

# **DIGITAL PROCESSES AND DEMOCRATIC THEORY:**

**Dynamics, risks and opportunities that  
arise when democratic institutions meet  
digital information and communication  
technologies**

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**About this publication:**

This online publication is the result of research I have mainly done during the years 2003-2006. Most of it is based on my 303-page long German doctor thesis (published February 2007; “[Digitalisierung demokratischer Prozesse. Gefahren und Chancen der Informations- und Kommunikationstechnologie in der demokratischen Willensbildung der Informationsgesellschaft](#)“; Beiträge zur Politischen Wissenschaft, Band 144, Duncker & Humboldt Berlin, Politikwissenschaften). I sporadically added to the text, but the ongoing evolution of the topic would require a non-stop real-time effort. The main literature remains from pre-2006.

I decided to publish the text online to facilitate access and its diffusion. The topic is as dynamic as it is relevant to a wide spectrum of scholars. I hope this online publication contributes to the deepening of our understanding of democratic processes in the digital age.

The fact that this text is openly accessible on the Internet does not mean it has not been peer-reviewed. I would like to thank [Prof. Karl Albrecht Schachtschneider](#) for the guidance throughout this research, and him and [Prof. Wolfram Reiß](#) from the University Friedrich-Alexander in Erlangen-Nuremberg for the peer-review and the extensive comments on previous versions of this text. I also thank [Prof. Jorge Katz](#) from the University of Chile for the inspiring comments and the final review of the entire English version.

*"You however, students of this world, never forget that behind every technology is somebody who is using it and this somebody is a society... And that technology is a weapon, and whoever feels that the world is not as perfect as it should be, should fight, so that the weapon of technology is used to the benefit of society... every technology should be used to the benefit of the greatest number of people so that we can build the society of the future, no matter what name it may be given"*

**ERNESTO (Che) GUEVARA DE LA SERNA**

29 August, 1963

Closing address to the International Meeting of Architect Students 1963.

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Author's remarks:

Italic or bold emphases in original quotations have been modified where necessary so that they fit the flow of the text. Text in square brackets [...] has been added to for grammatical reasons. Comments by the author are shown by square brackets and a reference [..., author's addition].

## **SUMMARY**

The functionality and the *modus operandi* of democracy was repeatedly reinvented and further developed by numerous societies during the 2,500 years of its history. The given historic setting and the evolution of available technological opportunities contribute significantly to the fact that the concept of equally entitled political co-determination over society's destiny continues to be engaged in a painstaking search process until today. As democratic processes consist essentially of information flows and communication practices, it is first and foremost the current state of technological development in the area of information and communication technologies (ICTs) that influences the implementation of democracy in the frame of a chosen institutional setting.

Since the end of the 20th century, the Internet and other modern ICTs have forever changed the way in which people communicate, exchange information and form the common will of society. In less than 15 years, every fifth human being on this earth has linked up virtually with his fellow citizens in the Internet and almost every second person can be reached through the mobile telephony network (data for 2006). We already know that digital information follows its own laws that differ decisively from analogue or offline communication options. Examples of this include the possibility to communicate in real time over large distances, the option to multiply digital information at marginal cost nearing zero and the use of multidirectional networks that converge a variety of communications channels. Notwithstanding the extremely fast worldwide digitization of information, its consequences for democratic processes and the ensuing risks and opportunities are largely unknown. Due to the rapid evolution of technological solutions, it is difficult to assess the future. Moreover, actual developments are still quite recent, and reliable empirical data are rare. Digital networks, however, will not disappear, and the massive and rapid spread of technology lends a certain degree of urgency to the matter. This study intends to make a contribution towards an improved understanding of the current and future developments in the digitization of democratic processes.

In this context it is assumed that digitization of democratic processes depends to a large extent upon the institutional framework conditions of the chosen democratic model. In order to be able to separate the impact of digitization from the influence of the different institutional conditions, a frame of reference is presented that aims at reducing the complexity of the institutions to dimensions that lend themselves to analysis of several opposing scenarios. General patterns of digital interactions and first experiences collected regarding the impact of ICTs upon democratic processes are examined from the viewpoint of democratic institutional

settings that have been stylized through the frame of reference. In this sense, there is no intention whatsoever to focus on the discussion whether democracy or digitization is good or bad for people, but rather whether the digitization of information and communication is good or bad for the implementation of the chosen democratic model. ICTs might be functional to implement a certain kind of democracy, while it might lead to undemocratic results in another institutional setting. To achieve the analysis of different democratic models, democracy is defined very broadly: democracy is the opposite of coercion of power. Less coercion of one person over another leads to more equal standing among citizens, and therefore equal participation in the formation of the common will is seen as positive and more power relations among people as negative.

A variety of democracy models have been developed and implemented during the course of the past millennia. The polis democracy of Athens, Max Weber's leader-democracy or Schumpeter's economic model of democracy, are but a few examples. The frame of reference that was chosen for this paper in order to distinguish between the various models is based upon three main axes formed by the three fundamental questions about the functionality of democratic processes: "Who?" "How?" and "What?". Democratic models are identified according to the criteria: who participates in ascertaining the truth and determining the common rules (all citizens directly or only a select group of representatives); how flexible are democratic powers (is the system based on the rule of human beings or on the rule of democratically produced laws); on what kind of citizenry is the underlying social contract founded (republican or liberalistic). For the sake of simplicity, the model depicts each of these three axes as bipolar with two extreme points, whereby the grey zones between these two end points are neglected in favor of analytical clarity. On the basis of these axes eight democracy models are established corresponding to the eight corners of a three-dimensional space. These models represent different combinations of institutional framework conditions of democracy. It is examined how the digitization of democratic processes impacts upon each of the eight models, which leads to different scenarios. The scenarios are exploratory not predictive and describe a possibility space that forces to reflect on the longer-term consequences of employing different institutional settings to lead to a truly democratic information society.

As ICTs are only the means to an end and not normative by their nature, an examination of the models shows quickly that ICTs *per se* are neither democratic, nor undemocratic. They are neutral tools that may be deployed to achieve certain goals. However, certain institutional framework conditions may either support or hamper the use of ICTs for the benefit of democratic processes.

The analysis of each of the eight democracy models has been divided into three research sections. First, some of the relevant theoretical foundations are examined. The inclusion of traditional literature on the theory of democracy is essential to place the model within the historic context, in order not to reinvent the wheel of democratic theory once over and over again. Given that democratic processes have always been founded on information flows and communication mechanisms, there is no fundamental change of the theory of democracy in the so-called information society. However, digitization sheds a different light on the functionality and the possibilities of the democratic processes. These changes are examined in the subsequent research section on the development of the democracy model in the information society. Certain digital applications and other peculiarities of digital interactions regarding the chosen institutional framework are examined. In the third section of each chapter the

consequences of the development of the respective democracy model in the information society are critically examined.

The eight chapters of the paper's analytical part comprise the following democracy models: polis democracy, cyber democracy, plebiscitarian leadership democracy, Big Brother democracy, economic democracy, push-button democracy, the Roman republic and deliberationware democracy. The names of the various models should be viewed as symbolic rather than descriptive and only serve to distinguish them. The following table gives a broad summary of the explored issues in each Chapter.

Broad summary of eight development scenarios, with involved opportunities and risks

<b>Name of scenario</b>	<b>Characteristics</b>	<b>Opportunities</b>	<b>Risks</b>
<b>Polis democracy</b>	All power with the people through direct decision making and weak institutions	Direct participation and deliberation, more involvement and satisfaction, overcoming geographical barriers, identification of like-minded	Tribalization of digital public sphere and missing integration, social instability
<b>Cyber democracy</b>	Focus on liberalistic and individualistic decision making	Optimization of the subsidiarity principle for separation between public and private conduct	Tyranny of the majority and constant discrimination of minority
<b>Plebiscitarian leadership democracy</b>	Legitimization of political leaders through the led	Constant contact and checks between people and their political representatives	Shift from free mandate to imperative mandate and populism
<b>Big Brother democracy</b>	State uses ICT as surveillance instrument	Facilitation of e-government services and fight of terrorism and crime	Manipulation of individual and public will and informational dictatorship
<b>Economic democracy</b>	Marketplace with supply of politics against payment by people through power legitimization of representatives	Diminishing information asymmetry between people and representatives, leading to more involvement and satisfaction	Theatralization of politics and fragmentation of public
<b>Push-button democracy</b>	Optimization of direct voting and referendums	Constant involvement of the people through comfortable vote-from-home ICT	Unequal access to digital public sphere, threat for secret ballot, crude and emotional decision making
<b>Roman republic</b>	Publicity principle and focus on inner reflections and public spirit	Optimization of freedom of information legislation and participative policy making	Tendency to elitist approaches, missing link between virtual opinion and real power
<b>Deliberationware democracy</b>	Digital intermediation of public deliberation and decision-making	Transparent identification of consensus and disagreement, value neutral intermediation of arguments, fine-tuning of collective opinion structure	Architecture and design of the deliberationware is decisive, investments are necessary to develop democratically valuable ICT

Source: own elaboration



The theoretical foundations of the polis democracy go back to the democracy model of ancient Athens in 500 B.C. All citizens participate in the democratic process of finding the truth and of determining the rules that govern their daily life. The social contract among them is republican in nature, there is no separation of power, and the rule of law is continuously subject to the will of all citizens. The information society mirrors this democracy model in the communitarian model of virtual deliberation groups. They are geographically unbounded interest groups that gather in virtual forums in order to conduct discussions of various topics. Since likeminded participants are only one mouse click away, homogenous discussion groups find each other quickly, while those who have different opinions leave the group and search the web for people like themselves. As the analysis of such development shows, the tendency towards group polarization among likeminded people plays a decisive role in this democratic model. This leads to the danger of a renewed tribalization of the public space, as parallel partial publics are formed inside one society, hardly having any contact with one another. This development opens up questions about the role of the classic political integration parties and the adequate institutional settings for virtual deliberations.

Cyber democracy differs from polis democracy in its liberalist focus. The liberalistic priority of private interests over social ones does not require the endeavor of the individual and his or her interest group to seek Rousseau's *volonté générale*. The focus on efficiency and the reduction of bureaucratic centralism, together with the flexible and dynamic organization of social life are regarded by many as the quintessence of the Internet age. It must be ensured, however, that the peaceful coexistence of various interest groups does not lead to the tyranny of the majority of groupings over weaker ones. This underscores the importance of institutional framework conditions in the information society, such as protection of minorities in the digital expression of opinions and transparency in public decision taking.

The model of plebiscitarian leadership democracy focuses attention on the legitimacy structure between the political leader and the led. Hence it is a kind of representative democracy whereas the representative is dependent on his or her electors and must heed their will, if he or she wishes to remain in power by democratic means. Thanks to opinion polls and other surveys, politicians and political parties of the information society are much better and more frequently informed about what voters are thinking than they used to be. Just as corporate managers incessantly track their company's share prices on the stock exchange, politicians are confronted by polls seconds before speeches and parliament votes and will be able to assess initial reactions immediately afterwards. The constant feedback-loop is becoming an indispensable guide for the people's representatives. In practice, however, the free mandate of the representatives will turn into an imperative mandate. Those who are better at saying what the people want to hear will be at an advantage over those who do not follow the imperative mandate of the digital feedback and instead listen only to their reason rather than orders and instructions. As most current democratic models are based on the free mandate of the people's representatives, a plebiscitarian leadership model creates an institutional challenge for the entire democratic system in the information society. By definition populism and not representation of the people will dominate democratic processes in this scenario.

Big Brother democracy goes back to Orwell's famous vision of an information-based surveillance state. The issue of digital monitoring and omnipresent controls suddenly took on

new topicality in particular in the wake of the September 11, 2001 terrorist attacks. Motivated by the e-government approach and questions of public safety, the intentions behind the effort to digitize as much information about individual citizens as possible are quite laudable. Nevertheless, separation of powers and a tight law structure must protect people's privacy lest the available information be used to manipulate democratic processes and centrally steer the shaping of public opinion.

In the marketplace envisaged by the economic democracy model, good policies are offered by politicians and paid for by the electorate on the demand side through approving representatives as their democratic leaders. Similar to evolution of the digital economy, asymmetrical information between supply and demand is reduced in this model. This leads to the revealing of preference structures on the demand side and a more customer-oriented focus on the supply side. Using one-to-one Customer-Relationship-Management tools (CRM), it becomes very easy for political representatives to identify special interest groups, facilitating the creation of separate sub-groupings. This could result in a fragmentation of the public by political representatives who specialize in defending special interest groups. The additional commercialization of political information leads to politics becoming increasingly theatrical (infotainment). The result is a combination of the threats provoked by the dominance of the economic powerful and the trend toward an imperative mandate, which might produce a self-sustainable power circle between the policy supplying politicians and the legitimizing people.

The sixth democracy model to be analyzed is pushbutton democracy, a variation of direct democracy in which all public power is exercised by referendums among the electorate. The election of representatives and exhaustive deliberations are foreign to this model. Home-based e-voting technology enables citizens to vote on all aspects of social life, be it the building of a new hospital, the government budget or war and peace. The first prerequisite for this model is universal ICT access for all citizens. Furthermore, it must be assured that the decision of the home-voter is not forced by any peer citizen, eliminating the benefit of the secret ballot and going against the protection of the weak by fostering the control of the dominant. Besides, it must be borne in mind that digital interaction is incredibly fast whereas the formation of the democratic will is extremely slow. There is a risk of taking overhasty and short-sighted decisions that are not mutually coherent, ignoring the long-term development of civil life. An analysis of all of these variables shows the undemocratic nature of home-based e-voting. This is especially worrisome considering that pushbutton democracy is often celebrated as the prototype of ICT-based democratic processes.

That is why the Roman republic model combines the institution of republican rule of law with representative democracy. The influence of ICTs on the principle of public information, such as embodied in freedom of information legislation, forms the crux of this model's analysis. ICTs also offer a variety of possibilities for digital interaction between citizens and legislators, for example through e-rulemaking.

The most comprehensive examination in the analytical part is dedicated to deliberationware democracy. This is the most futuristic vision of the democracy model in the information society and strives to completely digitize the public decision-making process. The will of all individual citizens is collectively formed and remaining contradictions are intermediated by value-neutral software systems. The aim is to find the common will of society, that is the will that encompasses the entire population, without the need for delegation or representation. The social *volonté générale* is to be formed digitally with powerful information systems enabling an unlimited number of citizens to participate in the deliberations that form the public will.

Intelligent software agents feed all opinions expressed during the deliberations into the digital intermediation system, based on the value-free correctness of artificial intelligence, hyperlink quotation procedures, computer supported cooperative work, semantic text orientation, text and argument visualizing procedures and automatic text classification. Consociational-democratic procedures provide the information-channeling decision structures so that the individual opinions of various interest groups can be evaluated in such a way that the people's will is gauged on the basis of a generally acceptable common will, in a republican sense, rather than on a confrontation of aggregated individual wills in a liberalistic sense. This leads to the question of how to program the decision and participation structures in the deliberationware. This question brings us back to the opening hypothesis of this paper, namely that the digitizing of democratic processes not only leads to the reorientation of democratic processes, but also makes it necessary to rethink the involved institutional settings.

In contrary to the majority of literature regarding the topic ICT and democracy, this study comes to the somewhat unexpected conclusion that there is an abundance of undemocratic features in the digitization of democratic processes. All of the investigated models show severe democratic flaws, or at least large challenges. The conclusions to be drawn from analyzing the eight democracy models include the finding that the rule of law and strict separation of powers are more important than ever to guarantee equal participation in the formation of the common will in the information society. It also becomes clear that the liberalist focus of democratic processes in the information society can all too easily lead to undemocratic systems of domination. The option of direct digital participation throws into doubt the long-standing justification of a representative-democratic system. The augmenting risk that politicians could abuse the media for politically motivated repression is also among the conclusions. On the other hand, if ICT are employed according to democratic ideals, especially the last two models illustrate fascinating possibilities.

It comes as no surprise that the study of a relatively new issue cannot present concrete solutions and policy suggestions. The outcome of this study is more akin to a research agenda that identifies areas in which democratic processes are particularly influenced by digitization. In this sense, five aspects of democratic processes have been identified: the new light and importance in which the rule of law and the strict separation of powers appears, including appropriate failsafe legislation and protection of the private sphere; the need to overhaul the party system and redefine the role of multi-channel mass media in the democratic decision-making process; the unequal access to the digital tools of democratic participation and the digital divide; the blurring borders between direct and representative democracy in the information society; and also the demands on research into the development of democracy-fostering ICT applications. All five are integrated aspects of a coherent research agenda so that digitization of democratic processes cannot only be better understood but steered in a direction that promotes and fosters true democracy.

## **Chapter 1: INTRODUCTION, DEFINITIONS AND MODELING**

### **Introduction**

A suitably implemented democracy model is defined on the one hand by its institutional framework conditions and on the other hand by the environment in which democratic processes are realized. During its more than 2,500-year history, democracy has been repeatedly reinvented and developed through various institutional implementation models in different cultures and by numerous societies. "...it would be a mistake to assume that democracy was just invented once and for all, as, for example, the steam engine was invented.... Like fire, painting or writing, democracy seems to have been invented more than once, and in more than one place"<sup>1</sup>. This process of developing democracy is an ongoing one that is dependent on the specific point in history and its circumstances. "Democracy... is so young that even today it still cannot be regarded as something completed. It is... even today still in an arduous search process!"<sup>2</sup>

This search process is influenced by the new achievements in the development of humanity. A complex system of various development factors forms the environment in which democracy is continuously re-invented and developed. As democracy is a mechanism that is based solely on information and communication processes, advances in information processing and improved communication during the course of millennia have had a pronounced influence on governance models applied since the emergence of democracy and on the evolution of the democratic principle itself. For example, Aristotle's view that the influence of democracy had to be restricted to a maximum of 70 kilometers because a person could not travel further than that in one day has been rendered obsolete by technological progress and possibilities during the course of the last 2,500 years. Likewise, the original requirement in the constitution of the United States of America (USA) that there had to be several weeks between the elections in the Electoral Colleges in the individual states and the actual national election of the president,

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<sup>1</sup> *Dahl, Robert*, On Democracy, Yale University Press, London, 1998, P. 8 f.

<sup>2</sup> *Heinrichs, Johannes*, Revolution der Demokratie: Eine Realutopie, Berlin, 2003, P. 46.

which was motivated by the difficulties of travel in those days<sup>3</sup>, is no longer an element in the US democratic processes. Similarly, the application of digital information and communication technologies (ICTs) in democratic processes has quickly led to visible changes over recent years. For example, the 2002 presidential election in Brazil, the world's fifth largest country with 180 million inhabitants, was not carried out on paper ballots but using public election computers. The complete outcome of the election was known twelve hours after the polling booths closed<sup>4</sup>. In contrast to this, the 2000 presidential election in the world's third largest country, the United States of America, was based on an "analog-industrial" method of punching holes in ballot cards. Even five weeks after the election booths closed, the winner was still not known because of the information chaos.

In this sense, it is particularly important to take a closer look at the current developments in ICTs and the related digitization of information and communications flows in a democratic society. The use of ICTs and the digitization of information and communication processes lead to a new social paradigm, often referred to as the information society. This influences developments in trade and commerce, labour and work, education and health systems, the entertainment sector and thus changes the general quality of life for society as a whole. The way society forms its collective will and thus creates the fundamental consensus of its social co-existence is strongly affected by the use of ICTs.

The democratic will is formed solely on the basis of information and communication processes and is thus completely digitizable. The continuing digitization of information and communications flows will subject democratic processes to fundamental and far-reaching changes in the decades to come. The changes do not entirely or by any means automatically promote democracy. The oldest vision of information society and democracy dates back to the year 1948 and was described by George Orwell in his novel on the perfected big-brother state in "1984"<sup>5</sup>. ICTs can contribute to the democratic principle but are by no means a guarantee for it<sup>6</sup>. They are however inevitable. The network of networks and other technological information processing possibilities will not mysteriously disappear again. Not even if their existence is

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<sup>3</sup> See *Scheuch, Michael*, *Neue Informationstechnologien und ihre Auswirkung auf die Demokratietheorie*, Technische Hochschule Darmstadt, Institut für Politikwissenschaften, Magisterarbeit, 1996, P. 21, <http://members.aol.com/Edemokrat/magister.htm> (read January 2005).

<sup>4</sup> *Almeida de, Marco*, *Logros y Retos del Programa e-Brasil*, Asesor de la Secretaría de Logística y Tecnología de Información, Ministerio de Planificación, Presupuesto y Gestión Brasil, präsentiert im Foro Internacional e-Panama, 6-7 Abril, 2004.

<sup>5</sup> *Orwell, George*, 1984, Part 1, Chapter 3, *The Literature Network*, Jalic LLC, first edition 1948, Part 1, Chapter 1, <http://www.online literature.com/orwell/1984> (read January 2005).

<sup>6</sup> In 1932, Berthold Brecht wrote: "Broadcasting has to be converted from a means of distribution into a means of communication. It would be the greatest conceivable means of communication in public life, a huge channeling system, that is it would be if it were capable not only of transmitting but also receiving, i.e. making the audience not only listen but also speak and putting it in touch rather than leaving it in isolation". 70 years later ICTs seem to be fulfilling this old dream to the benefit of democracy. But it has to be remembered that broadcasting was at the beginning of the 20th century a bidirectional means of communication including innumerable radio hams and radio communities. In those days when every radio operator was more or less equally professional or unprofessional, radio frequencies were used in the main to exchange information between radio operators rather than for the unidirectional diffusion of information. Shortly after however, these bidirectional participation options were no longer used, and operator communication turned into uni-directional diffusion of information over the radio. This leads to the question if a similar development is to be expected from modern ICTs, such as the Internet? see: *Brecht, Berthold*, *Der Rundfunk als Kommunikationsapparat. Rede über die Funktion des Rundfunks*, First edition 1932, in: *Schriften zu Literatur und Kunst I*, 1967, P. 134.

ignored and regarded as not important. Additionally to the inevitability of the development, the current speed with which the growing use of ICTs drives the development of information societies and influences the way democracy itself functions adds a certain degree of urgency to the whole matter. While many presume that the global victory of democracy after the fall of the Berlin Wall does not demand any obvious reason for reforming the current democracy model<sup>7</sup>, the incredibly fast rate of technological progress is revealing ever more signs that the traditional democratic institutions and models no longer supply the desired democratic properties under the new prevailing technological conditions.

In such an environment of uncertainty, it is extremely difficult to gaze into the future. However, in a sense that follows Seneca's logic that if one does not know to which port one might be sailing, no wind is favourable<sup>8</sup>, the best way of appraising the future is to be actively involved in shaping its development. "What *is* and what *should be* do not run on two parallel tracks that never meet. On the contrary, they constantly influence each other and interact"<sup>9</sup>.

