, cyber-guardianship may be just around the corner.

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