The present study is intended as a contribution to influence the "arduous search process"<sup>10</sup> in which democracy finds itself, by addressing the potential, risks, current and future developments relating to the digitization of democratic processes. The scenarios developed in this study are exploratory not predictive and aim at forcing to reflect on the consequences of digitization of democratic processes. The two main dimensions of analysis are the institutional possibilities to implement democracy and the prospective related to technological progress. Over the last 2,500 years so many different institutional models for implementing democracy have been tried out that the historical experiences and theories of democracy must be included in the analysis. The present study uses the institutional framework conditions of the chosen democracy model as the basis to derive the various development trends provoked by the changes of technological progress. The aim is to identify those areas of democratic processes that are strongly influenced by the changes introduced by the digitization of democratic information flows and communication processes. It is these areas that will require greater attention in the future if the evolution of democracy in information societies is to be fostered to the benefit of the democratic principle. This means that the scenarios are generated from a set of conceptual assumptions on basis of traditional democratic theory, rather than from an empirical exploration through a questionnaire of expert interviews. The strength of this approach is two-fold. First it brings intellectual coherence to the scenarios. Secondly it assures that traditional knowledge and experiences of the long history of democracy are adequately considered and not overthrown by short-winded fashions and glamorous hypes. This is especially important when considering that investigation of other areas of digitization, such as the so-called "new-economy" or the "dot-com economy", have been misled by not adequately considering the fundamental knowledge of traditional theories.

During the analysis, it is addressed whether, how and under which conditions digital information and communication processes are beneficial or inimical to democracy. Here, it is of lesser importance whether these democratic or undemocratic communication processes have

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<sup>7</sup> "...to keep what we have, however incomplete it is, than to gamble it away for what we might have, however attractive". Barber, Benjamin, Strong Democracy, Participatory Politics for a New Age, 1984, P. 308.

<sup>8</sup> "*Ignoranti, quem portum petat, nullus suus ventus est*".

<sup>9</sup> Sartori, Giovanni, Demokratietheorie, Darmstadt, Wissenschaftliche Buchgesellschaft, 1992, P. 23.

<sup>10</sup> See footnote 2.

positive or negative consequences for civil life. This would require a deeper discussion on the meaning and purpose of democracy for the well-being of people, extending back to Aristotle and his distinction between "good and bad types of government"<sup>11</sup>. Value-based normative and ideological judgments would be indispensable in this regard. Those, however, are aspects that go beyond the scope of the methodological approach adopted here. The present study is thus not intended to weigh up various democracy models against each other in order to reveal the one model as 'good' and the other as 'bad' for society. Instead, it analyzes the development of the various variants of democracy *as such* under the aspect of digitization in order to reach a conclusion whether the one or other institutional framework condition tends to foster or jeopardize the principle of democracy in the information society. In other words, when democracy is analyzed under its different aspects, it is of lesser importance whether the chosen combination of factors is good or bad for people and of more importance whether they are good or bad for the achievement of democracy *as such*, while the prevalence of democracy might be questionable from an ideological point of view.

### The Democratic Principle

Democracy is based on the political-philosophical principle of self-determination. This assumes that individuals are best suited for determining their fortunes, as laid down in Article 1 of the Universal Declaration of Human Rights. "All human beings are born free and equal in dignity and rights. They are endowed with reason and conscience and should act towards one another in a spirit of brotherhood". This certainty is presumed *a priori* for the democratic principle and says that free persons have the natural right to shape their political, economic, social and cultural environment as they think fit.

If the individual lives in a society, then the principle of self-determination of the individual must be expanded to the self-determination of the group. The role played by the individual's influence is important in the search for common principles for the good life of all members of society. The characteristic property of this common search is the uncertainty about future developments and the disunity about the various values of the community members. This in turn is the source of the necessity to exchange information and communicate between the various members of society. The mutual exchange of information triggers a common process, termed deliberation by Hobbes<sup>12</sup>.

Where the truth is not perceptible and it is assumed that all people are born free and equal in dignity and rights and endowed with reason and conscience, then in an ideal case, mechanisms should be developed that reassign the responsibility for this ignorance equally to all members of society entitled to self-determination<sup>13</sup>. Information and communication mechanisms that

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<sup>11</sup> *Aristoteles*, Politik III, 1278 b –1279, 6. Unterschiede der Staatsverfassungen, 7. Verfassungsformen, translated by Franz Susemihl, in: *Massing, Peter und Gotthard Breit*, Demokratietheorien, Von der Antike bis zur Gegenwart, Texte und Interpretationshilfen, Wochenschauverlag, Schwalbach, 2002, P. 37 ff.

<sup>12</sup> *Hobbes, Thomas*, Leviathan, oder Wesen, Form und Gewalt des kirchlichen und bürgerlichen Staates, First edition 1651, Rowohlt's Klassiker der Literatur und der Wissenschaft, in the translation by Dorothee Tidow, Ed. Ernesto Grassi und Walter Hess, München, 1965, P. 45 ff.

<sup>13</sup> "Politics concerns itself only with those realms where truth is not — or is not yet — known. We do not vote for the best polio vaccines or conduct surveys on the ideal sphere shuttle, not has Boolean algebra been subject to

support the common deliberation for ascertaining the truth are the basis for this. The focus in the design of democratic information and communication processes is set on just procedures, rather than on truthful results<sup>14</sup>. The involved uncertainty is too large and too subjective as to aspire to encounter the truth. The democratic content of the processes is therefore independent of whether the decision taken ultimately turns out to be "good" or "bad" for society. As long as all those involved bear their part of the responsibility, the procedure has a democratic content.

The responsibility for the common fate and the harmonious civil life should therefore be equally shared. Equality among all arises when there is no coercion between the members of society. Robert Dahl presents this idea with an anecdote about Danish Vikings. They organized themselves in tings, where as free and equal Vikings they resolved disputes and agreed on or rejected the rules for the community. "That the idea of equality was alive and well among Viking freeman in the tenth century is attested to by the answer given by some Danish Vikings when, while travelling up a river in France, they were asked by a messenger calling out from the riverbank, 'What is the name of your master?' 'None', they replied, 'we are equals'"<sup>15</sup>.

Among equals there is no master or ruler, an idea for which medieval continental Europe at the turn of the first century had little understanding. For the Vikings on the other hand equality and domination were clear opposites. If the good life of all is to be settled in general freedom among equals, there can be no coercion. This renders the process democratic. Democracy thus cannot be coercive<sup>16</sup>. "The democratic principle declares... the constitution of non-coercion... The democratic principle decides in a constitution of freedom negatively against any kind of coercion"<sup>17</sup>. By this minimal definition, democracy is the opposite of coercion. Democracy is thus the "governance of the people" (from "demos" – the Greek word for people, mass or fully citizenship – and "kratein", "govern"). It is the self-determination of a society in the absence of coercion in the outlined sense of superiority and subordination.

Here "people" should be defined in a political and not ethnic sense. According to Cicero " ... a people is not however just any congregate collection of people, but the gathering of a group united in the recognition of what is right and the common ground of utility"<sup>18</sup>. In the spirit of Kant, people is thus defined as here "staatsvolk" ('civitas'), which is an "association of a group of people under the rule of law"<sup>19</sup>. The boundaries of the democratic principle need not

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electoral testing. But Laetrile and genetic engineering, while they belong formally to the domain of science, have aroused sufficient conflict among scientists to throw them into the political domain — and rightly so. Where consensus stops, politics start". *Barber, Benjamin*, Strong Democracy, P. 129.

<sup>14</sup> *Rawls, John*, A Theory of Justice, Harvard College, Harvard University Press, 1973, Revised Edition, Fifth Printing, 2003, P. 20.

<sup>15</sup> *Dahl, Robert*, On Democracy, P. 19.

<sup>16</sup> *Schachtschneider, Karl Albrecht*, Res publica res populi, Grundlegung einer Allgemeinen Republiklehre. Ein Beitrag zur Freiheits-, Rechts- und Staatslehre", Berlin 1994, XXXIII, 1994, P. 14 f., 18 ff., 25 f., 93 f., 139 ff., 145 ff.; *idem*, Die Freiheit in der Republik, 2003, 3. Kapitel, 5. Kapitel, III., 6. Kapitel, I. in this sense also *Rousseau, Jean-Jacques*, Vom Gesellschaftsvertrag oder Grundsätze des Staatsrechts, First edition, 1762, translated and ed. Hans Bockard, Stuttgart, Reclam jun., 1977, II. Buch, Kapitel 1, 2, 4.

<sup>17</sup> *Schachtschneider, Karl Albrecht*, Res publica res populi, 1994, P. 4.

<sup>18</sup> *Cicero*, De re publica, De re publica, translated and ed. by Karl Büchner, Stuttgart 1979, Para. I, 39. "...populus autem non omnis hominum coetus quoquo modo congregatus, sed coetus multitudinis iuris consensu et utilitatis communione sociatus".

<sup>19</sup> *Kant, Immanuel*, Metaphysik der Sitten, Ed. Weischedel, First edition 1797, Bd. 7, P. 431.



necessarily coincide with the artificially created construct of the nation state and is generally defined on the basis of the extent of the decision-taking power of the democratically organized group. Thus, the democratic principle can have local, regional, national or global boundaries. "All people who can mutually influence each other must belong to some civic constitution"<sup>20</sup>.

### **On information and communication technologies**

Technology in the service of information and communication has always been a fixed component of human development. The ability to share information and the profound implications of communication have long astonished and puzzled human kind throughout its development, given it an omnipresent and almost mystic importance for all human conduct. In the Bible, St. John's Gospel even considers the word as the first feature of existence: "In the beginning was the Word and the Word was with God, and the Word was God ... And the Word became flesh and dwelt among us, full of grace and truth..."<sup>21</sup>. A long tradition of linguists maintains that it is the focused use of information and communication that so clearly separated the evolutionary path of humans and animals. It was and is then the ability to communicate, i.e. to formulate and exchange thoughts that enabled human intelligence to develop<sup>22</sup>. Since his first days, man has used certain instruments for communication. *Homo sapiens* (wise man) differed from other species in that it was the first to paint symbolic signs on cave walls in order to communicate messages. The use of "technology" to communicate with one's surroundings and to exchange thoughts was continuously developed during the course of thousands of years.

The capacity of information and communications systems is growing constantly. Schumpeter's "creative destruction"<sup>23</sup> is extremely powerful and rapid in this segment of technological evolution. The much quoted "*Moore's law*", that microprocessor capacity doubles about every two years (scientifically proven since 1971), or "*Cooper's law*", that the use of radio frequencies doubles every 30 months (valid since 1895), underscores the pace of innovation in the ICT sector.

The network is not only becoming ever more efficient, but also universal and ubiquitous. In 2001 more data could be sent through a single cable in one second than over the entire Internet in one month in 1997<sup>24</sup>. The number of Internet users around the world grew from 10 million in 1993 to 870 million in 2004 (14% of the world's population). The number of cell phones rose in the same period from 34 to 1,752 million (27% of the world's population)<sup>25</sup>. But not only the

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<sup>20</sup> *Kant, Immanuel*, Zum ewigen Frieden, Ein philosophischer Entwurf, First edition 1795, herausgegeben von Rudolf Malter, Philip Reclam Jun. Stuttgart, 1984, Zweiter Abschnitt, P. 11.

<sup>21</sup> Gospel according to John 1.1-1.14.

<sup>22</sup> On the context between language research and human evolution see *Bickerton, Derek*, Language and Human Behavior, Jessie and John Danz Lectures, UCL Press, 1995; and *Jablonski, Nina* and Leslie Aiello, The Origin and Diversification of Language, California Academy of Sciences, San Francisco, CA, 1998.

<sup>23</sup> *Schumpeter, Joseph Alois*, Kapitalismus, Sozialismus und Demokratie, First edition 1942, 4.Auflage, München 1950, Kapitel 7.

<sup>24</sup> On the continuous growth in bandwidth and its implications *Gilder, George*, Telecosm: How Infinite Bandwidth Will Revolutionize Our World, Blackstone Audiobooks, New York, 2000.

<sup>25</sup> *ITU* (International Telecommunications Union), Key Global Telecom Indicators for the World Telecommunications Service Sector, World Telecommunications Database, Geneva, 2003, <http://www.itu.int/itu-d/ict> (read January 2005).

efficiency and quantity are increasing rapidly, the quality of information exchange has been constantly improved and is heading towards ICT convergence, the integration of multimedia information and communication networks in the "Inter-net", the network of networks.

The exchange, storage and processing of information by digital systems have certain characteristics. It is important to heed these particular features of digital interaction when drawing conclusions about the effects of ICTs on a particular area - in this case on democracy. The changes in spatial and temporal preconditions for inter-personal communication are of major importance when analyzing the democratic principle. Normally, the underlying information and communication structures are presumed *a priori* as fulfilled on the basis of existing technologies.<sup>26</sup> The context between a society's communication structures and the way it considers democracy is not seen as being of any import. One consequence of this lack of appreciation is the view that various real-world factors constitute insoluble restrictions and limitations for the practical implementation of a democracy model<sup>27</sup>.

A good example for a generally accepted practical restriction of democracy is the area of a territorial state and the thus related geographical distance between its citizens. Aristotle is attributed with saying that democracy extends only so far as a man can travel in one day. The democracy model thus results from particular framework conditions in place at the time. A similar restrictive framework condition is the so-called "principle of the small unit"<sup>28</sup> that is supposedly necessary for meaningful communication between people. In the past it was practically and technically not possible to have effective discourse with a large number of fellow citizens at the same time. Assuming traditional information and communication processes, it would take 208 days non stop if every single one of 10,000 citizens were each given only ten minutes to have their say in a common discussion<sup>29</sup>. However, modern ICTs can tackle the challenges of space and time while communication can be optimized by parallel networking and intelligent classification of information inputs. In this sense, the digitization of information flows challenges the rules that were once valid for democratic processes.

Real-world limitations on democracy, such as geographic distance and the number of citizens involved, thus change their nature. "If, in Aristotle's time, the self-governing polis could extend no further than the territory a man could traverse in a day (so that all men could attend any assembly), the ultimate permissible size of a polis is now as elastic as technology itself ... Once it is understood that the problem of scale is susceptible to technological and institutional melioration and that political communities are human networks rooted in communication, scale becomes a tractable challenge rather than an insuperable barrier. ... Or, to put it more directly,

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<sup>26</sup> For a discussion of this see *Scheuch, Michael*, Neue Informationstechnologien und ihre Auswirkung auf die Demokratietheorie, P. 11-24.

<sup>27</sup> For a discussion of such real-world restrictions on democracy see *Dahl, Robert A.*, On Democracy, P. 83 ff., 105 ff. *Vorländer, Hans*, Demokratie, Geschichte, Formen, Theorien, Verlag C.H. Beck, München, 2003, P. 51 ff., 94 ff. *Schmidt, Manfred G.*, Demokratietheorien, S.91-158, 175 ff.

<sup>28</sup> *Schachtschneider, Karl Albrecht*, Die Freiheit in der Republik, 5. Kapitel, I, 3.; *idem*, Prinzipien des Rechtsstaates, S.53 ff.; *idem*, Rechtsstaatlichkeit als Grundlage des inneren und äusseren Friedens, in: Mut zur Ethik. Grundrechte, Rechtsstaatlichkeit und Völkerrecht versus Krieg, 2002, P. 6 – 94, P. 70 ff.; [http://www.oer.wiso.uni-erlangen.de/Schriften/Dokumente\\_zum\\_Herunterladen/Rechtsstaatlichkeit\\_als\\_Grundlage\\_des\\_innenen\\_und\\_ausseren\\_Friedens.pdf](http://www.oer.wiso.uni-erlangen.de/Schriften/Dokumente_zum_Herunterladen/Rechtsstaatlichkeit_als_Grundlage_des_innenen_und_ausseren_Friedens.pdf) (read January 2005).

<sup>29</sup> *Dahl, Robert A.*, On Democracy, P. 106 f.

the problem of scale is the problem of communication, and to deal with the second is to deal with the first"<sup>30</sup>.

Digital data are based on bits, the smallest indivisible unit of digital information – either a one or a zero. Every type of information, be it numbers or letters, noises or moving images, can be coded in bits. The end of the 20th century has witnessed a strong trend towards the digitization of products and services. Newspapers, books, music, films, TV, airline tickets, money and securities have already been digitized (*digital goods*) and are to a large extent transferred and traded electronically. Even such an old and familiar item such as 'money' has long since initiated its digitization, for example through cash cards or electronic transactions. This development will be continued until every coin has been replaced by digital data changing hands via (for example wireless and mobile) electronic wallets in real time. In other words, everything that can be digitized is being digitized. This trend is being driven above all by the numerous advantages digital information generates.

Since bits can travel around the world at the speed of light digital information is not subjected to significant delays. Combined with the possibility of practically unlimited digital data storage on computer servers, this leads to a new time management of the information flow. On the one hand, information can be transmitted in **real time**, thus accelerating exchange immensely, and on the other hand **asynchronous information exchange** is made possible. The stored information can be transmitted and processed or edited with any time lag that is desired. This combines the advantages of traditional telecommunications with the information-storing and distributing advantages of printing and the classic library. In this sense, ICT enable new ways to accumulate, selectively process and exchange information.

In addition to this new time management, the new technology also permits a new spatial management of the information flow, only restricted by the processing medium (performance and extent of the network). Digital information experiences the "*death of distance*"<sup>31</sup>. Non-digital information on the other hand remains subject to the laws of nature in their physical transportation<sup>32</sup>. Deliberating, expressing opinions, voting, gathering and counting the votes cast, and announcing the results are all digitizable processes, and thus also subject to the "*death of distance*".

A further advantage of digital exchange is that bits are **non rivaling**, in other words they cannot be used up or consumed. Digital data can always be read again, they may be divided up, abridged, mixed and redistributed, but we do not consume them. This leads to almost endless scale effects. It may take millions of Euros to produce digital information (for example a computer program or motion film), but then simple commands like 'copy' and 'paste' suffice to duplicate it. The cost structure of digital information is almost 100% fixed costs for its

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<sup>30</sup> Barber, Benjamin, Strong Democracy, P. 246 ff.

<sup>31</sup> In 1995, the *Economist* published an influential and provocative article entitled "*The Death of Distance*" by Francis Cairncross. The article deals with the effects of telecommunications and the Internet on geographic distance: "*The cost of communications will probably be the single most important economic force shaping society in the first half of the next century...*". Cairncross, Francis, *The Death of Distance: How the Communications Revolution Will Change Our Lives*, Cambridge, Massachusetts, Harvard Business School Press, 1997, P. 1.

<sup>32</sup> For an introduction and general treatment of the concepts of digital goods and not-digital goods *USDOC (U.S. Department of Commerce)*, *The emerging digital economy*, 1998, <http://ecommerce.gov> (read January 2005). *idem*, *The emerging digital economy 2*, 1999, <http://ecommerce.gov> (read January 2005). *idem*, *Digital Economy 2000*, 2000, <http://ecommerce.gov> (read January 2005).

production, whilst the variable costs are practically non-existent. This has a major effect on the transparency of public acts. There are hardly any additional costs for providing a public document or report to either one or many citizens, for example by posting on a website. Following the introduction of modern ICTs in the state machinery (e-government or electronic administration), it is possible to make public documents generally available on the relevant organization's website, thus promoting the transparency of public administration.

A further characteristic of digital interaction lies in the nature of **multidirectional networks**<sup>33</sup>. Unlike traditional uni- or bi-directional communication (*one-to-many*), multidirectional communication structures enable the flow of information both as comprehensive individual communication (*one-to-one*) and also among many at the same time (*many-to-many*). For example, email or video conferences can be used as digitized *face-to-face* communication in all of these communication directions. Unlike paper-based letters, emails can be sent *one-to-one*, *many-to-one*, and thanks to the non rivalry of bits also *one-to-many* or *many-to-many*. Owing to the non rivalry of bits and the nature of multidirectional networks, all four communication channels can now be used very quickly and practically at the same time, but above all –for the first time in the history of communications—in a media-frictionless manner, that is without the need to change the information carrying medium (see table "Communications variants").

#### Communications variants

	<b>From one</b>	<b>From many</b>
<b>To one</b>	analog + digital telephone, personal letter	voting, applause, survey, auction
<b>To many</b>	printing press, radio, TV, lecture, mass mailings, info mail	meetings, chats, e-groups, groupware, email list, audio and video conference

*Many-to-many* communication can have a topology formed as a star, chain, ring or network. Accordingly, such multidirectional networks are subject to "**network externalities**"<sup>34</sup>: the more participants connecting to the digital network, the greater the value of the network for each participant. Network effects influence information goods whose benefit to the consumer of the good rises with the number of consumers involved in the consumption of the good. For an economist this is a strange finding, because, since Adam Smith, it has been the law of scarcity that has driven economic life. This says that the higher the number of consumers using the same good, the lower the value for the individual. In networks however the opposite is the case. When Graham Bell invented the telephone in 1876, the value of the network was still very limited. With his two telephones he could only enjoy two communication directions. When he connected the third telephone however, communication was already possible in six directions, with the fourth telephone in twelve directions, etc. The value of network is thus increased by each new participant. To be precise, the value rises with the function  $(X^2 - X)$ . Hence many

<sup>33</sup> See *Shapiro, Carl and Hal Varian, Information Rules A Strategic Guide to the Network Economy*, Harvard Business School Press, 1999.

<sup>34</sup> *Shapiro, Carl and Hal Varian, Information Rules*, P. 13 f., 183 f, 321. *Kelly, Kevin, New Rules for the New Economy*, 1997, 2. the Law of Plentitude, [http://www.wired.com/wired/archive/5.09/newrules\\_pr.html](http://www.wired.com/wired/archive/5.09/newrules_pr.html) (read January 2005).

commercial online business models strive to win as many customers as possible for their networks, raising potential benefits exponentially.

Multidirectional networks thus run counter to the "principle of the small unit"<sup>35</sup>. It is not the small unit that is useful for generating value, but having as many consumers as possible. Then however, the suitable processing of the now available flood of information becomes decisive. For example, intelligent computer science programs can be used to moderate mass online discussions, to create user profiles and to use the revealed preference structures to individually engage large numbers of customers in the communication (*Customer Relationship Management*). The greatest challenge is finding suitable solutions to efficiently steer and correctly administer the information overflow of a very large number of participants. In the words of Manuel Castells: "New information technologies are not simply tools to be applied, but processes to be developed"<sup>36</sup>.

All digital processes are subject to the laws governing the specific features of digital interaction presented here. A striking example for a combination of these specific features can be found in **hypertext links** between web pages. This linking is the fundamental structural element of today's prevalent world-wide web (www)<sup>37</sup>. "The dream behind the Web is of a common information space in which we communicate by sharing information. Its universality is essential: the fact that a hypertext link can point to anything, be it personal, local or global, be it draft or highly polished"<sup>38</sup>. The web enables authors to express their opinions, link their thoughts with other web pages using a hyperlink, independently of the geographical location of the linked website. This can happen synchronously in real time (for example by a chat application), but also in an asynchronous manner (in information depositories). Such connections can be carried out in restricted or unrestricted access settings, resulting in private one-to-one communications or involving millions of users. If another idea producer has already linked his or her opinions with this website, the non rivalry of digital information does not reduce or use up the value of the original idea. On contrary, the value of this information rises thanks to network externalities. "[Networks] become a realistic mirror (or in fact the primary embodiment) of the ways in which we work and play and socialize"<sup>39</sup>. Completely new, comprehensive and fast mechanisms are now available for societal deliberations.

### **On the transition phase towards the information society**

It important to bear in mind that the transition to an information society is by no means completed yet and that the current transition process has significant asymmetries. This fact should not be overlooked when analyzing the paradigm. The converging information and

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<sup>35</sup> See footnote 28.

<sup>36</sup> *Castells, Manuel*, *The Rise of the Network Society*, P. 31.

<sup>37</sup> "As nodes or islands websites – together with the links between them – constitute the entirety of the web". *Egloff, Daniel*, *Digitale Demokratie: Mythos oder Realität? Auf den Spuren der demokratischen Aspekte des Internets und der Computerkultur*, *Studien zur Kommunikationswissenschaft*, Westdeutscher Verlag Wiesbaden, 2002, P. 113.

<sup>38</sup> *Berners-Lee, Tim*, *The World Wide Web: A very short personal history*, <http://www.w3.org/People/Berners-Lee/ShortHistory> (read January 2005).

<sup>39</sup> *Berners-Lee, Tim*, *The World Wide Web*.

communications technology is only at the very beginning of its development, nor is the distribution of this new technology yet universal.

As with other technologies, one can see that the distribution of ICTs follows a centre-periphery scheme, with the centre being distinguished by certain characteristics, such as higher income and standard of education. The periphery tends to be at a lower stage of development. This centre-periphery scheme results in unequal access to ICTs, following long established patterns of inequality. In the established information society, participation in democratic processes requires access to the digital channels and tools that transmit the democratic information and communication processes. If certain groups are denied access to these channels, this results in non-universality of the democratic principle. This type of inequality is generally known as the *digital divide*.

In order to enable a sustainable analysis of democracy in the information society, the digital divide and similar practical and technical developments have to be recognized as dynamic, temporary and changeable. This should not be interpreted in any way as underestimating or playing down the significance of this inequality. The digital divide is real and its full effect on inequality in a society very difficult to gauge. However, research into the implications of ICT often gets sidetracked by the technological subtleties of the temporary stage of development in ICT evolution. This results in the wrong conclusions being drawn about potential future developments.

For example, a German dissertation entitled "Democracy und Internet" that was published in 2002 came to the conclusion that the distribution of the Internet in Germany "at approximately twenty percent of the of population ... is not large enough to lead to corresponding changes in society ... Effects on the political system are thus not to be expected"<sup>40</sup>. Germany had an Internet penetration of about 20 percent in 1998. When the study was published in 2002 it had already reached 47.3 percent<sup>41</sup>. Thus even during the three years of research for the quoted dissertation the picture had already changed significantly. In view of the fact that half of the German population was regularly using the Internet in 2002, the findings of this study need to be reconsidered at the very least.

Apart from bearing in mind the early stage of technological diffusion, it should not be overlooked that the technology itself is being continuously improved. Driven in particular by the motor of ICT convergence, technological solutions and their functions are changing rapidly. It goes without saying that the early stage of development is producing a large number of **problems in the practical application of technological systems**. Since various authors regard such problems as given and unalterable properties of technology and commit the conceptual error of equating a given technological solution (such as a PC with a web browser) with the entire system of information and communications technology, the potential of ICTs is often misjudged. Equating information and communications technology with a PC and web browser is like equating rail transport technologies solely with a steam locomotive, or sound reproduction technology with an LP player, or considering the potential of electricity solely in conjunction with an electric light bulb. While all of these have been important first innovations of larger technological systems, they do by no way limit the subsequent diversity of solutions and the versatility of applications. In order to correctly gauge the potential of ICTs, it must be

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<sup>40</sup> Wagner, Ralf, Demokratie und Internet, P. 125.

<sup>41</sup> ITU, Key Global Telecom Indicators for the World Telecommunication Service Sector.

taken as the continuously developing, evolutionary system that it is. According to this basis, the core of the information society represents information-exchanging people who network in digital communication channels, independently of a particular technology or a technological feature that can be traced back to a temporary phase of technological process and its provisional application.

Three examples of current application problems that are gradually being removed

Technology is being developed such that it adapts as much as possible to people's habits. This is often expressed by the term "user-friendliness". For example, it is clear that entering information using a keyboard is a very complicated means of communication for a short 'chat'. This often leads to older people in particular rejecting Internet chatting for practical reasons. However, the technology is being modified to suit human convenience. In the near future, we will be able to chat via video conferences and even 3D holograms. If we are to research at the present point in time into the influence of digital chatting on the democratic principle, we should concentrate particularly on digital communication and its characteristics and not get sidetracked above all during our normative research by the technical application problems (such as the necessity of keying in words).

Security problems, such as identification and authentication mechanisms (currently one of the most pressing problems), will be comfortably and reliably solved by biotechnological ICTs (such as identification using finger prints or iris recognition). Only a few years ago, it was still rejected that a petition, which for example in Germany has to be submitted with a "signature"<sup>42</sup> by law, could be submitted via the Internet<sup>43</sup>. However, the advanced development of digital signatures has since solved this technological problem and, at least in Germany, petitions have already been submitted electronically with digital signatures<sup>44</sup>.

The often cited information overload can also be traced back in part to the early phase of technological progress. The fact that ICTs make it technologically possible to send information directly, for example by email, to other people, this means that the information recipients might be flooded with information<sup>45</sup>. The necessary thematic categorization and the qualitative weeding out of undesired information can constitute an unacceptable work load for recipients who see themselves confronted with the challenge of "assigning their limited resource attention optimally to the numerous sources and channels"<sup>46</sup>. This home-made problem of ICTs too will be alleviated by the development of appropriate technological solutions. Information-processing quality filters with individual and intelligent criteria patterns, thematic preselection and user-driven evaluation and compression of information will become important elements of communications flow in the information society<sup>47</sup>. Parallel to this learning capacity of technological solutions, people in the information society too will have to develop ways to cope with information-processing tasks.

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<sup>42</sup> Section 110 I Standing Orders of the German Parliament (GOBT), No. 4.

<sup>43</sup> *Wagner, Ralf*, Demokratie und Internet, P. 133.

<sup>44</sup> *Wagner, Ralf*, Demokratie und Internet, P. 134 f.

<sup>45</sup> See for example the complaints of an email inundated mayor in *Wesselmann, Christoph*, Internet und Partizipation in Kommunen, Strategien des optimalen Kommunikations-Mix, Dissertation Universität Oldenburg, Deutscher Universitäts-Verlag, Wiesbaden, 2002, P. 76 f.

<sup>46</sup> *Wesselmann, Christoph*, Internet und Partizipation in Kommunen, Strategien des optimalen Kommunikations-Mix, Dissertation Universität Oldenburg, Deutscher Universitäts-Verlag, Wiesbaden, 2002, P. 103.

<sup>47</sup> For example, Wolfgang Thierse, President of the German Parliament in 2000, noted: "The German Parliament is drowning in emails. We have long been thinking about how to develop a filter that can separate the unimportant from the important". *Spiegel*, Den Bürgern mehr Einfluss zugestehen, Wolfgang Thierse, 30 Dezember 2000, <http://www.spiegel.de/politik/deutschland/0,1518,110135,00.html> (read January 2005).

### Three basic axes for the theoretical analysis of democracy

As already addressed in the preceding sections, the two concepts underlying this study, democracy and information society, are very complex and dynamic. Structuring the discussion of both concepts requires a model that reduces this complexity to analyzable dimensions by abstracting from reality. In such a model, 'reality' is presented by various model components and their mutual combination. Since the first of the two concepts - democracy - has without doubt already been researched more thoroughly than information society, the applied model is based on a three-dimensional characterization of democracy. This provides the structure to address the trends in the various democracy scenarios in information society.

The model developed for this study is based on three basic axes derived from the three fundamental questions of democratic processes: "Who?", "How?" and "What?". Democratic possibilities will then be identified by **who** is involved in ascertaining the truth and determining the law (all the citizens or only a selected group of representatives); **how** flexible are democratic powers (do people rule as they like or do people-made laws rule); and on **what** kind of citizenship is the underlying social contract based (republican or liberalist). For reasons of simplicity and presentation, these three basic axes are all shown as bipolar axes, each with two extreme points, whereby the various transition zones between the extreme points of the continuum have been ignored for our purposes.

These three bipolar axes form a three-dimensional space in which we can place eight different democracy models. These represent various institutional framework conditions within which the democratic principle can be implemented. It will be followed by a discussion of how the digitization of democratic processes affects each of these eight democracy models, taking into consideration that the influence of ICTs on the democratic principle is dependent on the institutional framework conditions. This provides a basis for deriving in the following chapters those areas of the democratic principle most strongly influenced by changes in the information society.

#### WHO is involved in identifying the truth and determining the law?

The two extreme points of this axis relate to the well-known distinction between direct and representative democratic systems. The underlying discussion goes back to the dawn of democracy in ancient Athens. The well-known Athenian constitutional debate centred on the number of people involved in the public deliberation process<sup>48</sup>. Unlike autocratic power structures, every second citizen in ancient Athens held temporary political office chosen by the casting of lots, either in the assembly, the courts, council or in the administration. This massive and active inclusion of people in day-to-day politics remains unique to the present day.

The two extreme points on the axis of determining right thus represent either the entire population or few representatives of the people who derive their legitimation to exercise this power from the people. Ruler-based types of government are not included because they are not democratic<sup>49</sup>. Whether the democratic process for determining the truth is entrusted to one

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<sup>48</sup> See *Schmidt, Manfred G.*, *Demokratiethorien*, P. 34 ff. *Vorländer, Hans*, *Demokratie*, P. 20 ff. *Massing, Peter* und *Gotthard Breit*, *Demokratiethorien*, P. 27 ff, 37 ff.

<sup>49</sup> See footnote 16.



individual legitimated representative or a more or less large group of representatives is not distinguished here since both are covered by the representative democratic system.

In modern theories of democracy the arguments for the greatest possible direct participation of citizens in the democratic truth determination process are based on the theory of **Jean-Jacques Rousseau** (1712-1778). For Rousseau it was inconceivable to seek out laws that entrust the good life of the people to people's representatives, be it by the grace of God (as in an absolute monarchy) or by election or nomination (as in a constitutional monarchy). For Rousseau, sovereignty rested with the people and was indivisible and inalienable. Rousseau strongly opposed the idea that although the common good was a matter of the people, it could be represented by an elite or even a constitutional monarch under a legitimate transfer of power. Once a people delegates its power of self-determination to representatives, "it is not longer free, it exists no longer"<sup>50</sup>. The core of his critique of representation concerns the transfer of legislative powers, stating that "every law not decided by the people itself is void; it not a law at all". Based on Rousseau's understanding of democracy, today's usual "modern representative democracies" would be regarded as "oligarchies with an elected political leadership"<sup>51</sup>. In today's widespread representative democracy, the actual act of sovereignty - legislation and enactment - rests in the hands of representatives (parliaments and civil servants), a situation that would have been intolerable for Rousseau.

Parallel to Rousseau's concept, the principle of constitutional monarchy was developed, with the Federalist Papers playing a major role during the foundation phase in the United States of America. The Papers spoke out against direct democracy (popular government) and for representative democracy. Besides the limitations of technical implementation for a direct democracy in a territorial state of the 18th century, the federalist **James Madison** (1751-1836) above all raised the qualifications of his fellow citizens as the clinching argument. For him, it is indispensable that the government is derived from a "great body of society"<sup>52</sup>. Nevertheless it must be derived and for the federalists "a government in which the scheme of representation takes place"<sup>53</sup> is thus the suitable form of government. This attempts to counter the "instability, injustice, and confusion... under which popular governments have everywhere perished"<sup>54</sup>. Madison did not hide the fact that he considered the masses to be incapable of determining their own destiny and needed representation for their own good. "The delegation of the government ... to a smaller number of citizens elected by the rest ... [has] the effect ... to refine and enlarge the public views by passing them through the medium of a chosen body of citizens whose wisdom may best discern the true interest of their country and whose patriotism and love of justice will be least likely to sacrifice it to temporary or partial considerations. Under such a regulation it may well happen that the public voice, pronounced by the representatives

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<sup>50</sup> See and for following *Rousseau, Jean-Jacques*, Social contract, III. Book, Chapter 15.

<sup>51</sup> *Dahl, Robert*, Democracy and its Critics, Yale University Press, New Haven and London, P. 225.

<sup>52</sup> *Madison, James*, Federalist 39, The Conformity of the Plan to Republican Principles, Independent Journal, January 17, 1788, ed. Constitution Society, Austin, Texas, <http://www.constitution.org/fed/federa39.htm> (read January 2005).

<sup>53</sup> *Madison, James*, "Federalist 10, The Utility of the Union as a Safeguard Against Domestic Faction and Insurrection (continued)", Independent Journal, November 22, 1787, ed. Constitution Society, Austin, Texas, <http://www.constitution.org/fed/federa10.htm> (read January 2005).

<sup>54</sup> *Madison, James*, Federalist 10, P. 1.

of the people, will be more consonant to the public good than if pronounced by the people themselves, convened for the same purpose."<sup>55</sup>

This mechanism with which public views are "refined and enlarged" is often described with the metaphor of the "*Madisonian filter*". Public opinion in its "raw form" is to be refined by filtering and so produce what permits the good life of all in general freedom and equality to the well-being of everybody<sup>56</sup>. He relied on the conviction that moral representatives ("a chosen body of citizens, whose wisdom... patriotism and love of justice...") can ensure this better than the people themselves so that the entire population can profit from the results. Deliberations of a high moral standard could, according to this line of argument, only take place in a small group of very selected and conscientious representatives<sup>57</sup>.

The two extreme points shown here, i.e. direct democracy, in which all the citizens themselves are involved in ascertaining the truth and right, and representative democracy, in which the people entrusts the ascertaining of the truth and right to a small number of representatives, are bipolar terminal points on an axis that in effect ought to depict a continuum. Along this continuum there are many different democratic mixed forms. The currently implemented democracy models are largely based on representative democracy. Exceptions are the more direct democratic model in Switzerland<sup>58</sup> or communal democracy model at the local level (such as the famous *town-hall meetings* in New England)<sup>59</sup>. Some democracies have direct democratic elements in a representative democratic structure, such as citizens' petitions, popular initiatives and referendums<sup>60</sup>. For conceptual reasons however, only the two extreme points are shown in a black-or-white presentation, albeit with the great grey zone and the boundaries between direct and representative democracy being addressed specifically in the closing chapter.

### HOW flexible are democratic powers?

After the "Who?" in the democratic principle follows logically the question "How?" democratic power is structured. In other words, can the democratic will of the moment go all the way or is it restricted by some kind of underlying and predefined consensus. Here we can mark as the

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<sup>55</sup> Madison, James, Federalist 10, P. 1.

<sup>56</sup> For a discussion about raw- or filtered opinions see *Fishkin, James*, Virtual democratic Possibilities: Prospects for Internet Democracy, 2000, prepared for the conference on "Internet, Democracy and Public Goods", in Belo Horizonte, Brazil, Nov., 2000, P. 2 ff., [http://www.e-democracy.lcc.ufmg.br/e-democracy.nsf/palestras\\_ing\\_fishkin.html](http://www.e-democracy.lcc.ufmg.br/e-democracy.nsf/palestras_ing_fishkin.html) (read January 2005).

<sup>57</sup> Here, however, it must be pointed out that the criticism of a lack of morality applies not only for the people but also for the representatives, such as elaborated by *Mill, John Stuart*, Considerations on Representative Government, New York, The Liberal Arts Press, 1958, P. 86 f.

<sup>58</sup> See *Budge, Ian*, The new challenge of direct democracy, Polity Press, Blackwell Publishers Inc, Cambridge, 1996, P. 95 ff. *Schmidt, Manfred G.*, Demokratietheorien, P. 364 ff.

<sup>59</sup> See also Budge's model of a "party-mediated direct democracy", a direct democracy supported by representative political parties. *Budge, Ian*, The new challenge of direct democracy, P. 35 ff.

<sup>60</sup> See also *Jung, Otmar* und *Franz-Ludwig Knemeyer*, Im Blickpunkt: Direkte Demokratie, unter der Mitarbeit von Christian Gebhardt, OLZOG, München, 2001. *Schiller, Theo*, Direkte Demokratie: Eine Einführung, Campus Verlag, Frankfurt, New York, 2002.

two extreme points of our axis that either "people" rule directly (be these people all the citizens or a leading elite) or people create "laws" that rule (the rule of law).

The concept of democracy in ancient Athens can be summed up in a short sentence that Euripides puts in the mouth of Theseus: "I have made the people monarch"<sup>61</sup>. In other words, the people could do whatever it wanted. It could even act arbitrarily just like a monarch. There was no legal certainty or protection of minorities. The majority was always right and in the right. At the centre of the debate was the weighing up of alternatives in the act of deliberation. This was also feared since it gave demagogues and skilled speakers the power to go as far as their rhetorical skills could take them. The art of conviction was the sharpest weapon of domination. For example, we can read that Pericles was such a master of rhetoric that he was second to none in dominating the assembly as speaker and petitioner. According to Thucydides, during this time Athens was ruled "in name only as a democracy, but in reality was dominated by the first man"<sup>62</sup>. From the example of Pericles, we can clearly see that rule by the people reduces the area between the direct influence of all citizens and the leadership of an individual (or a few individuals) to a very narrow line. In the interaction between societal deliberation and opinion leadership it can even disappear, and the "power by the people" becomes de facto an undemocratic "domination by the few".

Unlike the mainstream Athenian sophists of these days (Predagoras, Gorgias etc.), the three philosophers **Socrates**, **Plato** and **Aristotle** were no friends of democracy. The disturbing questions of a Socrates were not at all acceptable to the "unreasonable..., arrogant"<sup>63</sup> and blind masses, who at the end sentenced him to death. Although Socrates had the right to express his differing opinion under *isegoria* (i.e. equal right of speech), which applied for him too, he also had to submit to *isonomia* (equality before the law) if he wanted to remain in Athens. Since there were no personal rights apart from the will of the majority, he had to either flee from the reach of the democratic influence of Athens or die. As is widely known, Socrates opted for the latter. Opposition and inalienable personal protective rights were unknown in this form of '*demo-kratia*'.

In order to put an end to the arbitrary domination by the people over people (be it all over all, a few over all, one over all, or all over a few) the Roman *res publica* relied on a specific form of the rule of law. Limiting the powers of senate, magistrate and assembly ensured a separation and balance of power. On the one hand, the institutional interaction between and within the various powers created a state model that was based on the consensual influence and mutual controlling of the various public powers. On the other hand, it provided protection for the citizens through a legal code. A well-known symbol for Roman legislation is the Law of the Twelve Tables<sup>64</sup>. Unlike the unclarified role of older legal texts, such as the laws of King Hammurabi of Babylon engraved in stone in the 17th century BC (Codex Hammurabi)<sup>65</sup>, the Roman Law of the Twelve Tables was regarded as the basis of all aspects of law (according to

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<sup>61</sup> Euripides, Hiketiden, Die Schutzflehenden, 424 v. Chr., in Hans Vorländer, Demokratie, P. 15.

<sup>62</sup> Vorländer, Hans, Demokratie, P. 30 f.

<sup>63</sup> Euripides, Hiketiden, Die Schutzflehenden, in Hans Vorländer, Demokratie, P. 13f.

<sup>64</sup> Vogt, Joseph, Die Römische Republik, P. 71. see also Bruns Georg und Otto Gradenwitz, Leges XII tabularum, in: Fontes iuris Romani antiqui I, Tübingen 1909; [http://www.fh-augsburg.de/~harsch/Chronologia/Lsante05/LegesXII/leg\\_ta00.html](http://www.fh-augsburg.de/~harsch/Chronologia/Lsante05/LegesXII/leg_ta00.html) (read January 2005).

<sup>65</sup> Hooker, Richard, Mesopotamia, The code of Hammurabi, World Civilizations, Washington State University, 1996, <http://www.wsu.edu/~dee/MESO/CODE.HTM> (read 06.2004).

Livy: *fons omnis publici privatique iuris*). They applied to all Roman citizens, regardless of their social standing. The civil law provisions they contained were meant to protect citizens from the despotism of their fellow citizens.

The Roman government structure and its focus on the restricting of power and the rule of law were later taken up in the 17th and 18th centuries. Even before the American War of Independence, rule of law was a subject of discussion. In 1776 John Adams (later the third American president) taught, loosely based on James Harrington's *Commonwealth of Oceana* (1656)<sup>66</sup>, that the "definition of republic is an empire of laws and not of men"<sup>67</sup>. The theoretical underpinning was then supplied above all by John Locke's "Two Treatises of Government" (1689)<sup>68</sup> and Montesquieu's *De l'esprit des lois* (1748)<sup>69</sup>. Locke's most well-known contribution to public law is the theory of *checks and balances*, by which he tried even more strongly than in the Roman Republic to restrict the legislative and the executive<sup>70</sup>. Montesquieu included the judicative along with the legislative and executive and constructed a tight web of checks and balances, whereby the focus was more on balancing the three arms of state rather than their separation. Later, the federalists took up and developed these ideas of *checks and balances* in the struggle for the U.S. constitution. The resulting system builds on defining the separation of power in various arms (legislative, executive and judicative) and of that between the various levels and social groups in the same arm (for example between local, regional and national powers or a two-chamber system in the legislative arm). Such a system requires laws that define the balance of power between the various parties involved<sup>71</sup>.

As with the preceding section, the problem of the form of government is of course not to be seen as a pure either/or decision. Between a form of government in which solely people rule and a form of government whose functioning is determined by laws 'carved in stone' there are interdependent mixed forms. In essence, these mixed forms must also be found in a democracy. In a democracy it must even be possible to change constitutions. These changes in fundamental rights or the manner in which powers are separated in turn depend on decisions taken by the ruling people. In modern democracies however, they are also bound by laws that determine the process in which the people can change such laws in a democratic manner. In reality then the

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<sup>66</sup> *Harrington, James*, *Commonwealth of Oceana*, first edition 1656, ed. Constitution Society Austin, Texas, <http://www.constitution.org/jh/oceana.htm> (read January 2005).

<sup>67</sup> *Everdell, William*, *From State to Freestate: the Meaning of the Word Republic from Jean Bodin to John Adams*, 7th ISECS, Budapest, 1987, P. 1f, <http://dhm.best.vwh.net/archives/wre-republics.html#1> (read January 2005).

<sup>68</sup> *Locke, John*, *Two Treatises of Government*.

<sup>69</sup> *Montesquieu, Charles*, *Spirit of Laws*.

<sup>70</sup> *Locke, John*, *Two Treatises of Government*, P. 298, Section 156.

<sup>71</sup> It is quite justified to ask the question whether separation of power and rule of law are not presumed as given in today's democracies. This may be the case, both separation of power and the rule of law are however undermined all too often, for example by political parties in which the feeling of legitimacy from belonging to the party is greater than the corresponding role of the politician in the legislative or executive. In many cases legislative and executive powers even merge formally or informally, when for example the head of government is also the party chairman and thus controls his party's members in the legislative. Also recent developments on the international level, whereas for example member states of the United Nations decided to go against international agreements by act arbitrarily, underlined the discussion about the rule of international law or bilateral despotism. Therefore it is important to distinguish between the two types of government shown here so that the possible effects of a dysfunctional separation of power on the democratic principle in the information society can be analyzed.

question is not a bipolar axis either, but a continuum of the various mixed forms and interdependencies between "rule of people" and "rule of laws".

WHAT kind of citizenship is pursued by the underlying social contract?

The last of the three basic axes on which our analysis of democracy is based looks at the question of "what?" kind of citizenship is to be produced by the social contract. This question appears to be slightly more complex than the often discussed and well-known concepts of direct versus representative democracy or rule of people versus the rule of law. The axis of the social contract extends between the two extreme points of the liberalist *volonté de tous* and the republican *volonté générale*. This multifaceted question is however essential. According to Jürgen Habermas, "the decisive difference lies in the understanding of the role of democratic processes"<sup>72</sup>.

The distinction goes again back to Jean-Jacques Rousseau and his treatise "*Du Contrat Social: The Social Contract or Principles of Political Right*"<sup>73</sup>. If the people is to practise its power over itself (i.e. its sovereignty), it must of course first know what it wants. This must take into consideration individual and common interests. "Find a form of association which will defend the person and goods of each member with the collective force of all, and under which each individual, while uniting himself with the others, obeys no one but himself, and remains as free as before. That is the fundamental problem that is solved by the social contract"<sup>74</sup>. Rousseau's social contract is based on the idea of the *volonté générale*. In contrast to the *volonté de tous*, which is grounded on the *volonté particulière* and "is nothing but a summation of special wills"<sup>75</sup>, the *volonté générale* is grounded on "the common interest"<sup>76</sup>. The question the *volonté générale* asks is not what is good for the individual (*volonté particulière*) or what is the outcome if each individual follows his own interests in the association with others (*volonté de tous*), but what is good for all: "The issue is not 'I want' versus 'you want' but 'I want' versus 'we want'"<sup>77</sup>. "Rather than asking the question, 'What's good for me?' the good citizen asks 'What's good for the country?'"<sup>78</sup>

But how can the individual find a *volonté générale* that is the best for everybody without being able to look inside the head of everybody? This is where Immanuel Kant's well-known categorical imperative comes into play. This concept focuses on the emergence of the *volonté particulière* and its fine-tuning in the search for the *volonté générale*. To find out what is not

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<sup>72</sup> Habermas, Jürgen, Die Einbeziehung des Anderen, Studien zur Politischen Theorie, Suhrkamp Wissenschaft, Frankfurt am Main, 1999, P. 277 ff., also 293 ff. on "liberal-dogmatic paradigm shift between Liberalism and Republicanism" and the related "paradigma dogma dispute" Schachtschneider, Karl Albrecht, Die Freiheit in der Republik, 6. Kapitel, I.; Barber, Benjamin, Strong Democracy.

<sup>73</sup> Rousseau, Jean-Jacques, The Social Contract.

<sup>74</sup> Rousseau, Jean-Jacques, The Social Contract, I. Book, Chapter 6.

<sup>75</sup> See and for following Rousseau, Jean-Jacques, The Social Contract, II. Book, Chapter 3.

<sup>76</sup> Rousseau, Jean-Jacques, The Social Contract, II. Book, Chapter 3.

<sup>77</sup> Barber, Benjamin, Strong Democracy, P. 200.

<sup>78</sup> Ackerman Bruce and James Fishkin, Deliberation Day, in James Fishkin and Peter Laslet, Debating Deliberative Democracy, Philosophy, Politics and Society 7, Blackwell Publishing Ltd, 2003, P. 21. Also Pettit, Philip, Deliberative Democracy, the Discursive Dilemma, and Republican Theory, in James Fishkin and Peter Laslet, Debating Deliberative Democracy, Philosophy, Politics and Society 7, Blackwell Publishing Ltd, 2003, P. 139 f.

only good for me but good for everybody means that I have to put myself in the other person's shoes and see the world through the eyes of the other<sup>79</sup>. "As soon as you are forced to see through the eyes of another, then you have to want what the other wants"<sup>80</sup>. This is aided by inner reflection but also common discourse based on the core republican principle of *audi alteram partem* (listen to the other side)<sup>81</sup>. Thus it is Kant's categorical imperative ("act only on those maxims that you also want to become a general law"<sup>82</sup>) that makes citizens in the social contract to act in accordance with the own practical reason (morality) and to strive for the good life of all in general equality and freedom<sup>83</sup>. "As private persons we may prefer all sorts of things, but as citizens we must be ready to will into existence a world in which our preferences can be gratified, and that turns out to be a quite different matter. I may want a big, fast, lead fuel-powered automobile, but I may not be prepared to will into existence a world with polluted air, concrete landscapes, depleted energy resources, and gruesome high-way death tolls; and so as a citizen I may act contrary to my private preferences"<sup>84</sup>. According to this theory, only the heeding of the categorical imperative and thus the creating of the *volonté générale* turns people into a citizenry. „The citizen is by definition a we-thinker, and to think of the we is always to transform how interests are perceived and goods defined... At the moment when 'masses' start deliberating, acting, sharing, and contributing, they cease to be masses and become citizens"<sup>85</sup>. This results in the republican theory of liberty that states that the individual can only be free when everybody is free from force and coercion of the other. The only way this can happen is if everybody strives for what 'we want', not what 'I want'.

This theory of freedom is challenged by the **liberalist theory of liberty**. "In the liberal view... politics (in the sense of the forming the citizens' political will) has the function of bundling and upholding societal private interests against a state machinery that specializes in the administrative application of political power for collective purposes"<sup>86</sup>. This separation of state and society continues the tradition of constitutional enlightened monarchy<sup>87</sup>. Gradually, the people were granted liberties under a monarch in order to protect the individual from the monarch's despotism. The separation of state and society, the difference between the ruler and the ruled, was thus the starting point for the liberalist theory of liberty. In these days citizens were granted the right to elect representative governments which then in turn grant and

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<sup>79</sup> "In any political election..., the voter is under an absolute moral obligation to consider the interest of the public, not his private advantage, and give his vote, to the best of his judgment, exactly as he would be bound to do if he were the sole voter and the election depended upon him alone." *Mill, John Stuart*, Considerations on Representative Government, P. 156.

<sup>80</sup> *Rousseau, Jean-Jacques*, Emile, 2nd Book, own translation from *Barber, Benjamin*, Strong Democracy, P. 235.

<sup>81</sup> "...the fundamental principle of reciprocity... holds that citizens owe one another justifications for the mutually binding laws and public policies they collectively enact". *Gutmann, Amy and Dennis Thompson*, Deliberative Democracy Beyond Process, in Fishkin, James and Peter Laslet, "Debating Deliberative Democracy", Philosophy, Politics and Society 7, Blackwell Publishing Ltd, 2003, P. 33.

<sup>82</sup> *Kant, Immanuel*, Grundlegung zur Metaphysik der Sitten, Bd.6, P. 51.

<sup>83</sup> See *Schachtschneider, Karl Albrecht*, Res publica res populi, esp. P. 275 ff., 325 ff., 410 ff., 441 ff. see also *idem*, Die Freiheit in der Republik, 2. Kapitel, VI.

<sup>84</sup> *Barber, Benjamin*, Strong Democracy, P. 201.

<sup>85</sup> *Barber, Benjamin*, Strong Democracy, P. 153, 155.

<sup>86</sup> *Habermas, Jürgen*, Die Einbeziehung des Anderen, P. 277.

<sup>87</sup> See *Schachtschneider, Karl Albrecht*, Res publica res populi, P. 159 ff.

guarantee the citizens individual defending rights to protect them against the selfsame government and fellow citizens.

In the words of Benjamin Barber, the outcome is "*politics as zookeeping*"<sup>88</sup>. The individual is in an enclosed sphere of individual protective rights, in which he is "free" and can exercise his arbitrary *volonté particulière*. However he encounters boundaries where the individual freedom of the other begins. The liberalist approach thus assumes that laws restrict the freedom of the individual<sup>89</sup>. Freedom is understood as the legal right to do anything that is not forbidden by law<sup>90</sup>. "It is concerned more... to keep men safely apart rather than to bring them fruitfully together"<sup>91</sup>. Equality in freedom does not manifest itself in 'we-thinking', as in the republican theory, but in the fact that all enjoy an equally large individual area of freedom, that is that everybody can live out the same scale of individualistic choice. It is then an individual freedom where in the Hobbesian sense everything is allowed that is not forbidden<sup>92</sup>.

On the contrary, in the **republican theory of liberty**, laws do not restrict the freedom of the individual but realize the general freedom because they point at the common interest rather than a compromise of conflicting individual interests<sup>93</sup>. "In the republican view, the status of citizens is not determined by the pattern of negative liberties to which they have a right as private individuals. Citizenship rights, primarily rights of political participation and communication, are on the contrary positive liberties. They do not guarantee freedom from external coercion but participation in a common practice, only the exercising of which turns citizens into what they want to be – politically responsible actors in a community of the free and equal"<sup>94</sup>. "The focus here is not on restricting 'foreign' coercion but creating the republican community's 'own power' in which its members ... can also enter into mutual responsibilities for the 'common good'"<sup>95</sup>. Citizens create the freedom of all through their will and "their laws". The law is then not a restriction but the embodiment of the general freedom of everybody.

Unlike in the liberalist theory of liberty, in which laws restrict the freedom of the individual so that it does not impinge on the "other's" area of freedom, it makes no sense in the republican theory of liberty to ask: 'How much scope do laws leave for individual freedom of action?' This question would be just as meaningless as: 'How much scope does friendship leave for self-development?' or: 'How much scope does education leave for autonomous thinking?'<sup>96</sup>. Genuine friendship does not limit self-development of the individual but promotes it. Likewise, enlightened education does not restrict autonomous thinking. In the same way, laws do not restrict republican freedom but promote it.

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<sup>88</sup> See Barber, Benjamin, Strong Democracy, P. 20 ff.

<sup>89</sup> Schachtschneider, Karl Albrecht, Res publica res populi. P. 175 ff., S 441 ff. *Idem*, Die Freiheit in der Republik, 2. Kapitel, IV, 6. Kapitel, I, III.

<sup>90</sup> Schachtschneider, Karl Albrecht, Die Freiheit in der Republik, 1. Kapitel, P. 7.

<sup>91</sup> Barber, Benjamin, Strong Democracy, P. 4, P. 91.

<sup>92</sup> See Schachtschneider, Karl Albrecht, Die Freiheit in der Republik, 6. Kapitel, II.

<sup>93</sup> See Schachtschneider, Karl Albrecht, Die Freiheit in der Republik, 2. Kapitel, II, 5. Kapitel, I.

<sup>94</sup> Habermas, Jürgen, Die Einbeziehung des Anderen, P. 279.

<sup>95</sup> Schiller, Theo, Direkte Demokratie, P. 29.

<sup>96</sup> See Barber, Benjamin, Strong Democracy, P. 35 f.

As was the case with the preceding axes, the dividing line on this third axis between the two extreme points of republicanism and liberalism is often blurred in practice. Likewise, it is often difficult to institutionalize pure republicanism because this in essence is grounded on moral principles, i.e. the morality of the categorical imperative. "Because man is made of all too crooked wood, the work of republicanism, true general freedom, will never be completed"<sup>97</sup>. Even Rousseau lowered his sights significantly in his real-world political recommendations and admitted that a "people of gods"<sup>98</sup> were needed if the true *volonté générale* is to be found. While desirable and while indispensable to consider in a theoretical analysis of democracy, even Rousseau acknowledges that all too often "such perfect government is not fit for people".

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<sup>97</sup> See *Schachtschneider, Karl Albrecht*, *Res publica res populi*, P. VIII.

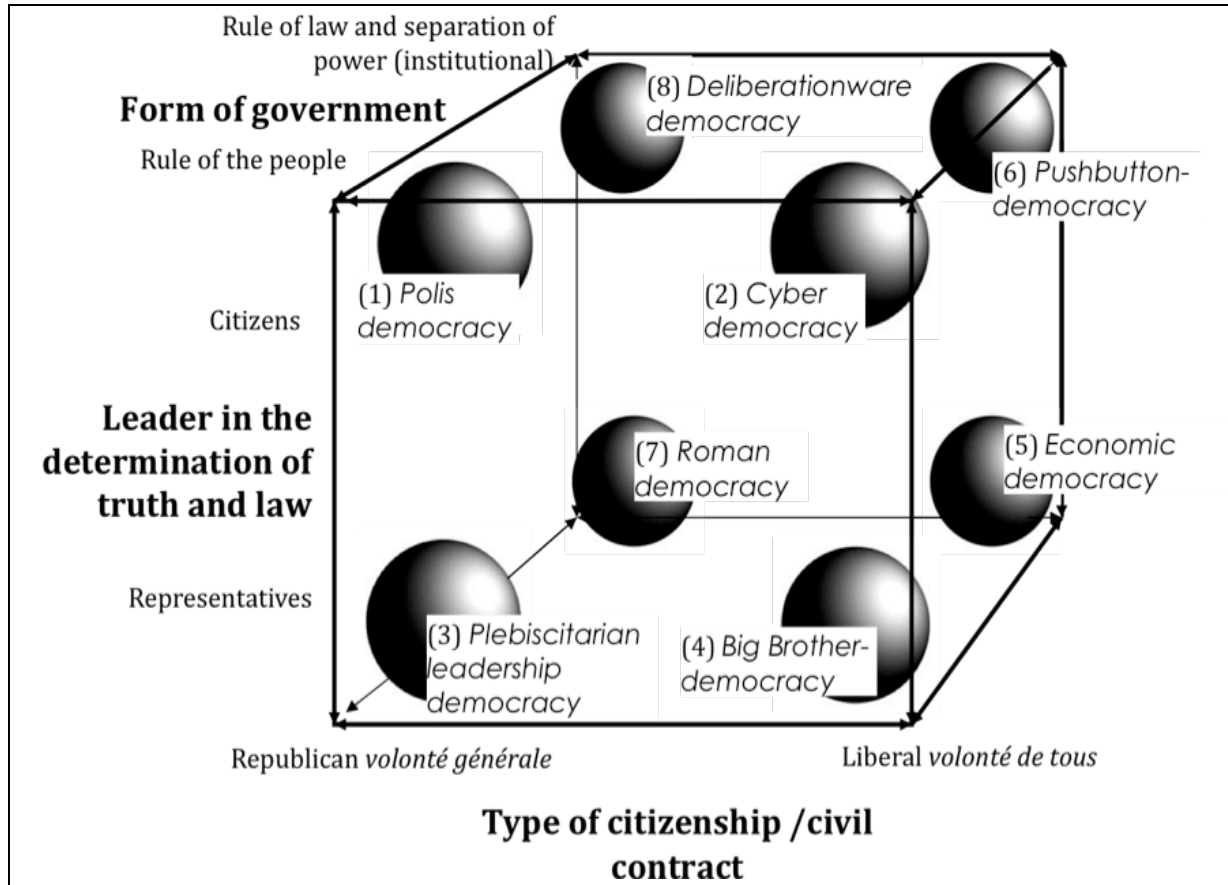
<sup>98</sup> See and for following *Rousseau, Jean-Jacques*, *Social contract*, III. Book, Chapter 4.



**Chapter 2: EIGHT DEVELOPMENT SCENARIOS FOR DEMOCRACY IN THE  
INFORMATION SOCIETY**

Combining the two extreme points of each of the three basic axes produces a three-dimensional model with eight corners (see graphic "3D model for analyzing democracy in the information society"). Each of the eight corners characterizes a democracy model distinguished by a combination of (1) the flexibility of democratic powers, lead by people or laws; (2) the determination of the law carried out by citizens or representatives; and (3) a type of citizenship based on either republican or liberalist principles. The eight resulting democracy models represent alternatives of various institutional combinations and democracy-theoretical alignments. The names for the various models are more symbolic than descriptive and are meant merely as an aide for distinction among them.

### 3D model for analyzing democracy in the information society



Source: own presentation.

The models are used to present the interdependence between democratic institutions and the digitization on democratic processes, analyzing it from the various viewpoints of each of these eight scenarios. The study of each of the eight democracy models is divided into three sections. Firstly, in each there is a brief analysis of various **theoretical foundations** of each model. The inclusion of traditional democracy-theoretical literature assures to place the model in the historical context of existing theories of democracy and so avoid having to reinvent the wheel of democracy. Long-standing theories exist to explain the differences among democratic settings with diverse structural focuses. Democratic processes have always been based on information flows and communication mechanisms, which is why democracy theory in the information society does not fundamentally change, even if digitization places the emphases and functions in a different light. These shifts are analyzed in the section on the **development of the democracy model in the information society**. Particular digital applications and the features of digital interaction with particular institutional framework conditions are looked at here. The elaboration of such scenarios involves tracing through the implications of a particular

association between the institutional setting in question and the characteristics of digital information and communication, as discussed in the preceding chapter. This is an act of the imagination that draws on recent experiences and examples in ICT development, existing trends, well-founded theories, close analysis of technological progress and dynamics and the exploration of possibilities. The third section of each chapter critically addresses the **consequences of this development in the information society**. Framed by the conceptual reflections of the preceding analysis, this last section does not intend to predict the future, but to draw the attention to the significance of current developments and to inform choices today that may shape future outcomes.

As this chapter shows, digitization is strongly dependent on the institutional framework conditions of the implemented democracy model. Digitization impacts democratic processes differently in each of the cases depicted in the graphic. Before these effects and their relationship to the institutional framework conditions can be understood, they have to be analyzed for each individual model. As traditional scenario approaches work with three to six alternative possibility spaces<sup>99</sup>, the differentiation in eight scenarios may seem a little too detailed at the first sight. It shows however that, while common consequences are observable between related scenarios, such detailed analysis enables the desirable and less desirable institutional combinations to be distinguished in a more clear-cut manner. It also brings out those institutions and system properties that are particularly exposed to being affected by digitization. In the final chapter, some common characteristics are then grouped and discussed as building blocks of a future research agenda. The differentiation in a greater number of scenarios also shows the narrow path between positive and negative effects of digitization. As already stated, ICTs are by their nature neither amicable nor antagonistic to democracy. They are neutral means that can be used to achieve particular end<sup>100</sup>.

While the approach employed in this study stresses uncertainty about the future and the plausibility of many different outcomes, primarily dependent of the chosen institutional setting that forms the democratic model, it also stresses the scope for choice. This study sustains that if there is a proactive conscience about current developments and if the right choices are made now, at the beginning of the digitization of democratic processes, we guide can the “arduous search process”<sup>101</sup> of democracy’s evolution for the benefit of future societies.

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<sup>99</sup> See for example *Ogilvy, Jay and Peter Schwartz*, Plotting your scenarios, GBN Global Business Network, 2004, <http://www.gbn.com/ArticleDisplayServlet.srv?aid=34550> (read January 2005). Also *Popper, Rafael and Ian Miles*, Overview of selected European IST scenario reports, Information Society Technologies Futures Forum, WP4 First Scenario Synthesis Report, FISTERA project (Foresight on Information Society Technologies in the European Research Area), PREST (Policy Research in Engineering, Science and Technology), University of Manchester, 2004, <http://www.mbs.ac.uk/research/engineering-policy/index.htm> (read January 2005).

<sup>100</sup> *Leggewie, Claus*, Netizens oder: der gut informierte Bürger heute. Ein neuer Strukturwandel der Öffentlichkeit? Chancen demokratischer Beteiligung im Internet – anhand US-amerikanischer und kanadischer Erfahrungen, Rede an der Internationalen Konferenz über die Werte der Informations-gesellschaft, 1996, P. 18, <http://members.aol.com/helmutwe/leggewie.htm> (read January 2005).

<sup>101</sup> See footnote 2.

## Polis democracy in the information society

As can be seen in the graphic above, polis democracy is distinguished by being based on the principle of republicanism, direct democratic participation of all citizens and the fact that people govern themselves without restriction of a complicated system of rule of law and separation of power. Polis democracy is often seen as the original democracy model.

### Theoretical foundations of polis democracy

The model of polis democracy is often described using terms such as "city state democracy" or "assembly democracy"<sup>102</sup> and can be traced back to the model in ancient Athens. The era of democracy in Athens began with the reforms of Kleisthenes (508/507 BC). The classic epoch of Attic democracy was to last for almost 200 years. The oldest source that mentions '*Demokratia*' is from Herodot in about 430 BC<sup>103</sup>. The term itself thus appeared only at a relatively late stage, before that '*isonomia*' (equality before the law), *isegoria* (equal right of speech) and *isokratia* (equal right to rule) had been used. In this sense, equality and freedom of speech were already key principles even before the term *Demokratia* established itself.

Democracy in Athens was a direct democracy. It had a complex system of institutions by means of which the demos steered public life to a significant extent. In the Athenian polis democracy, the people managed their own fortunes through a democratic system without being bound by a legal code that restricted state powers. Various contemporaries, including the philosophers Socrates, Plato and Aristotle, rejected this form of identity democracy that resulted in the total politicization of the people and society, because they regarded it as a form of coercion. The opinion of the mass dominated, and this was often influenced by demagogues and opinion leaders, whereas the individual was not protected against the mass<sup>104</sup>. In the assembly democracy of ancient Athens the "people were led by conceited chatter"<sup>105</sup> to give its "badness", "wickedness" and "stupidity"<sup>106</sup> free rein. The state was thus reduced to a fickle "domination by the mob", in which the people indulged in its current moods and heeded neither the safety of the individual or minority nor the long-term common good. Plato's **Socrates** therefore compared democracy to the absurd undertaking of steering a ship by the joint decisions of all those on board<sup>107</sup>. **Plato** himself criticized democracy as being full of disorder and was instability, emphasizing that, in its favour, it could at most be said that it was not the worst form of government. This honour went to *Tyrannis*, but democracy smoothed the path to this fate. For Plato, the democrat symbolizes a lack of sense of responsibility. He allows

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<sup>102</sup> See *Schmidt, Manfred G.*, *Demokratietheorien*, P. 29 – 59.; *Massing, Peter* und *Gotthard Breit*, *Demokratietheorien*, P. 13 – 45.

<sup>103</sup> See *Vorländer, Hans*, *Demokratie*, P. 14 f.

<sup>104</sup> The same ideology was later used by the Nazis for their propaganda: "You are nothing - Your people are everything!" for a discussion see *Schachtschneider, Karl Albrecht*, *Die Freiheit in der Republik*, 9. chapter, 2. comp. with references *I. v. Münch*, *Grundgesetz*, Rdn. 2 zu Art. 1.

<sup>105</sup> *Euripides*, *Hiketiden*, *Die Schutzflehenden*, in *Hans Vorländer*, *Demokratie*, P. 13f.

<sup>106</sup> *Herodot*, *Historien*, *Deutsche Gesamtausgabe*, translated by A Horneffer, Stuttgart 1971, III Buch 80-82, P. 217 ff.

<sup>107</sup> *Vorländer, Hans*, *Demokratie*, P. 33.

himself to be driven unpredictably by his moods: "He lives on, yielding day by day to the desire at hand. Sometimes he drinks heavily while listening to the flute; at other times, he drinks only water and is on a diet; sometimes he goes in for physical training; at other times, he's idle and neglects everything; and sometimes he even occupies himself with what he takes to be philosophy. He often engages in politics, leaping up from his seat and saying and doing whatever comes to mind"<sup>108</sup>.

The polis democracy did not disappear with the fall of the Athenian assembly democracy. During the 1848 revolution, a system of representative democracy as we know it today was rejected by various advocates of democracy as a variant of absolutism. "One has no desire ... to replace one ruler with 300 small rulers"<sup>109</sup>. Polis democracy was regarded as a desirable alternative. **Karl Marx** was one of the advocates of radical or revolutionary democracy grounded on the same principles as polis democracy: citizens should govern themselves through a republican social contract<sup>110</sup>. Marx described all forms of government apart from this type of democracy as "untrue"<sup>111</sup>. The fundamental thought that leads to this hymn of praise for democracy is simple: If in socialism, on the route to communism, jointly produced goods are to be divided among equals, who, other than the people themselves, should decide how the common wealth of the people will be administered and spent? Marx's concept of democracy thus went beyond society, incorporated economic sectors and was to ultimately dissolve the separation of state and society<sup>112</sup>. The wild and unequal doings of capitalism were to be democratized without restrictions. The proletariat was to be enabled to determine and coordinate the economy ("proletarian democracy") and so smooth the path to communist society. In this sense Friedrich Engels speaks of the "true democracy... the democracy of the masses" and claims that "democracy is a proletarian principle"<sup>113</sup>. In order to achieve this, Marx envisages a direct democracy leading – much like in Athens – to a total politicization of the people<sup>114</sup>.

The Latin-American revolutionary **Ernesto ("Che") Guevara** de la Serna (1928-1967) took up the thoughts of Marx. Frustrated by the authoritarian rule of real-existing socialism (Realsozialismus) based on the Russian pattern, the declared Marxist developed an alternative to the soviet model<sup>115</sup>. While still on his last mission in the tropical forests of Bolivia – the

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<sup>108</sup> Plato, *Politeia: Der Staat, Über das Gerechte*, Hamburg, 1989, P. 561.

<sup>109</sup> Jung, *Otmar* und *Franz-Ludwig Knemeyer*, *Im Blickpunkt: Direkte Demokratie*, P. 18.

<sup>110</sup> See and for following: *Schmidt, Manfred G.*, *Demokratietheorien*, P. 165 ff.

<sup>111</sup> "Democracy is the generic constitution. ...Democracy is content and form. ...Democracy is the resolved riddle for all constitutions. Here the constitution not only in itself, according to essence, but according to existence and actuality is returned to its real ground, actual man, the actual people, and established as its own work." *Marx, Karl*, *Critique of Hegel's Philosophy of Right. Kritik des Hegelschen Staatsrechts*, First edition 1843, in: *Karl Marx/ Friedrich Engels, Werke*. (Karl) Dietz Verlag, Berlin. Volume 1. Berlin/DDR, 1976. P. 230 f., 232.

<sup>112</sup> See *Schmidt, Manfred G.*, *Demokratietheorien*, P. 165 ff.

<sup>113</sup> *Engels, Friedrich*, *Das Fest der Nationen in London*, First edition 1846, in: *Karl Marx - Friedrich Engels - Werke*, Dietz Verlag, Berlin/DDR 1972, Band 2, P. 612 f.

<sup>114</sup> Marx used the example of the Paris commune to develop and illustrate his thoughts. See *Marx, Karl*, *Der Bürgerkrieg in Frankreich*, First edition 1871, in: *Karl Marx/Friedrich Engels - Werke*, (Karl) Dietz Verlag, Berlin/DDR, Band 17, 5. Auflage 1973, unveränderter Nachdruck der 1. Auflage 1962, P. 313-365.

<sup>115</sup> See *Tablada Pérez, Carlos*, *El Pensamiento Económico de Ernesto Che Guevara*, Editorial de Ciencias Sociales, Instituto Cubano del Libro, La Habana, Cuba, 2001, P. 7-11, 18 f., 24-37.

underground struggle for the socialist revolution in Bolivia, during the course of which he was executed by CIA-trained soldiers – Guevara worked on a "Marxist criticism" of the economic plan of the USSR<sup>116</sup>. In it he criticized above all two fundamental deviations from Marxism, one economic and one democratic. On the one hand, the real socialists were using capitalist incentive systems to keep up their central economy (e.g. bonuses and benefits for increased productivity). On the other hand there was no factual democratic participation of the workforce. According to Guevara, in true socialism it was not enough to legally share out property to all. The liberated workers should be able to control their own destinies. "The masses must have the possibility to steer their destinies, to decide how much is assigned for accumulation and how much for consumption, the economic technique must operate with these numbers and the conscience of the masses must assure its fulfilment"<sup>117</sup>. A democratization of the socialist economy would have been the outcome that has never been implemented in real politics.

Summing up, in a polis democracy (from its older and younger theoretical foundations) the demos itself decides its destiny in a direct-democratic way. In a totally politicized society the citizens together should form a collective will that guides public life. This requires public deliberation to define the *volonté générale*, following the republican principle *audi alteram partem*. Therefore, freedom of speech (*isegoria*) is a central component. The people come to a direct understanding with each other on the guidelines for a good life for all by an exchange of arguments in a kind of Athenian assembly.

#### Development of polis democracy in the information society

In the information society too there are developments similar to assembly democracy. The focus is set on the often quoted vision of former US Vice President Al Gore in 1994: "The GII [Global information Infrastructure, author's addition] will not only be a metaphor for a functioning democracy, it will in fact promote the functioning of democracy by greatly enhancing the participation of citizens in decision-making. And it will greatly promote the ability of nations to cooperate with each other. I see a new Athenian Age of democracy forged in the fora the GII will create"<sup>118</sup>. For Gore, the network of networks is itself a "metaphor for a functioning democracy". As argued, digital networks will break through the barriers of time and space and every networked citizen can now potentially discuss with every other networked citizen about determining the law under which the good life of all can prosper. Removing the spatial and temporal restrictions in inter-personal communication will make it possible to restore the Athenian "city state" in which everyone could communicate with each other at any time. The declared aim is "...to merge the spirit of ancient Athens with the technology of twenty-first century – Pericles with digital transmission. Direct democracy can and should have

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<sup>116</sup> Guevara, Ernesto Che, Notas al Manual de Economía Política, 1966, Obra inédita, in: Carlos Tablada Pérez, El Pensamiento Económico de Ernesto Che Guevara, P. 17, 25-33.

<sup>117</sup> Guevara, Ernesto Che, Notas al Manual de Economía Política, 1966, Obra inédita, in: Carlos Tablada Pérez, El Pensamiento Económico de Ernesto Che Guevara, P. 25.

<sup>118</sup> Gore, Al, Remarks prepared for delivery by U.S. Vice President Al Gore, World Telecommunication Development Conference ITU, Buenos Aires, 21. March, 1994, <http://www.itu.int/itudoc/itu-d/wtdc/wtdc1994/speech/gore.html> (read January 2005).

a rebirth"<sup>119</sup>. With the advent of modern ICTs comes "the hope of finally replacing the interim solution of representative democracy in part or completely with the direct participation of all – based on the great model of the Athenian Agora."<sup>120</sup>

The idea of freely deliberating masses in digital networks was developed in the so-called communitarian concept of Howard Rheingold in his seminal work about The Virtual Community. "Virtual communities are social aggregations that emerge from the Net when enough people carry on those public discussions long enough, with sufficient human feeling, to form webs of personal relationships in cyberspace.... The political significance of CMC [computer mediated communication, author's addition] lies in its capacity to challenge the existing political hierarchy's monopoly on powerful communications media, and perhaps thus revitalize citizen-based democracy."<sup>121</sup> In virtual networks such citizens can come together, discuss and deliberate, advise, coordinate, collect signatures and form opinions in chat-rooms<sup>122</sup>. By founding virtual communities citizens protest indirectly against the shortcomings and the abuse of power that they see in official political parties and broadcast media. Much like with traditional self-organizing citizens groups, they prefer to participate in democracy at the grass roots level<sup>123</sup>.

The underlying idea is based on the conviction that deliberations in virtual communities can result in the *volonté générale* being formed in a democratic way by the largest possible number of citizens and without the need for representative opinion filters in the sense of a parliament. The **features of digital interaction** enable this vision. For example, digital media offer the possibility of coupling synchronous real-time communication with asynchronous information exchange and thus permit independence from the time and place of the discourse. It is possible to respond immediately to the others' arguments or only a few days later, at any time that suits. The possibility of implementing multidirectional *many-to-many* communication and also private *one-to-one* conversations can help to involve either the greatest number of participants in an open deliberation or to hold private direct discussions to hear the other side on conflicting issues. The creation and flexible combination of hypertext links can lead to a logical line of argument between the digitally recorded opinions. Participants can flexibly link arguments, create cross references and then the discussion group can apply an iterative process of interactive exchange to identify the possibilities for a common will that is acceptable to all.

As the first step, the person affected must address the opinions of the other affected people and so determine the difference between his particular will (*volonté particulière*), the particular will of the others and identify a possible common will (*volonté générale*). This first step need not necessarily strengthen altruism and morality in the citizenry but can merely contribute to the

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<sup>119</sup> Hollander, Richard, Video Democracy, 1985, quoted in: Scheuch, Michael, Neue Informationstechnologien und ihre Auswirkung auf die Demokratietheorie, 6.1.1.

<sup>120</sup> Westermayer, Till, Politik im Internet, Hausarbeit am Institut für Informatik und Gesellschaft, Soziologie des Internets, 1998, P. 15, <http://www.westermayer.de/till/> (read January 2005).

<sup>121</sup> Rheingold, Howard, The Virtual Community, Chapter 10, 1993, Rheingold's brainstorms, Introduction, <http://www.rheingold.com/vc/book> (read January 2005).

<sup>122</sup> A large part of these virtual communities with chat rooms and suchlike are commercially operated. For a discussion of the possibilities and the applicability of commercial to political participation platforms see Wesselmann, Christoph, Internet und Partizipation in Kommunen, P. 206 ff.

<sup>123</sup> Schnetz, Dietmut, Neue soziale Bewegungen und direkte Demokratie. Zur Entwicklung gesellschaftlicher Innovation von unten, in: Theorie und Praxis der sozialen Arbeit, Heft 6, 1991.

revealing of information asymmetries and prejudices about various aspects and between various views. Various studies and experiments on public deliberations have shown that this first step also changes the willingness of citizens to move away from their particular will and change their opinion to the benefit of the common good<sup>124</sup>. In the sense of the republican core principle *audi alteram partem*, the group shares reflection on the various arguments and views about a certain issue. This simplifies the identification of the inner categorical imperative of each participant in the search for the *volonté générale*. In harmony with Habermas's discourse theory, this is the only way through which the priority of the best arguments for achieving the common will be guaranteed<sup>125</sup>.

Fishkin conducted a series of experiments that he termed "**Deliberative Polling**". This method is based, just like the Athenian polis democracy, on the principle of drawing lots, with the randomly drawn citizens deliberating representatively in the name of the people<sup>126</sup>. The deliberation group thus has a different constellation each time and only by chance contained citizens who are experts on the given topic. "Deliberative Polls suggest that the very process of engaging in extended dialogue about shared public problems will produce a greater susceptibility to the public interest – or at least to considerations beyond narrow, short-term self-interest or immediate personal gratification... Opinions that are the product of deliberation result from the persons in question having reflected on the merits of competing arguments"<sup>127</sup>. John Stuart Mill calls this process of common morality the "*school of public spirit*"<sup>128</sup>.

These opinion-forming deliberations can be carried out in digital networks, under the rules arising from the features of digital interaction, and supported by digital applications in virtual communities. The resulting possibilities may best be demonstrated by a **short anecdote** on a particular ICT application. The city of Milton Keynes in England has given its inhabitants the opportunity to deliberate digitally on how much local tax they want to pay. In a transparent presentation, the citizens were confronted with the choice of reducing municipal services or

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<sup>124</sup> In a series of Deliberative Polls supervised by Bruce Ackerman and James Fishkin on the issue of electric utility regulation one of the remarkably consistent patterns was that at the end of the deliberation, overwhelming percentages of the respondents expresses a willingness to pay more on their monthly bills for purposes such as subsidizing renewable energy (wind and solar power). "The percentages willing to do so ranged from about two-thirds to four-fifths, and as the result of large increases compared to their positions before deliberation". For a large number of empirical experiments and proof of the proposition that deliberations change the opinions of participants see *Fishkin, James*, *Deliberative Polling, Toward a better-informed democracy*, Center for Deliberative Democracy, Stanford University, 2004, P. 22, <http://cdd.stanford.edu/polls/docs/summary> (read January 2005).

<sup>125</sup> *Habermas, Jürgen*, *Faktizität und Geltung, Beiträge zur Diskurstheorie des Rechts und des demokratischen Rechtsstaats*, Suhrkamp Taschenbuch Wissenschaft 1361, Erste Auflage, Frankfurt a. M., 1992, P. 133.

<sup>126</sup> "...members of the sample are invited to gather at a single place for a weekend in order to discuss the issues. Carefully balanced briefing materials are sent to the participants and are also made publicly available. The participants engage in dialogue with competing experts and political leaders based on questions they develop in small group discussions with trained moderators. Parts of the weekend events are broadcast on television, either live or in taped and edited form. After the deliberations, the sample is again asked the original questions. The resulting changes in opinion represent the conclusions the public would reach, if people had opportunity to become more informed and more engaged by the issues". The resulting changes in opinion in a series of experiments conducted by the initiative between 1994-2000 are sometimes up to 50 percent between the original and the post-deliberative opinion. *Fishkin, James*, *Deliberative Polling*.

<sup>127</sup> *Ackerman, Bruce* and *James P. Fishkin*, *Deliberation Day*, in *James Fishkin* and *Peter Laslet*, *Debating Deliberative Democracy*, P. 22, 27.

<sup>128</sup> *Mill, John Stuart*, *Considerations on Representative Government*, P. 54 f.



increasing taxes. The public was confronted with clear scenarios in an electronic software application showing how much it costs to provide public services such as schools, libraries and welfare benefits. Similar to a software simulation game, citizens were invited to decide on the range of services offered by the city in three quality levels which each involved increasing local taxes by a certain percentage. In virtual deliberation forums, such a debate can be staged synchronously or asynchronously over a period of several weeks with electronic applications presenting the problem in an entertaining and interactive way. In ICT networks opinion exchange can be open or private in a *one-to-one* channel. Citizens themselves can calculate tax revenue and expenditure and thus provide more or fewer public goods for their municipality and thus for themselves, their families and their fellow citizens. The surprising result was that the political party promising voters tax increases did best in the election. A clear majority of citizens wanted their municipality to provide services that were possible only with a 15 percent tax increase. The resulting tax rate was much higher than the guideline set by the British government<sup>129</sup>.

Debating the topic in virtual deliberation forums and the related possibility of seeing the problem (virtually) through the eyes of others helps to reduce the existing information asymmetry between the individual citizen and the entire citizenry. The efforts of individual citizens driven by their particular wish not to have their personal income reduced by taxes were directly opposed by the efforts of the entire citizenry driven by the common will to create public goods and to this end surrender a part of their private income. Reducing the information asymmetry between these two views enabled the individual citizens to clearly see that a contribution to the common good can also be to their own benefit. The apparently conflicting particular will was resolved in the *volonté générale*. In the words of Carole Pateman: "[The] ideal system [online or offline, author's addition] is designed to develop responsible, individual social and political action through the effect of the participatory process. During this process the individual learns that the word 'each' must be applied to himself; that is to say, he finds that he has to take into account wider matters than his own immediate private interests... and he learns that the public and private interest are linked"<sup>130</sup>.

### Consequences of the development of polis democracy

One particular feature of virtual communities is that unlike traditional communities they are **not geographically bound** (*death of distance*<sup>131</sup>). Whereas in the past the democratic discourse took place at the meeting room above the local pub and the decisive factor for determining the participants was the geographic vicinity of the same local association, in virtual communities it is the topic that determines who joins in the group. In the 1980s, Hollander used the term "*issue groups*"<sup>132</sup>, in the 1990s Grossman the term "*issue publics*"<sup>133</sup>. The ease with which issue

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<sup>129</sup> See also: *BMWi (Bundesministerium für Wirtschaft und Technologie)*, Virtuelle Rathäuser – Stand, Aktivitäten, Perspektiven aus kommunaler Sicht, Landsberg, Dr. Gerd, Geschäftsführendes Präsidialmitglied des Deutschen Städte- und Gemeindebundes (DStGB), in Virtuelles Rathaus, Dokumentation des 1. Media@Komm-Kongress, erstellt von Christine Siegfried, Deutsches Institut für Urbanistik (Difu), 4./5. September 2000, Bremen, P. 27.

<sup>130</sup> *Pateman, Carole*, Participation and Democratic Theory, Cambridge University Press, first edition 1970, digital printing 2000, Cambridge, P. 24 f; also 110 f.

<sup>131</sup> See footnote 31.

<sup>132</sup> *Hollander, Richard*, Video Democracy.

groups come together in open digital networks is due to the fact which Bill Gates expressed with the simple observation: "people who have the same interests can meet and organize online without the slightest effort"<sup>134</sup>. Search engines and the transparency of digital information make it possible to find the appropriate issue group with just a few mouse clicks. Geography plays only an indirect role here, for example because of language problems or because of the focused treatment of local issues<sup>135</sup>.

When considering temporary groupings of like-minded people in a homogeneous group the "**law of group polarization**" must be heeded<sup>136</sup>: "members of a deliberating group predictably move toward a more extreme point in the direction indicated by the members' predeliberation tendencies"<sup>137</sup>. For example, imagine a group of parents whose children have been killed by drunken drivers coming together to discuss possible changes in alcohol checks and restrictions. Is it possible to predict what will happen to the various individual opinions during the deliberation? Presumably they will find their opinion confirmed as soon as they hear the experiences of the other like-minded people. Thus, it is very probable that they will express their conclusions even more strongly and, supported by the opinion of their discussion partners, even intensify them. A snowball effect sets in, and the group's opinion will be driven more extremely in the same direction as already perceptible in the tendencies prior to the discussion. "The effect of deliberation is both to decrease variance among group members, as individual differences diminish, and also to produce convergence on a relatively more extreme point among predeliberation judgments"<sup>138</sup>. Especially if the united group feels unfairly treated or suppressed, this can have dangerous effects of radicalization and extremism<sup>139</sup>.

In the information society, the aspect of group polarization takes on a new brisance. Owing to the ease with which interest groups can be created and come together in virtual communities via digital networks, a number of authors assume that increasing familiarity with virtual associations and gatherings will increasingly undermine traditional opinion leaders, such as **classic political mass parties**<sup>140</sup>. Major integration parties have traditionally taken the mediating role between specific and splintered interest groups. Where virtual communities make it possible for people to organize *ad hoc* and without significant formalities in order to

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<sup>133</sup> *Grossman, Lawrence K.*, The Electronic Republic. Reshaping Democracy in the Information Age, Viking 20th Century Fund, New York, 1995.

<sup>134</sup> *Gates, Bill*, Der Weg nach vorn. Die Zukunft der Informationsgesellschaft, Hoffmann und Campe, 1995, P. 391.

<sup>135</sup> Since the treatment of local issues frequently concerns only people living near each other, geographic affiliation does in this case play a certain role. However, here too it is the topic and not geographic affiliation that unifies this group, the geographic proximity in this case being a precondition of the topic group.

<sup>136</sup> *Sunstein, Cass R.*, The Law of Group Polarization, in *James Fishkin* and *Peter Laslet*, Debating Deliberative Democracy, P. 80 - 102.

<sup>137</sup> *idem, op. cit.*, P. 81.

<sup>138</sup> *idem, op. cit.*, P. 83.

<sup>139</sup> *idem, op. cit.*, P. 91, 95.

<sup>140</sup> See for example *Toffler, Alvin*, the Third Wave, P. 438. *Slaton, Christa*, Televote – Expanding Citizen Participation in the Quantum Age, New York, Praeger, 1992, P. 79. *Hollander, Richard*, Video Democracy. P. 96. *Dyson, Esther*, Interview with Joshua Quittner, the Merry Pranksters Go to Washington, in Wired Issue 2.06, June 1994, <http://www.wired.com/wired/archive> (read January 2005).

participate in forming the political will of the people, issue-conglomerating institutions such as political parties would lose importance.

This could then reverse the system of thematic bloc building that is inherent in mass parties. **Issue packets can be unbundled.** The existence of mass parties in the industrial age was the result of lacking information about the will of individual people, leading to the necessity to group them by far-reaching and long-lasting characteristics, such as workers, Christians, entrepreneurs or by their ethnic origin. In the industrial era, parties were "regionally organized with a bureaucratic structure, geared to ideological integration and political mobilization of the broad voting masses ... the parties were now confronted with the task of integrating the mass of citizens with the help of new methods ... [which had increased immensely with the expansion of the demos concept in the last century, author's addition] for the purpose of casting their votes"<sup>141</sup>. The wide-ranging scope of these rough categorizations of mass parties led to the fact that parties started to defend various, albeit thematically independent issues. They followed the predominant opinion holders within their electorate, but could not expect all of their voters to be of the same opinion on all of the various issues<sup>142</sup>. This enmassment of the political will formation by major parties was fostered by the then available mass information and communication possibilities. In the information society this development is challenged by the formation of decentralized *issue groups*. The augmented information flow and the possibility not only to easily spot and separate differing opinions on sub-topics, but also to form flexible interest groups for certain issues and deliberating 'virtually' topic by topic with whatever group citizens can best identify with in the particular areas, reverses the necessity of scale-effect deliberative associations of the industrial age. In the industrial era it was practically impossible to leave the party meeting in the meeting room above the local pub whenever a certain sub-topic the individual did not agree with was raised without that individual distancing himself from the entirety of the gathered group. Digital deliberation systems now offer more subtle and sophisticated possibilities of participating in various deliberation groups on various issues at the same time. "The people jump from the tanker [of the major parties, author's addition] into small boats; they are more manoeuvrable ... parties are nowadays one-sided, relatively enclosed and relatively old, hierarchic communication circles, in which the manifold needs of the differentiated society make inroads only laboriously and slowly"<sup>143</sup>. Small, flexible and single issue deliberation groups are thus participating more and more in "the political will formation of the people"<sup>144</sup>. The refined desegregation of opinion structures and deliberation topics is

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<sup>141</sup> *Habermas, Jürgen*, Strukturwandel der Öffentlichkeit, P. 302.

<sup>142</sup> For example, there are political parties that advocate environmental protection and an open door policy for immigrants. Others combine a liberal economic system and gay rights. Others again have protecting the family and a pro defense policy on their agenda and so forth. What should voters do when they do not agree with "their party" on both points? "They are in a dilemma and since they cannot clearly decide either factually or emotionally, they simply opt for the large party of non-voters... These are structural dilemmas that point to a very fundamental flaw in democracy". *Heinrichs, Johannes*, Revolution der Demokratie, P. 169.

<sup>143</sup> *Glutz, Peter*, Freiheitliche Demokratie in der Informationsgesellschaft, in: Freiheitliche Demokratie in der globalen Informationsgesellschaft, Chancen – Perspektiven – Risiken?, Paderborner Podium 2; Heinz Nixdorf Museums Forum, Schöningh Paderborn, 2000, P. 20 f.

<sup>144</sup> With respect to mass media and parties, and the role of an "informal and decentralized corrective" to this centralized system by issue groups, see *Geser, Hans*, Auf dem Weg zur 'Cyberdemocracy'? Auswirkungen der Computernetze auf die öffentliche politische Kommunikation, Universität Zürich, in Sociology in Switzerland, Juli 1996, 4. Teil, [http://socio.ch/intcom/t\\_hgeser00.htm](http://socio.ch/intcom/t_hgeser00.htm) (read January 2005).

only "mouse clicks" apart. From this some authors conclude: "The ability to have 'virtual political parties' is the greatest challenge the two parties have ever faced"<sup>145</sup>.

It can thus be assumed that homogenous interest groups will very quickly find each other in virtual *issue groups*. "The greater and more heterogeneous the membership of a newsgroup [in the sense of *issue group*, author's addition], the more I can expect to find resonance and agreement somewhere in the world even for the strangest of issues and opinions – and the greater the number of groups, the greater the chance of finding myself as an extremist, an anarchist or a social utopian somewhere in like company"<sup>146</sup>. Under the law of group polarization this can then lead to greater heterogeneity between the various interest groups. "For example, experience shows that computer networks tend to lead to individuals intensifying their initial divergences and idiosyncrasies, whereas conventional forms of informal communication tend to be converging and homogenizing because the partners strive not to appear all too different and dissensual from each other"<sup>147</sup>. Whereas in the past the mass media and the political mass parties had the task of bundling the available information and making it available to the public in a more integrating rather than diverging form (the so-called "integration party")<sup>148</sup>, opinion heterogeneity in transient interest groups will be made more pronounced in a communitarian-aligned polis democracy<sup>149</sup>. The various interest groups are "...issue-driven, more narrow, more narrow-minded, and sometimes more extreme, as like-minded people reinforce each other's views."<sup>150</sup> Since there are hardly any barriers to entry or exit, participants will seek out those groups where they feel most at home. "The Internet is making it possible for people to design their own highly individuated communications packages, filtering out troublesome issues and disfavoured voices"<sup>151</sup>. Citizens are not forced to continue addressing the opinions of their fellow citizens in the meeting room above the local pub until a more or less acceptable compromise is found but can leave the virtual community, geographically unbound through a single 'mouse click', associating with less conflictive like-minded people.

Thus various partial publics emerge that conduct their own, sometimes totally dissimilar discourses. The removed information asymmetry in transparent searchable networks, the "*death of distance*" and the explosive opening of a wide range of communication channels which link up to form unhierarchical hypertext networks lead in a certain sense to a "**retribalization of the public sphere**"<sup>152</sup>. The fragmentation of the public and formation of partial publics facilitated by the Internet thus reinforces the heterogeneity between the various interest groups.

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<sup>145</sup> Ehrlich, Everett, Information age may spell end of two-party system, Special to the Washington Post, Arbiter online, December, 2003, P. 3, <http://www.arbiteronline.com/vnews/display.v/ART/2003/12/15/3fdd7fd338454> (read January 2005).

<sup>146</sup> Geser, Hans, Auf dem Weg zur ‚Cyberdemocracy‘?, 2.2. Teil, P. 8.

<sup>147</sup> Geser, Hans, Auf dem Weg zur ‚Cyberdemocracy‘?, 2.2. Teil, P. 8.

<sup>148</sup> Habermas, Jürgen, Strukturwandel der Öffentlichkeit, P. 302 ff.

<sup>149</sup> Wesselmann, Christoph, Internet und Partizipation in Kommunen, P. 77 ff.

<sup>150</sup> Noam, Eli, Why the Internet will be bad for democracy, in: Freiheitliche Demokratie in der globalen Informationsgesellschaft, Chancen – Perspektiven – Risiken?, Paderborner Podium 2, Heinz Nixdorf Museums Forum, Schöningh Paderborn, 2000, P. 36.

<sup>151</sup> Sunstein, Cass R., The Law of Group Polarization, P. 89.

<sup>152</sup> Leggewie, Claus, Netizens oder: der gut informierte Bürger heute, P. 10.

They are scarcely in contact with each other and when they do at last meet the differences can already be unbridgeable. Some authors therefore assume that, totally in contrary to the idea of the *volonté générale* "in the computer networks a global heterogenic public arises that is incapable of a general consensus because ... the parts generally cannot see the whole at all."<sup>153</sup> The result of this development is an old dilemma of the republican doctrine: the aspiration of finding the *volonté générale* and the challenge of establishing a sufficiently homogenous social group for achieving it. Rousseau was of the opinion that the *volonté générale* was "always on the right path" and could never err. Dissenters therefore err and must be excluded for the well-being of the *volonté générale*. "**Homogeneity** is a precondition for the republic"<sup>154</sup>. For example, Carl Schmitt pleads for the "expulsion or destruction of the heterogeneous"<sup>155</sup>, which under National Socialism had well-known devastating consequences.

In the information society it can be assumed that this republican dilemma will be aggravated because it is more likely that interest groups will polarize more extremely. For example, it is often lamented that deliberation participants in virtual communities are out to polarize and "to mouth off". "Most users ... see the boards as outlets [of virtual discussions, author's addition], not as places to learn and discuss"<sup>156</sup>. From an analysis of the contents of virtual communities, some authors conclude that "the unchecked agitation, **hate speech** and the adaptation of political elites to this 'hyperdemocratic' wave"<sup>157</sup> is by no means advantageous to harmonious democratic discourse. The ease of logging into the deliberation of another homogeneous group and stirring it up is not necessarily good for placating the various deliberation groups. "Good on-line consultations therefore always need facilitators or moderators to guide (and where necessary edit) the discussion"<sup>158</sup>. Moderation and deliberation guidance can arise in various forms. Some chat-rooms automatically delete entries with certain swear words for example. In others, there is manual filtering out of irrelevant or provocative entries<sup>159</sup>.

It is clear that the drafting of a tight set of rules and intervention and restrictions from the top are not compatible with the institutional framework conditions of the polis democracy. In the polis democracy, by definition the citizens govern themselves in a democratic manner without a statutory set of rules and without a moderator intervening from above (even if democratically

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<sup>153</sup> *Ehe, Ralf*, Die Informationsgesellschaft und die politische Dimension des Internets, Schriftliche Hausarbeit zur Erlangung des Grades eines Magister Artium (M.A.) der Philosophischen Fakultät der Christian-Albrechts-Universität zu Kiel, 11. Februar 1998, P. 67 f.

<sup>154</sup> *Schachtschneider, Karl Albrecht*, Res publica res populi, P. 1177.

<sup>155</sup> From *Schachtschneider, Karl Albrecht*, Res publica res populi, P. 1177.

<sup>156</sup> *Thompson, Nicholas*, Can online political chat be fixed?, Statecraft Articles, The Axiom Foundation, 2002, P. 2., <http://www.opinion.statecraft.co.uk/content/article.php?id=25> (read January 2005).

<sup>157</sup> *Leggewie, Claus*, Netizens oder: der gut informierte Bürger heute, P. 8.

<sup>158</sup> *House of Commons*, Connecting Parliament with the Public, First Report of Session 2003-04 Select Committee on Modernisation of the House of Commons, Report, together with formal minutes, oral and written evidence, Ordered by the House of Commons to be printed 26 May 2004, P. 21, <http://www.publications.parliament.uk/pa/cm200304/cmselect/cmmodern/368/368.pdf> (read January 2005).

<sup>159</sup> For example, the "AOL Instant Messenger Web Chat Rules & Etiquette" says that AOL reserves the right to reject entries that publish "off-topic comments in a topical chat". Entries that use the *chat* forums "in a manner deemed inappropriate by AOL" are also censored. What falls within the definition of "off-topic" or "inappropriate" is of course a subjective decision of the operator, or of the group moderator, and can therefore be strongly influenced by commercial interests for example. *America Online*, AOL Instant Messenger Web Chat Rules & Etiquette, 2004, <http://www.aol.com/community/rules.html> (read January 2005).

legitimated). These institutional changes would lead us in the direction of the Roman Republic or deliberationware democracy models (see graphic "3D model for analyzing democracy in the information society"). Later sections provide more details about these. In order to uphold the democratic ideal of the polis democracy, democracy theoretician Benjamin Barber suggests a solution in his forum [www.unchat.com](http://www.unchat.com) (read January 2005) in which the deliberation participants themselves decide constantly about the moderation style in a democratic way, through the software configuration of their *issue group*. This can be "unmoderated, moderated, self-moderated", with or without anonymity or identification of the participants and so on. Of course such a self-moderated system provides the best preconditions for only like-minded people coming together in a group. If the moderation style selected does not strike a participant as being suitable, it is very unlikely that he will enter into a long deliberation with the other members but simply switch groups. The alternative would be to start such a conflictive discussion, while it is very probable that the mob of the like-minded will offer the dissenter the two alternatives to either leave the group or face the consequences.

We can conclude that the problem of extremism and the disintegration into various partial publics cannot be solved in the polis democracy because of the lack of a set of rules and assignment of power to an intermediating representative or moderator. Dissenters will have very little more choice than in the extreme case of Socrates: either leave the democratic scope of influence or suffer the consequences. As was the case in ancient Athens, this can be delicate in a polis democracy, because institutional framework conditions such as legal protection for the individual and separation of power are missing or undermined. Deliberative assembly democracies are ruled by the opinion of the mass, and this can have devastating consequences for minorities and marginalized individuals owing to group polarization and the absence of liberalist individual protective rights. For example, James Madison sums up the dangerous combination of group polarization with the institutional characteristics of a polis democracy with the following words: "In all very numerous assemblies, of whatever character composed, passion never fails to wrest the scepter from reason. Had every Athenian citizen been a Socrates, every Athenian assembly would still have been a mob."<sup>160</sup>

The consequence is that there is no republican resolution of the dilemma if the two fundamental institutional conditions of the polis democracy are to be retained: direct participation of all citizens and a form of government without checks and balances and rule of law. There remains the option of removing direct participation in the government from the hands of the "mob" and leave the ascertaining of the truth to Madison's representative democratic opinion filters, which would entail a movement on the basic axis between citizens and representatives in the octagonal democracy analysis model (see graphic "3D model for analyzing democracy in the information society"). Furthermore, the rule of law and institutional framework conditions can be introduced in order to establish checks and balances (shift on the basic axis for the form of government). Or the republican ideal of *volonté générale* can be diluted (shift on the basic axis of the citizenship under the social contract). Cyber democracy, which is discussed in the following section, therefore tries to strike a liberalist balance, in which the *volonté générale* admittedly cannot be found, but on the other hand the direct involvement of citizens in determining the truth and government process need not be restricted.

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<sup>160</sup> Madison, James, Federalist 55, The Total Number of the House of Representatives, First Edition 1788, Independent Journal, February 13, 1788, ed. Constitution Society, Austin, Texas, <http://www.constitution.org/fed/federa55.htm> (read January 2005).

## Cyber democracy in the information society

In cyber democracy, the people are also directly involved in the process to ascertain the common rules. All citizens rule democratically in a kind of group arbitrariness, without being bound by a restricting system of rule of law and separation of power. The difference to polis democracy is that the social contract is grounded on the liberalist concept of liberty, which results in critical changes of perspectives.

### Theoretical foundations of cyber democracy

Cyber democracy has its foundations in the neo-classic *laissez-faire* approach and in the associative and pluralistic theories of democracy. It is based on the free play of forces<sup>161</sup>. The prefix "cyber-" comes from the Greek word *kybernetes*, which means helmsman or governor. In cyber democracy an interdependent, interactive and multidirectional, auto-regulating network is the helmsman.

Cyber democracy is based on the postulate of self-government and the greatest possible individual self-determination, i.e. the right to act arbitrary in one's private sphere through the subsidiarity principle. "The **priority of the principle of private decision making in shaping one's life** is mostly termed the subsidiarity principle"<sup>162</sup>. The subsidiarity principle gives the individual a liberalist sphere of freedom, in which he can allow free choice to run unbounded and in which he is protected from the choices of others through protective rights. The greater the individual freedom, the smaller the sphere governed by general laws. Under the liberalist theory of liberty however there is no attempt to seek out a *volonté générale*, but true to the philosophy of 'live and let live', liberalist spheres of freedom are created in which everybody can follow their *volonté particulière*. This goes not only for individuals but also for interest groups, since individuals form interest groups as soon as they have a like-minded particular will.

The so-called **associative democracy theory** takes up this idea and tries to perfect it<sup>163</sup>. Similar to the process of secularization that separates religious believes and politics, it tries to take as many areas of life as possible out the realm of general public politics and provide the heterogeneous citizenry with a pluralistic offering of alternative public associations. Paul Hirst writes on associative democracy in his seminal work with the same title<sup>164</sup>: "Associationalism makes a central normative claim that individual liberty and human welfare are both best served when as many of the affairs of society as possible are managed by voluntary and democratically self-governing associations. Associationalism seeks to square the aims of freedom for the individual in pursuing his or her chosen goals with the effective governance of

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<sup>161</sup> See Hagen, Martin, Elektronische Demokratie. Computernetzwerke und politische Theorie in den USA, P. 73 ff, Hamburg: LIT-Verlag, <http://www.martin-hagen.net> (read January 2005).

<sup>162</sup> Schachtschneider, Karl Albrecht, Res publica res populi, P. 51 f.

<sup>163</sup> See Hirst, Paul, Associative Democracy: New Forms of Economic and Social Governance, Polity Press, Cambridge and University of Massachusetts Press, Amherst MA, 1994.

<sup>164</sup> Hirst, Paul, Associative Democracy, P. 19.

social affairs."<sup>165</sup> For example, individuals should have the opportunity of obtaining public goods and services from a number of self-organizing associations. Each of these organizations is based on a partnership between the members and its own democratic leadership. The associations would be financed partly from general taxes and partly from particular taxes paid by their members. This is already being done in part in the education system (for example private schools), in pension insurance (with private pension funds), in the free choice of trade unions, in health insurance (for example private insurance plans) or in multi-language countries by being able to use a certain language in public agencies. The extension of this associative system to any number of aspects in public life is basically a problem of managing information and the coordination of agents through communication.

For example, supposing that a mixed society has come to the democratic conclusion that everybody should have a 'weekly day of rest'. Such a rule would, according to the society, be important to foster sustainable social peace and stress-minimizing human relations. Under a system of associative democracy, members of the Jewish faith are permitted to work on Sundays and hold their religious day of rest (Sabbath) from Friday to Saturday evening, while Christians take off Sundays. Thanks to the priority of privacy of lifestyle, the various associations choose their own day of rest to suit their need, complying with the general law. Taking the example a step further, the system would be enabling the religious groups of Sikhs, with their long hair and beards, to meet crash helmet requirements by using a type of turban that would not impinge on the freedom of the "Sikh Association"<sup>166</sup>. The line of argument could be continued, justifying the creation of interest associations of any kind. The democratic legitimation for these self-governing associations would not come from a territorial state to be applied in that state but be regardless of the geographic dispersal of this association's members in the state territory. The specific rules would however apply for all members of that association in the pertinent state territory.

The various associations in the model of cyber democracy are held together by a web of mutual private meta-interests. This is promoted by the possibility of interlaced affiliation. For example, members of the Muslim faith can be divided into men and women, into orthodox, practising or liberal, into those who speak Arabic, Spanish, Portuguese, and/or English, into drivers and cyclists, into handicapped and non handicapped, into nature lovers and technology freaks and so forth. The effect of cross membership in a wide range of associations is an interlocking of power and a common ground in the search for compromise<sup>167</sup>. In this model, the state acts **as an association of associations**. It must play the role of intermediary between the various associations. For example, budget dependencies must be clarified and standards harmonized<sup>168</sup>. The system is also dependent on its flexibility for sustaining the dynamics of group formation

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<sup>165</sup> Unlike this application to cyber democracy, it must be pointed out however that Paul Hirst's model of associative democracy does not expressly abolish the representative system. see *Hirst, Paul*, Associative Democracy, P. 19.

<sup>166</sup> The religious tradition of orthodox Sikhs requires leaving hair and beards uncut, wearing a comb in the hair knot and for male Sikhs a turban. This makes it impossible for Sikhs to wear crash helmets. However, crash helmets are mandatory in many countries, and this has priority over religious freedom for reasons of personal and public safety. see *Malsch, Ineke*, Personal Protective Equipment at Work, European Parliament, Directorate General for Research, Directorate A, the STOA Programme, EP/IV/B/STOA/99/20/01, 1999, [http://www.europarl.eu.int/stoa/publi/pdf/99-20-01\\_en.pdf](http://www.europarl.eu.int/stoa/publi/pdf/99-20-01_en.pdf) (read January 2005).

<sup>167</sup> *Bellamy, Richard*, Dealing with Difference: Four Models of Pluralistic Politics, P. 214 f.

<sup>168</sup> See *Hirst, Paul*, Associative Democracy, P. 202.



within the state system. Since groups are in a constant process of formation and collapse, new groups also have to be integrated in the system as optimally as possible and old ones allowed to disappear without any lasting problems. There must not be any legitimate group forming outside the system.

In this sense, the state should also ensure that certain fundamental values of the community are not attacked and the freedom of interest groups is not restricted by other groups. In the terms of the pluralistic theory of democracy of Ernst Fraenkel<sup>169</sup>, it has to be assured that the non-controversial sector of society's ground-consensus is stable and large enough to sustain diverging life-options in the controversial sectors of society. For example, pedophiles could declare themselves as an interest group that is constantly discriminated against. They could thus apply for registration of their association. Thieves could also point to the communist philosophy and claim that the means of production belong to everybody and as a communist association they could simply take what they need. Here the society needs to establish a stable non-controversial value base on basis of which the association of associations can ensure that the rest of the system is not damaged.

Cyber democracy strives to compensate for the lack of homogeneity between the various groups and applies the liberalist concept of liberty to circumvent the republican dilemma encountered in polis democracy.

#### Development of cyber democracy in the information society

The fundamental conviction that centralized government, strong state intervention, omnipresent regulation, control and censorship are the worst evil is the driving force of this ideology<sup>170</sup>. The non-hierarchic and interactive nature of the Internet contributes to the conclusion that the concept of self-government will dominate Cyberspace. In their 1994 "Magna Carta of the Knowledge Age"<sup>171</sup> information society theoreticians and advisors to the then US government called for the decentralization of power and praised the possibilities of plurality in electronic information networks. Apparently overwhelmed by the changes in information management caused by ICTs, John Barlow demands with a mystically threatening air in his "Declaration of the Independence of Cyberspace": "Governments of the Industrial World, you weary giants of flesh and steel, I come from Cyberspace, the new home of Mind. On behalf of the future, I ask you of the past to leave us alone. You are not welcome among us. You have no sovereignty where we gather... Cyberspace does not lie within your borders. Do not think that you can build it, as though it were a public construction project. You cannot. It is an act of nature and it grows itself through our collective actions."<sup>172</sup>

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<sup>169</sup> *Fraenkel, Ernst*, *Strukturanalyse der modernen Demokratie*, Erstausgabe 1962, in: Fraenkel, Ernst, *Deutschland und die westlichen Demokratien*, Frankfurt a.M., 1991.

<sup>170</sup> See *Barbrook, Richard* und *Andy Cameron*, *Die kalifornische Ideologie. Wiedergeburt der Modern?*, in: *Telepolis Magazin der Netzkultur*, Verlag Heinz Heise, 1997, <http://www.heise.de/tp/deutsch/inhalt/te/1007/1.html> (read January 2005).

<sup>171</sup> *PFF (Progress and Freedom Foundation)*, *Cyberspace and the American Dream: A Magna Carta for the Knowledge Age*, by Esther Dyson, George Gilder, George Keyworth, and Alvin Toffler, Release 1.2, August 22, 1994, <http://www.pff.org/position.html> (read January 2005).

<sup>172</sup> *Barlow, John Perry*, *Unabhängigkeitserklärung des Cyberspace*, in *Telepolis Magazin der Netzkultur*, Verlag Heinz Heise, 1996, <http://www.heise.de/tp/deutsch/inhalt/te/1028/2.html> (read January 2005).

Such a philosophy takes up the idea of applying the electronic and market-driven self governance found in the digital economy to the democratic system of public powers. The argument is that the Internet "...spells the death of the central institutional paradigm of modern life, the bureaucratic organization"<sup>173</sup>. The corresponding literature assumes that e-business models should be applied to boost e-government<sup>174</sup>. E-government, in the sense used by these authors, deals with "banishing bureaucracy"<sup>175</sup> and transforming bureaucratic systems and organizational structures into entrepreneurial ones. "Decisive is that the steering function of the market supersedes the bureaucratic centralist control ... As customers they [the citizens, author's addition] should exercise their sovereignty by the direct steering of administrative acts via market mechanisms"<sup>176</sup>. This would enable the public sector to be structured more flexibly and much more efficiently. The rigid and slow public institutions are no longer able to keep up with the speed of the Internet era and ought to adopt the flexible and dynamic pattern of the network. According to the advocates of cyber democracy, ICTs enlarge the power of the individual and radically reduce public powers to the benefit of the liberalist-individual freedom of action.

In addition, digital communication and will formation are geographically unbound and hence the subsidiarity principle for subordinated democratic processes is not restricted only to territorial spheres. Under the traditional public law doctrine, statutes always apply a certain people in a certain state territory, such as the jurisdiction of a federal state, a municipality or a county. Under the Kantian definition however, a "*Staatsvolk*" ('civitas') is an "association of a group of people under laws"<sup>177</sup> and thus not necessarily geographically bound. Once we free ourselves from thinking in terms of the necessity of a fixed territory, the associative democracy theory can help us to seek out alternative models for realizing the priority of privacy in shaping our life in many aspects of the community. The unit in which the democratic self determination process is to take place can thus be distributed widely throughout the same state territory, being bound by coordinating information networks, not by geographic frontiers. The geographic unboundedness of digital will formation and the dominance of issue-related over geographic interest groups in digital networks push for such solutions.

Owing to problems of technological implementation, it has been very difficult in the past to achieve non-territorial separations for groups with a differing democratic will. There are one-off examples of non-territorial special cases in the pre-information society, such that of immunity. This status, one could say a membership of the association of citizens with immunity, is registered by a special paper-based means of identity. In case it is required, the member of this association has to show that the common law does not apply to his situation and that he is subject to other laws. If such special regulations for multiple associations would come into force, it would in practice be impossible for the executive branch to manually check the affiliation of each individual citizen to various associations and legal special cases on a regular

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<sup>173</sup> PFF (*Progress and Freedom Foundation*), *Cyberspace and the American Dream*, 1994.

<sup>174</sup> See for example *Saueressig, Gabriele*, *Internetbasierte Self-Service-Systeme für kundenorientierte Dienstleistungsprozesse in öffentlichen Verwaltungen*, Dissertation, Lehrstuhl Bodendorf, Friedrich-Alexander Universität Erlangen-Nürnberg, 1999, <http://www.dissertation.de> (read January 2005).

<sup>175</sup> See *Osborne, David* and *Peter Plastrik*, *Banishing Bureaucracy: the Five Strategies for Reinventing Government*, Addison Wesley, 1997.

<sup>176</sup> *Wesselmann, Christoph*, *Internet und Partizipation in Kommunen*, P. 21 f, 40.

<sup>177</sup> *Kant, Immanuel*, *Metaphysik der Sitten*, Bd. 7, P. 431.

basis. A policeman would be simply unable to cope if he had to check everyone not wearing a crash helmet for membership of a Sikh association. ICT solutions can however solve this problem of information coordination. Wireless and mobile digital verification instruments, such as "wearable computers"<sup>178</sup>, and interconnected networks would enable to sustain such complex systems of regulations, facilitating the executive branch to monitor various associations and their members for compliance and application of their own legislation and thus prevent possible statutory niches being exploited by freeloaders.

### Consequences of the development of cyber democracy

The association of associations, i.e. the overarching state, has various tasks in such scenario. A scenario in which a policeman uses a wireless device to check that a passing motorcyclist is complying with crash helmet laws requires strict protection of the private sphere. In order to avoid abuse digital identification of individual citizens should be carried out separately from the authentication of his affiliation to certain associations.

Besides, the state must also enable the peaceful coexistence of the various associations. Once the people are directly involved in steering the association of associations and this is not anchored by institutional checks and balances and the rule of law, it is very possible that the strongest associations could dominate the entire system. Since this exercising of power is not accompanied by statutory codes, the predominant power of one or a handful of associations can become ever greater. This development shows significant parallels to that of a **one-party system**, in which the rule of law is negated by party hegemony<sup>179</sup>. Parties are interest groups, i.e. associations in the sense used by associative democracy theory. In this sense Habermas reminds us that "organizations and parties remain in effect *private associations*; some are not even organized in the form of legally recognized associations and nevertheless participate in the holding of public office... For example, the organizations have de facto broken down the barriers of civic association law; their declared aim is to convert private interests of many individuals into a common public interest, the credible representation and demonstration of the organization's interest as a general one"<sup>180</sup>. By definition parties are however partial and take sides, not striving for the common public interest<sup>181</sup>. Similarly, in cyber democracy strong associations will use their influence to steer the fate of the entire system, applying their particular will through the various channels of power and thus enforce their will on other interest groups. The democratic influence of the stronger can lead to majority tyranny of the strong associations over the weaker ones, an undemocratic situation because coercion is the consequence.

Thus it can be concluded that if the social contract is not republican but liberalist it is very difficult to avoid coercion by the stronger. The danger of applying concepts from a *laissez-faire*

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<sup>178</sup> See *Massachusetts Institute for Technology (MIT)*, Wearable Computing, MIT Media Lab, Human Design, <http://www.media.with.edu/wearables/history.html> (read January 2005).

<sup>179</sup> *Schachtschneider, Karl Albrecht*, Das Rechtsstaatsprinzip der Republik, 4. Auflage, Erlangen-Nürnberg, 1992, P. 48 f. *idem*, Die Freiheit in der Republik, 5. Kapitel, I, 3. *idem*, Res Publica, Res populi, P. 14 ff., 772 ff., 1045 ff.. *idem*, Der republikwidrige Parteienstaat, in: Murswiek, Dietrich, Ulrich Storost, Heinrich A. Wolff (Ed.), Staat - Souveränität - Verfassung. Festschrift für Helmut Quaritsch zum 70. Geburtstag, 2000, P. 141 - 161.

<sup>180</sup> *Habermas, Jürgen*, Strukturwandel der Öffentlichkeit, P. 297.

<sup>181</sup> *Schachtschneider, Karl Albrecht*, Res Publica, Res populi, P. 772 ff., 1045 ff..

e-business approach with minimum regulation to the digitization of democratic processes does not fail because of the possibilities of technological implementation, but because the way self-determining economic agents act cannot be equated to a democratic public entity. In capitalism the stronger is meant to prevail, in democracy this is to be prevented by the equality of all.

We can deduce that the political influence of the various associations must be equitably institutionalized. It must be ensured that none of the associations is dominated or discriminated against. The raping of the system by the majority (majority tyranny) should be prevented by the rule of law and separation of power, and the democracy model thus shifted on the basic axis of the form of government. As with polis democracy, cyber democracy however rejects this by definition and leaves the democratic power of government without restriction and limit in the hands of the people. It can thus be concluded that in the two recently analyzed democracy models (polis and cyber democracy), the absence of the rule of law in the information society can very easily lead to undemocratic conditions. Another possibility would be to shift the democracy model on the citizens-representatives axis, in the direction of a representative democratic model. In this sense, the role of the association of associations would not be left with the people themselves but entrusted to representatives, in order to “refine and enlarge the public views by passing them through the medium of a chosen body of citizens”<sup>182</sup>, who would then take on moral supervising tasks in the form of good leaders, selflessly, for the well-being of all. The plebiscitarian leadership democracy assumes such a model.

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<sup>182</sup> See footnote 55.

### **Plebiscitarian leadership democracy in the information society**

Unlike in polis and cyber democracy, citizens in a plebiscitarian leadership democracy are not directly involved in determining the law, but instead entrust this task to representatives who are legitimated by them. A common feature with the two preceding democracy models is that people rule, not laws. In other words, the people legitimated for governing are not influenced by institutional checks and balances and legal codes, but are democratically dependent on the legitimation of the people alone. The representatives' efforts are based on a republican social contract that strives to achieve the *volonté générale*.

#### Theoretical foundations of plebiscitarian leadership democracy

The theoretical foundations for "plebiscitarian leadership democracy" have their roots in the democracy-theoretical writings of **Max Weber** (1864-1920)<sup>183</sup>. In his concept there was a single charismatic leader at the head, similar to the then usual monarchies. Unlike in a monarchy, he was to be democratically dependent on the people. For Weber democracy meant "not powerless abandonment to cliques but subordination to self-elected leaders"<sup>184</sup>. The leader should "always see the gallows awaiting him"<sup>185</sup> and so not even think of an autocratic style of government. The master becomes then "a master by the grace of the ruled"<sup>186</sup>, and not by the grace of God, as in a monarchy, or by dint of power, as in a dictatorship. The led can "freely choose and appoint as they think fit, eventually also: dismiss as they think fit"<sup>187</sup>. According to Weber, the process leading to the democratic legitimization of the representation is a tough competitive struggle<sup>188</sup>. This was the right mechanism for revealing capable political leaders and guaranteeing the choice of the best among the people who then becomes the "spokesman of the masses"<sup>189</sup>.

"The mass as such (regardless of which social classes it may comprise) thinks only until the day after tomorrow" warns Weber. Experience shows that the mass is "always open to the current purely emotional and irrational influences"<sup>190</sup>. This makes it impossible to find the best for the good life of all, i.e. the *volonté générale*, when involving the mass directly. This called for political leadership by the best mind among the people that would make good the lack of rationality and virtue of the people.

Here it should be noted that in his democracy-theoretical analysis at the end of the Wilhelminian Empire, Weber had not yet realized the extent to which "führer leadership"

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<sup>183</sup> Weber, Max, *Wirtschaft und Gesellschaft*, Tübingen, Mohr, 1985, P. 157.

<sup>184</sup> Weber, Max, *Der Reichspräsident*, First edition 1919, in: Max Weber, *Zur Neuordnung Deutschlands*, Schriften und Reden 1918-1920, ed. Wolfgang J. Mommsen with Wolfgang Schwentker, Tübingen, P. 220-224.

<sup>185</sup> Weber, Max, *Der Reichspräsident*, P. 220-224.

<sup>186</sup> Weber, Max, *Wirtschaft und Gesellschaft*, P. 156.

<sup>187</sup> Weber, Max, *Wirtschaft und Gesellschaft*, P. 156.

<sup>188</sup> Weber, Max, *Parlament und Regierung im neugeordneten Deutschland*, *Zur politischen Kritik des Beamten-tums und Parteiwesens*, in Max Weber, *Zur Politik im Weltkrieg*. Schriften und Reden 1914-1918, ed. Wolfgang Mommsen with Gangolf Hübinger, Tübingen, 1984, P. 460.

<sup>189</sup> Weber, Max, *Parlament und Regierung im neugeordneten Deutschland*, P. 540.

<sup>190</sup> Weber, Max, *Parlament und Regierung im neugeordneten Deutschland*, P. 549.

would take on a life of its own in the Germany of 1933-1945<sup>191</sup>. However, the model of plebiscitarian leadership democracy was known not only in the political right in the Germany of the early 20th century.

In his anthology of letters and discourses on "*Socialismo y el hombre en Cuba*"<sup>192</sup>, Ernesto Che Guevara writes on the democratic relationship between the Cuban revolutionary leader **Fidel Castro and the Cuban people** in the first years after the successful revolution of 1959. He emphasizes that, even though in these first euphoric years the mass followed their leaders unswervingly (and especially Castro), it was by no means a tame herd without a will of its own. According to Guevara, the degree of trust the people gave Fidel Castro is based on his complete and exact interpretation of the wishes and aspirations of the people and his sincere struggle to fulfil the promises made<sup>193</sup>. "From a superficial standpoint it could appear if those who speak of the subjugation of the individual to the state are right; the mass carries out with enthusiasm and singular discipline the tasks defined by the government, be they economic, cultural, defensive or sport, etc. The initiative generally comes from Fidel or the high ranks of the revolution and presented to the people which takes it up as its own. ... Nevertheless, the state errs sometimes. When one of these mistakes is made, one can note a reduction of the collective enthusiasm which makes itself apparent through a quantitative reduction of all the elements involved"<sup>194</sup>.

Guevara admits that this reactive mechanism of the intuitive democratic leadership could be improved by a "more structured connection with the mass"<sup>195</sup>. However that had not been necessary at that time because Fidel Castro had the unique gift of speaking from the people's hearts. The Cuban revolutionary leader is renowned for his long speeches which frequently lasted seven or eight hours. According to Guevara, these speeches are not monologues but dialogues. The length and intensity of this dialog between the people and its leader stands for democratic close contact, legitimation and mutual confirmation or rejection. "Fidel is a master in this [plebiscitarian leadership, author's addition], and his unique manner of integration with the people can only be appreciated when you watch him. In the great public associations one can observe something like a dialog between two tuning forks whose vibrations call forth new vibrations in the partner. In a dialog Fidel and the mass begin to vibrate and its intensity grows until it reaches a climax with an abrupt end crowned by our battle and victory cries"<sup>196</sup>. Through the "close dialectic association between the individual and the mass, in which both connect, and the mass in turn, as an association of individuals, connects with its leaders"<sup>197</sup> the democratic process becomes a plebiscitarian leadership democracy, in which the good leader has his republican leadership legitimated by the people.

Through the morality and far-sightedness of the good leader and his personal gift of exercising the categorical imperative in the name of the people, the *volonté générale* can be identified

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<sup>191</sup> For a discussion of this see *Schmidt, Manfred G.*, *Demokratiethorien*, P. 180 f.

<sup>192</sup> *Guevara, Ernesto Che*, *El socialismo y el hombre en Cuba*.

<sup>193</sup> *Guevara, Ernesto Che*, *El socialismo y el hombre en Cuba*, P. 53.

<sup>194</sup> *Guevara, Ernesto Che*, *El socialismo y el hombre en Cuba*, P. 54.

<sup>195</sup> See *Guevara, Ernesto Che*, *El socialismo y el hombre en Cuba*, P. 54, 60 f.

<sup>196</sup> *Guevara, Ernesto Che*, *El socialismo y el hombre en Cuba*, P. 54.

<sup>197</sup> *Guevara, Ernesto Che*, *El socialismo y el hombre en Cuba*, P. 55.

better than when the people themselves took over the leadership. Through the use of his reason, conscience and ethics, the leader finds solutions that represent the will of the whole people, not just small fractions of them. The skills of the leader must therefore be extraordinary. To underline just how difficult it is to achieve such a high degree of morality, Kant takes up Plato's metaphor of the philosopher king: "That kings should philosophize or philosophers become kings is not to be expected. Nor is it to be wished, since the possession of power inevitably corrupts the untrammelled judgment of reason"<sup>198</sup>. The fact that Weber's and Guevara's theories were misused by both the political right and left to establish despotic systems of government reveals the weak point: the morality of the people and their inability to put the categorical imperative above particular interests. In this sense also John Stuart Mill: "The moment a man, or class of men, find themselves with power in their hands, the man's individual interest, or the class's separate interest, acquires an entirely new degree of importance in their eyes. Finding themselves worshiped by others, they become worshipers of themselves and think themselves entitled to be counted at a hundred times the value of other people".<sup>199</sup> This would also include the breaking up of organized special interests (*volonté particulière*) which could arise for example in opposition parties, organizations and churches. Carl Schmitt's "expulsion or destruction of the heterogeneous"<sup>200</sup> is the consequence that was applied in both Hitler's and Honecker's Germanys and in Castro's Cuba.

#### Development of plebiscitarian leadership democracy in the information society

The digitization of the information flow in the information society reduces the information asymmetry between people and leader, which can be used for the informal legitimation and confirmation process between citizens and representatives. Politicians and political parties are much better and more frequently informed about voters' current thoughts thanks to opinion polls and other surveys in the information society. "Politicians will be confronted by polls seconds before votes in parliament and then immediately afterwards with voters' initial reactions"<sup>201</sup>. Just as corporate managers track their company's share prices on the stock exchange, day-to-day opinions on a very wide range of issues and questions will dictate the stance of people's representatives (or those who want to be elected in the near future). The grumbles or praise of the people are being digitized and intensified in the information society.

The use of modern ICTs has made conducting opinion polls by demoscopic methods on all conceivable issues so cost effective that it can be easily done by even small firms and non-governmental organizations, students and other independent researchers. For example, voting by means of SMS technology (Short Message Service) has become a common feature of entertainment shows. Even the next music video of a TV-station is chosen by a press of the button in real-time. It should not be overlooked that these polls are not necessarily representative or statistically significant. However ICTs also offer statisticians the possibility for conducting representative surveys very much more cost effectively and thus more frequently. This continuous information flow from the people to the political leadership is

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<sup>198</sup> Kant, *Immanuel*, Zum ewigen Frieden, Anhang, II, P. 35.

<sup>199</sup> Mill, *John Stuart*, Considerations on Representative Government, P. 97.

<sup>200</sup> See footnote 155.

<sup>201</sup> Schmillen, *Achim*, Stau auf dem Datenhighway, in *Blätter für deutsche und internationale Politik*, Ausgabe 6/1997, P. 676.

created not only by quantitative statistics. **Qualitative polls** and expressions of opinions are also very much more frequent in the information society. Bi- and multidirectional communication channels enable individuals to participate interactively in talk shows, phone in with questions or email their opinions. Digital communication channels, be they mobile or fixed, voice or text, enable people to take part in public discussions at any time from everywhere, expressing their opinions on particular topics.

The continuous recording and distribution of quantitative and qualitative opinion polls reduces the information asymmetry between representatives and people significantly. "Thirty or forty years ago political arguments could range over the question of what public opinion on an issue actually was"<sup>202</sup>. In the information society the question tends to be whether and to what degree the representative takes the identified sentiments on board, in other words, if there is a choice of not considering it.

In a society in which people are increasingly accustomed to phoning in to radio shows, to deciding the winners and losers in song contests, communicating directly with the show master in entertainment shows, and expressing their opinions on political issues very much more frequently via various communication channels, it is very unlikely that the political leader can escape from the constant information flow from the politically led. The representative will have to remain constantly informed about the opinion of the people and most of the successful politicians will try to imitate what people are saying in as near real time as possible. Politicians are thus forever chasing behind the opinion of the masses.

The former American presidential candidate and multi-millionaire Ross Perot, a well-known advocate of electronic democracy, was using this argument about the shift of power to the people in his election campaigns even before the Internet age. He was already promising his voters in the early 1990s that if elected he would set up free phone lines so that citizens could express their opinion on current discussions in political talk shows. Under his administration, this feedback would then be used "to get the White House and Congress dancing together like Fred Astaire and Ginger Rogers"<sup>203</sup>. Fifteen years later, feedback consultations via online media (e-consultations) are being regarded by houses of representatives as a real possibility for adapting representative deliberations to the wishes and concerns of the ordinary citizens<sup>204</sup>.

The obvious conclusion is that the future representatives of the people will see themselves forced to play the role of **reality-show candidates** and as such respond to the real-time voting of the public. The public approves or disapproves the actions of their representatives using digitized feedback channels. This would be public sector transparency perfected through ICTs. In time representatives would become accustomed to their role and even ensure that the electorate learns as much as possible about them since they might otherwise suffer a competitive disadvantage in the competition for votes. Here, the most acclaim goes to that leader who provides the information-processing citizens with the most information possible. In order to become the "spokesman of the masses"<sup>205</sup>, the representative in the information society must live a transparent life. This trend, already dubbed by some representatives as "Wired

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<sup>202</sup> Budge, Ian, *The new challenge of direct democracy*, P. 53.

<sup>203</sup> Quoted in *Fishkin, James*, *Talk of the Tube, How to get Teledemocracy right*, in the *American Prospect* Vol.3, Issue 11, September 1, 1992, <http://www.prospect.org/print/V3/11/fishkin-j.html> (read January 2005).

<sup>204</sup> See for example *House of Commons*, *Connecting Parliament with the Public*, P. 20 f.

<sup>205</sup> See footnote 189.



Elected Officials"<sup>206</sup> and being taken up by the focused application of websites, emails, and video conferences, is becoming ever more apparent with the massive use of multimedial ICTs<sup>207</sup> in and outside of parliamentary work. Steven Clift concludes: "In society, public officials will be the most publicly exposed people on the planet. Privacy for political leaders – I doubt it."<sup>208</sup>

At first sight, we might agree with Grossman, who soberly notes: "The question is not whether the transformation to instant public feedback through electronics is good or bad, or politically desirable or undesirable. Like a force of nature, it is simply the way our political system is heading. The people are being asked to give their own judgment before major governmental decisions are made. Since personal electronic media, the teleprocessors and computerized keypads that register public opinion are inherently democratic -- some fear too democratic -- their effect will be to stretch our political system toward more sharing of power, at least by those citizens motivated to participate"<sup>209</sup>. At second sight, we might find more profound consequences of the digitization of democratic feedback in a representative democracy.

### Consequences of the development of plebiscitarian leadership democracy

The loops of the democratic feedback cycle from the people to their representatives and the resulting marionette-like control have far-reaching consequences for the principles of representative democracy. Prior to the information society, the political leaders only orientated itself now and again via polling people's opinions (especially during election campaigns). In the interim they were supposed to use their conscience in the name of the people, in the moral striving to find the best for the good life of all. As the feedback cycle is being accelerated, democratically selected politicians are forced to adapt their policies more finely to the now empirically measurable mood. "The aim is to spin a message that will snare a majority"<sup>210</sup>. This is by definition populism and not representation of the people. The trend towards constant feedback can thus result in politicians no longer acting as they think fit, which for example is required under the principle of the free mandate in many democracies (for example Article 38, Para. 1, Sentence 2 of the German Constitution "They are representatives of the whole people, are not bound by orders and instructions and are subject only to their conscience"). Instead they might see themselves forced to move to an **imperative mandate**.

The consequence is that the free mandate, which is the key sentence governing present-day representation systems, has to be interpreted differently in the information society. The Madisonian filter of representation aims at refining and enlarging the public opinion, that is that representatives to represent the people in their reasoning and judgment. While the scenario

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<sup>206</sup> Clift, Steven, Top Ten Tips for Weos – Wired Elected Officials, Parliaments Online Forum, Democracies Online, 2000, <http://www.publicus.net/articles/weos.html> (read January 2005).

<sup>207</sup> See also Caldwell, Janet, The Virtual Ballot Box: A Survey of Digital Democracy in Europe, Institute for Electronic Government, IBM Corporation, <http://www-1.ibm.com/industries/government/ieg/pdf/ddreport.pdf> (read January 2005).

<sup>208</sup> Clift, Steven, The Future of e-Democracy – the 50 Year Plan, Publicus.net, 2002, P. 9, <http://www.publicus.net/articles/future.html> (read January 2005).

<sup>209</sup> Grossman, Lawrence K., The Electronic Republic, P. 154.

<sup>210</sup> Ackerman, Bruce and James P. Fishkin, Deliberation Day, in: James Fishkin and Peter Laslet, Debating Deliberative Democracy, P. 10.

of the marionette-representative differs from Madison's definition of representation, in principle an imperative mandate is not undemocratic. However it must be seen for what it is in order to prevent possible undemocratic consequences, such as the prevalence of populism. Such as Plato and Kant distinguish between the natures of kings and philosophers<sup>211</sup>, one should clearly differentiate between representatives that use their reason and conscience to find solutions that could represent the will of the whole people (*volonté générale*) or those that are guided by the desire to invent a message that pleases a majority. While none of both types of representatives is safe from being corrupted by power, the latter contains the logic of not even aiming for solutions that might satisfy everybody. The past has shown that this can easily result in handing power to demagogues or in converting good leaders into ones that are exclusively occupied with sustaining their legitimization. This changes the plebiscitarian leadership democracy into a *Führer*-model, with the likelihood that the leader will abuse his given powers to crash opposition voices and strengthen his own position by consolidating a majority around him.

In this sense, the transformation to instant public feedback through ICT bears an undemocratic potential in cases where the institutional structure does not recognize the ceasing existence of the free mandate in practice. The plebiscitarian leadership democracy, such as described by Weber and Guevara, is based on the idea of the free mandate. It counts with the presence of a good leader who supposedly uses his reason, conscience and ethics to find solutions that represent the will of the whole people. The analysis of the digitization of democratic processes in such scenario has shown that such system is undermined by the extremely reduced information asymmetry between people and leader, which almost obligates representatives to tell people what they want to hear. Without restricting regulations and checks and balances controls on the leader, the system is therefore endangered to become victim to a similar undemocratic tyranny as other systems in the past.

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<sup>211</sup> See footnote 198.

## Big Brother democracy in the information society

Similar to plebiscitarian leadership democracy, the scenario of Big Brother democracy is also based on the institutional foundations of democratic representation and people-dominated government. Here too, the representatives of the people are not guided by a complex system of rule of law and separation of power. In contrast however, the model is based on a liberalist social contract that presumes that the formation of the democratic will in society is not bound to the republican morality of the *volonté générale*.

### Theoretical foundations of Big Brother democracy

The scenario of Big Brother democracy is surely the oldest variant of what is nowadays understood by the term theory of democracy for the information society. It is based on Orwell's 1948 vision of an informative Big Brother state with its principle: "the Party was the guardian of democracy"<sup>212</sup>. The underlying concept is similar to the transparent representative as described above in the plebiscitarian leadership democracy, only that the direction of the information flow is reversed and aim at the transparent citizen. "The same channels of communication that enable citizens around the world to communicate with one another [and with its leaders, author's addition] also allow government and private interests to gather information about them."<sup>213</sup> In this vision of the information society, the state has understood how best to benefit from the new information and communication technologies. It is not the citizens, but the state that uses ICTs as a continuous instrument of control.

The outcome is what Enzensberger calls "repressive use of media"<sup>214</sup>. According to this theory, media devices are in principle **always means of consumption and production** at one and the same time. Radio (with its radio hams), film (with its video amateurs), printing (with ink jet printers and photocopiers) and the camera are in principle communication channels that can be used by everyone. Through the better use of the more emancipated side of these channels, however, the production capacity of one side is practically converted in mere consumption, thus creating a basically unidirectional mass medium. This happened for example with radio, film and printing, and the Internet could suffer the same fate. As Webpages become more sophisticated, their production and maintenance is becoming more resource intense, conglomerating traffic to but a few main sites. Instead of the highly praised Internet participation among equal cyber bloggers, this would entail the "retrograde development to largely unfranchised subjects of an oligarchy on an ICT basis"<sup>215</sup>. Enzensberger theory ends up in a scenario where the emancipated side of the communication channel uses its superiority to dominate the weak side, not only for consumption, but also to manipulate and repress the one that is less capable of using the medium for its purposes.

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<sup>212</sup> *Orwell, George*, 1984, Part 1, Chapter 3.

<sup>213</sup> *Rheingold, Howard*, *The Virtual Community*, Chapter 10.

<sup>214</sup> See and for following *Enzensberger, Hans Magnus*, *Baukasten zu einer Theorie der Medien*, First edition 1970, in: *Palaver, Political deliberations*, Suhrkamp Verlag Frankfurt, 1974.

<sup>215</sup> *Hoffmann, Gerd*, *Informierte Bürger oder Technologie-Untertanen*, in: *Hansen, H.R.*, *Mensch und Computer: zur Kontroverse über die ökonomischen und gesellschaftlichen Auswirkungen der EDV*, München/ Wien, Oldenbourg, 1979, P. 135.

Given the omnipresent importance of information and communication, the repressive use of media can have devastating results. For example, for "1984" Orwell predicted: "By comparison with that existing today, all the tyrannies of the past were half-hearted and inefficient. The ruling groups were always infected to some extent by liberal ideas, and were content to leave loose ends everywhere, to regard only the overt act and to be uninterested in what their subjects were thinking. Even the Catholic Church of the Middle Ages was tolerant by modern standards. Part of the reason for this was that in the past no government had the power to keep its citizens under constant surveillance. The invention of print, however, made it easier to manipulate public opinion, and the film and the radio carried the process further. With the development of television, and the technical advance which made it possible to receive and transmit simultaneously on the same instrument [the Internet was unknown to Orwell of course - author's comment], private life came to an end. Every citizen, or at least every citizen important enough to be worth watching, could be kept for twenty-four hours a day under the eyes of the police and in the sound of official propaganda, with all other channels of communication closed. The possibility of enforcing not only complete obedience to the will of the State, but complete uniformity of opinion on all subjects, now existed for the first time."<sup>216</sup>

In the end the state is turned into a kind of "*Panopticum*" (pan = all; opticon = seeing), a prison in which all the prisoners are watched all the time by unseen warders. This idea dates back to Jeremy Bentham<sup>217</sup> in the 18th century and enjoyed a significant revival at the end of the 20th century in the fight against crime. Since the end of the 1980s cameras have been installed not only in prisons, museums and banks, but also in streets and public areas of various cities. In London, for example, New Scotland Yard has been using ICTs since 1986 in the hunt for criminals<sup>218</sup>. Through constant video monitoring citizens are to be constantly monitored for their own protection. By 2003, 4 million security cameras had been installed in the United Kingdom, an average of 15 citizens per camera<sup>219</sup>. In that year a visitor to downtown London was filmed 300 times a day on average. The trends goes toward integrating more and more of the real world in the virtual reality and tie information networks as tight that terrorists, pickpockets, tax evaders and counterfeiters cannot escape.

For the work of the executive and the judicative it is surely very useful that there is digital evidence or clues. If these data end up in the hands of the legislative however, they can be used against democracy and for coercion. "It has always been the ideal for the ruler to see every gesture of his subjects, to hear every word (and if at all possible without being seen or heard): this ideal has today become technically feasible"<sup>220</sup>. An Orwellian information society, in which the reality is presented to people as a controlled information spectacle ("*Reality*

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<sup>216</sup> *Orwell, George*, 1984, Part 2, Chapter 9.

<sup>217</sup> *Bentham, Jeremy*, Panopticum, or the Inspection House, first edition 1779, in: Liane Lefaivre and Alexander Tzonis, the Emergence of Modern Architecture. A Documentary History from 1000 to 1800, Routledge, Taylor and Francis Group, 2003.

<sup>218</sup> See *Pauleit, Winfried*, Videoüberwachung und the 'condition postmoderne', in: Ästhetik und Kommunikation, 1999, <http://www.aktuelle-kamera.org/txt/pauleit-video.html> (read January 2005).

<sup>219</sup> See *National Geographic*, Ojos bien abiertos, El nuevo mundo de la vigilancia pública, National Geograohic en Español, November 2003, P. 8, 16.

<sup>220</sup> *Bobbio, Norbert*, Die Zukunft der Demokratie, Rotbuch, Berlin, 1988, P. 23.

*Control*") and in which the "*Thought Police*" track down each "*crimethink*" to make sure that no opposition emerges<sup>221</sup>, is of course no functioning democracy but information tyranny.

### Development of Big Brother democracy in the information society

In these first 15 years of unencrypted and open communications services via the worldwide web it has been above all commercial activities that have fuelled the debate about privacy protection and habeas data. Data are being used for the targeted manipulation of purchasing decisions. The production of transparent customers not only helps to identify consumer behaviour patterns but also the offering of additional services. However, there are more than a few cases in which information from private data pools have been misused for government issues<sup>222</sup>. In an online world in which users leave a digital trail of their thoughts while surfing the net, it is very easy to create such information and thought patterns.

Besides such illegal loopholes, it can also be the praiseworthy increasing of efficiency and transparency of public administration (e-government) that augments the information power of the state. Following the logic of Customer Relationship Management systems<sup>223</sup> (CRM) from e-commerce, this aims at creating individual data profiles for each individual citizen. In 2000 for example, Chile introduced individually set-up **tax returns** provided online for citizens<sup>224</sup>. In contrary to traditional systems where the citizen has to make a tax declaration statement about earnings from independent labour, wage tax returns from firms are used in this system to automatically set up individual tax profiles for employees. The information is processed by the tax authorities and combined with other information. Citizens only have to visit the individual income tax returns already completed on the website and accept, edit or add to them with a mouse click. The system knows about their economic activity. CRM applications that enable the administration and intelligent evaluation of a large number of individual profiles round off these applications. Whereas citizens today still have to enter income from self employment themselves, the increase in electronic payment mechanisms will make it technically ever more possible to offer all economic activities to the tax authorities. A completely transparent payment system would be very pleasant from the viewpoint of honest citizens when making their tax returns. They will simply have to acknowledge an already individually prepared tax return by mouse click without having to spend a weekend adding up their income of the past year. And it would boost the administrative effectiveness of the executive and the compliance monitoring activities of the judicative immensely.

In the wake of the terrorist attacks of September 11, 2001, the discussion about the protection of the private sphere and reasonable information processing was rekindled<sup>225</sup>. Led by

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<sup>221</sup> See *Orwell, George*, 1984, Part 1, Chapter 3, Part 2, Chapter 8, 9.

<sup>222</sup> For example, online provider America Online (AOL) revealed the identity of a customer to the US navy so that it could prosecute him for homosexuality. *Egloff, Daniel*, *Digitale Demokratie: Mythos oder Realität? Auf den Spuren der demokratischen Aspekte des Internets und der Computerkultur*, Studien zur Kommunikationswissenschaft, Westdeutscher Verlag Wiesbaden, 2002, P. 153.

<sup>223</sup> *Siedschlag, Alexander, Arne Rogg und Caroline Welzel*, *Digitale Demokratie, Willensbildung und Partizipation per Internet*, Leske + Budrich, Opladen, Hemsbach, 2002, P. 56 ff.

<sup>224</sup> See: <http://www.sii.cl> (read January 2005).

<sup>225</sup> Even before the terrorist attacks of September 11, 2001, it has been estimated that around the world between 15-20 billion euros were spent on so-called communications intelligence in 2000, in other words for espionage. A

developments in the USA, such as the debate on the American "Total (or Terrorist) Information Awareness" project<sup>226</sup>, the worldwide trend is more towards giving at least secret service military intelligence agencies greater access to digital data. For example, under the US Act "Uniting and strengthening America by providing appropriate tools required to intercept and obstruct terrorism" (**USA Patriot Act**, October 2001), libraries and book stores in the United States could be subpoenaed to pass on data about the buying and reading habits of their customers to government investigators<sup>227</sup>. The US government would merely have to be of the opinion that the investigation was necessary "to protect against international terrorism or clandestine intelligence activities"<sup>228</sup>. Apart from the broad interpretation of this claim, the persons passing on the information are strictly prohibited from informing anybody that such snooping was going on<sup>229</sup>. "As a result of this gag order, the subjects of surveillance never even find out that their personal records have been examined by the government. That undercuts an important check and balance on this power: the ability of individuals to challenge illegitimate searches"<sup>230</sup>.

In the fight against an invisible opponent, the sparse information that can be gathered and evaluated using sophisticated ICTs on (potential) terrorists and sympathizers is absolutely indispensable for defending the democratic freedom of the people, argue the defenders of the concept. "Dead people, they argue, are not free"<sup>231</sup>. Others warn that the newly granted freedom to government intelligence, above all in the light of the information-processing possibilities of ICTs, is an invitation to misuse in government circles<sup>232</sup>.

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well-known example is the Echelon surveillance system. This satellite-based espionage system operated by the USA, United Kingdom, Canada, Australia and New Zealand was kept a secret for over 50 years. Satellite receiver stations around the world intercept and filter telephone calls, fax messages, Internet and email traffic within certain technological limits, in order to identify suspicious communications. Particularly in the days of the Cold War, this surveillance system was used for espionage purposes to eavesdrop on the information and communication processes of the Warsaw Pact, and nowadays even private communications and economic information are intercepted, especially in the fight against terrorism. See: *Europäisches Parlament*, Bericht über die Existenz eines globalen Abhörsystems für private und wirtschaftliche Kommunikation (Abhörsystem Echelon), 2001/2098, A5-0264/2001, <http://www.europarl.europa.eu/omk/sipade3?PROG=REPORT&L=EN&PUBREF=-//EP//TEXT+REPORT+A5-2001-0264+0+NOT+SGML+V0//EN> (read January 2005). *idem*, Arbeitsdokument, Nichtständiger Ausschuss über das Abhörsystem Echelon, Berichterstatter Gerhard Schmid, P. 3, [http://www.europarl.eu.int/tempcom/echelon/pdf/431720\\_de.pdf](http://www.europarl.eu.int/tempcom/echelon/pdf/431720_de.pdf) (read January 2005).

<sup>226</sup> It included data mining, the evaluation of the data streams on the Internet, and the monitoring of databases held by financial and banking institution, travel agencies, the purchasing of government-critical books on online stores, health and transport agencies are expected to reveal patterns that indicate terrorist activities. In mid 2002, the U.S. Senate suspended the funds for the program temporarily to reevaluate and modify related measures.

<sup>227</sup> *USA Patriot Act*, Public Law 107–56—OCT. 26, 2001, Uniting and strengthening America by providing appropriate tools required to intercept and obstruct terrorism, United States of America Public Law, 2001, Section 215, <http://thomas.loc.gov/cgi-am/query/D?c107:4:./temp/~c107nrAYLV>: (read January 2005).

<sup>228</sup> *USA Patriot Act*, Section 215, a1

<sup>229</sup> *USA Patriot Act*, Section 215, 2, d.

<sup>230</sup> *American Civil Liberties Union (ACLU)*, USA Patriot Act, Summaries and Analysis, 2004, Surveillance under the USA Patriot Act, <http://www.aclu.org/SafeandFree/SafeandFree.cfm?ID=12126&c=207> (read January 2005).

<sup>231</sup> *Etzioni, Amitai*, Implications of select new technologies for individual rights and public safety, *Harvard Journal of Law & Technology*, Volume 15, Number 2, Spring 2002, P. 258.

<sup>232</sup> See *American Civil Liberties Union (ACLU)*, USA Patriot Act, Surveillance under the USA Patriot Act.

The "discoveries" about the 50-year existence of the global cold-war satellite-based Echelon spy system<sup>233</sup>, US defence strategists' plans for the so-called "Star Wars Program" and also the satellite-based "National Missile Defense System"<sup>234</sup> all reinforce the debate about the focused and intensive use of ICTs for public control purposes. When surveillance satellites are equipped with such powerful lenses that they can snoop in the bunkers of identified 'rogue states' to find terrorists, of course it is child's play to monitor 'suspicious' citizens anywhere and any time.

### Consequences of the development of Big Brother democracy

As long as a **strict separation of power and rule of law** ensures that the information gathered is used solely by the appropriate public authority for the appropriate purposes, no antidemocratic developments need necessarily emerge. The provided information simply eases the workload of the responsible department for the benefit of society. Whereas the tax authorities only need to know about the various earnings of citizens to charge a certain income tax rate, other executive authorities however, could be interested in the contents of the payment transactions, for example to catch terrorists and money launderers. For their own security, honest citizens should thus be keen to make their information available to the corresponding government authorities for the well-being of society as a whole. While strict regulation would need to assure who receives what kind of information for what purpose, generally speaking, similar kind of information is required for similar purposes in the same branch of the state, in the example the executive branch.

As soon as the separation of powers is no longer completely guaranteed however, this can easily become delicate. While information transparency in the executive branch might be welcomed by frank citizens, privacy issues become essential for the functioning of the legislative branch and democracy. If for example certain administrative information was made available not only to the executive branch but also to "party colleagues" in the legislative branch, individual citizen profiles could be drawn up that would help representatives in their election campaigns. ICT applications can be used to derive individual thought patterns, attitudes and political opinions from large digital databases. This would not only enable the legislative to gather information about citizens' preferences but also to anticipate preference structures and to manipulate them appropriately. The path to information-based manipulation of citizens, Orwell's "*Reality Control*" and "*Thought Police*" would then be potentially open.

The line between protecting public security and violating the private sphere was always a very thin one. But from the above, we can conclude that the new technology now makes it feasible to process huge quantities of information so cheaply that this line is becoming increasingly slippery. Once expensive satellite systems have been installed, there is only a marginal difference whether they are used to process information on a dozen terrorists or on millions citizens owing to the possible network and scale effects in digital information management. Because of the existence of network externalities, it is in fact much more efficient to process more information, for this makes it easier to identify behaviour trends and so anticipate the future behaviour of monitored individuals all the better. Since in the scenario of Big Brother

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<sup>233</sup> See footnote 225.

<sup>234</sup> *Federation of American Scientists* (FAS), Space Policy Project, Special Weapons Monitor, Washington D.C., 2004, <http://www.fas.org/spp/starwars/program> (read January 2005).

democracy it is not the institutionalized rule of law that governs but representatives furnished with sufficient leeway, Orwell's vision of the information society shows very clearly that ICTs can be very damaging for democracy in such an institutional setting: "*Big Brother is watching you.*"<sup>235</sup>

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<sup>235</sup> *Orwell, George*, 1984, Part 1, Chapter 1.



## Economic democracy in the information society

Unlike all the theories of democracy discussed above, the economic democracy theory is based on the postulate of the rule of law and the separation of power. The democratic despotism of the ruling people is channelled by a legal code. If this legal code has been produced in a democratic manner, this does not mean of course that the will of the people is limited in power or not democratic<sup>236</sup>. It is, in a sense, just less flexible, providing the process of collective reasoning with procedural certainty and less haste. The institutionalized procedures can be changed in a democratic, but not despotic way<sup>237</sup>. Typical for a democracy theory from the mid 20th century, the economic democracy theory builds on the liberalist concept of democracy with a representative system.

### Theoretical foundations of economic democracy

The intellectual father of this theory is Joseph Alois **Schumpeter** (1883-1950). His writings on democracy theory dealt with mutual dependencies in modern representative democracies and how such systems lead to decisions. Being an economist, Schumpeter concluded that one can interpret democracy as a market in which there is mutual but free interdependence between representatives and represented, much like between sellers and buyers. In the 21st chapter of his work on "capitalism, socialism and democracy" he defines: "The democratic method is that institutional arrangement for arriving at political decisions in which individuals acquire the power to decide by means of a competitive struggle for the people's vote"<sup>238</sup>.

Schumpeter adds to this definition that in this market model the public institutions are the suppliers. The people have a more reactive demand function. "The way in which problems and the will of the people concerning these problems are fabricated is completely analogue to commercial advertising techniques"<sup>239</sup>. The public institutions determine the agenda, influence the citizens and offer a priority list of important challenges and their solutions to the people, who then legitimate the politicians to solve certain problems. The citizens pay by assigning legitimacy to the proffering politician. In other words, they give him permission to exercise power over them. The main driving force for politicians when drawing up their offerings is, according to Schumpeter, their will to gain or stay in office<sup>240</sup>.

Schumpeter's view that people merely react to the policies offered stands in contrast to Rousseau's concept of *volonté générale* and the republican concept of democracy, which says that the common will is an exogenous variable coming from the people itself. For Schumpeter on the other hand, there is no autonomous and independent will of the people<sup>241</sup>. He sees the

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<sup>236</sup> Kant, Immanuel, Über den Gemeinspruch, P. 40 f.

<sup>237</sup> Kant, Immanuel, Über den Gemeinspruch, P. 57 f.

<sup>238</sup> Schumpeter, Joseph A., Kapitalismus, Sozialismus und Demokratie, P. 427 ff.

<sup>239</sup> Schumpeter, Joseph A., Kapitalismus, Sozialismus und Demokratie, S 418. For further details about political advertising in the private sector and vice versa, see Habermas, Jürgen, Strukturwandel der Öffentlichkeit, P. 289 ff.

<sup>240</sup> Schumpeter, Joseph A., Kapitalismus, Sozialismus und Demokratie, P. 455 f.

<sup>241</sup> This supply-side definition might also lead to the impression that the public is not there any more *a priori*, but would need to be created. "Even the term 'public relations work' reveals that effort must be put into creating a

will of the people as an "artifact"<sup>242</sup>, as a "fabricated will... the product and not the driving force of the political process"<sup>243</sup>. According to the economist, this was necessarily the case as citizens were too infantile for politics, their way of thinking too "associative and affective"<sup>244</sup> and they were also extremely influenceable.

The fine-tuning of market mechanism between party manifestos and the demand for leadership depends on information and communication processes. Traditionally it is evidently very coarse. The policy offerings are limited and highly generalized, whereas the will of the people on the demand side is a complex and very heterogeneous "mosaic"<sup>245</sup>. With the metaphor of the will of the people as a mosaic, Schumpeter refers to the various particular wills of the individual citizens which are pooled to form a *volonté de tous*. The offering that is ultimately chosen represents the will of the majority. In other words, the largest piece of mosaic or the mightiest particular will prevails in the competition in the democracy market for the *volonté de tous*<sup>246</sup>.

Fifteen years later, this forms the basis for the draft dissertation by **Anthony Downs** (born 1930) on the "economic theory of democracy"<sup>247</sup>. According to this theory, citizens are rational and economic utility maximizers<sup>248</sup> who "without exception" act in accordance with the "selfishness axiom", i.e. following and defending their *volonté particulière*<sup>249</sup>. Thus, for example, only those who felt the expected benefit of participation exceeded the costs of political participation (for example information search costs, time required, etc.) would contribute to democracy and vote<sup>250</sup>. Along with other conclusions, he also finds that party manifestos had to be generalized in order to appeal to the largest possible electorate. As a result, it may well be the case that in the competitive struggle for the largest "piece of mosaic" party manifestos of different parties are identical<sup>251</sup>.

Downs' theory is clearly open to the criticism that the citizen should not just be seen as a rational and utility maximizing *homo oeconomicus*, but as a person who not only acts according to utilitarian principles but also acts through social reasoning and who is interested in the intrinsic value of political participation for reaching consensus. He is also exposed to the criticism of those who attribute to politicians and parties not only the striving for power but also ideological values<sup>252</sup>. Nevertheless, the economic theories of democracy can help us to

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public each time ... the public must be 'worked', it is not longer 'there'" See *Habermas, Jürgen*, Strukturwandel der Öffentlichkeit, P. 299 f, 312 ff, 320 f.

<sup>242</sup> *Schumpeter, Joseph A.*, Kapitalismus, Sozialismus und Demokratie, S 418, also 429.

<sup>243</sup> *Schumpeter, Joseph A.*, Kapitalismus, Sozialismus und Demokratie, P. 420.

<sup>244</sup> *Schumpeter, Joseph A.*, Kapitalismus, Sozialismus und Demokratie, P. 418.

<sup>245</sup> "... the will of the people ... is a mosaic ...". *Schumpeter, Joseph A.*, Kapitalismus, Sozialismus und Demokratie, P. 432.

<sup>246</sup> *Schumpeter, Joseph A.*, Kapitalismus, Sozialismus und Demokratie, P. 432.

<sup>247</sup> *Downs, Anthony*, An Economic Theory of Democracy: Ökonomische Theorie der Politik, first edition 1957, Tübingen 1968.

<sup>248</sup> *Downs, Anthony*, Ökonomische Theorie der Politik, S 5.

<sup>249</sup> *Downs, Anthony*, Ökonomische Theorie der Politik, P. 26 f.

<sup>250</sup> See *Downs, Anthony*, Ökonomische Theorie der Politik, P. 202 ff.

<sup>251</sup> *Downs, Anthony*, Ökonomische Theorie der Politik, S 50 ff., 290.

<sup>252</sup> See *Schmidt, Manfred G.*, Demokratietheorien, P. 221 ff.

gain interesting insights into the functionality of representative democracies in the information society.

### Development of economic democracy in the information society

To understand the implications of digitization for such a model of democracy it is advisable to compare with developments of the digital economy. In digital markets the mechanism of supply and demand is being digitized. Lower transaction costs, changes in cooperation mechanisms and coordination arrangements, growing transparency, and also shifts in "principal-agent" relationships are the well-known consequences<sup>253</sup>. A consequence on the supply side is that the supplier feels compelled to gain new competitive advantages over his competitors as a result of the greater transparency. A frequently used tool for gaining new competitive advantages is the offering of additional customized services. The more the customer comes into contact with the provider, the more the latter learns about the customer's preference pattern (learning relationship) and the better it can offer individualized products.

Besides the integrative gathering, processing and evaluating of customer data (data mining) and customized one-to-one marketing through CRM, digital systems are used to scale such efforts<sup>254</sup>. As a result, the benefits of Michael Porter's two competitive advantages (differentiation versus cost leadership<sup>255</sup>) can be combined through e-business (outpacing strategies). Using *mass customization* products (and/or byproducts) can be individualized through CRM, while their basic information input is produced on a massive scale. The input for newspapers or music discs can, for example, be produced on a large scale, whereas different modular inputs can be combined to build the individual final product for the customer. A similar logic accounts for non-digital products, whereas the related information-based services and additional by-products are personalized digitally. The non-rivalry of digital information and the intelligent analysis of massive data through ICT systems enable such hybrid business strategies. Products are also individualized by being offered at the appropriate time and in the desired quality and quantity through *versioning*. Each of these product versions has its own individual demand and price (dynamic pricing<sup>256</sup>). The customer demands a personalized product and pays only as much as necessary. The improved communication and reduced information asymmetry between *principal* (customer) and *agent* (provider) enable individual satisfaction of the heterogeneous particular wishes of the various customers.

These new possibilities show that ICT networks, unlike traditional communications systems (which permit only *one-to-many* or *few-to-many* communication), not only enable the oft-lauded multidirectional communication (*many-to-many*) but also foster direct individual communication (*one-to-one*). Since the offered product is better tailored to the special demand of the customer and it is possible to determine quite precisely how much the customer is willing to pay, the economic system moves closer to the equilibrium point between supply and demand. Supply and demand in the digital economy are thus balanced much more quickly than in an industrial economy, in which imperfect information, incomplete contracts and geographic

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<sup>253</sup> See and for following Bodendorf, *Freimut*, Networked and Mobile Business, P. 101 ff.

<sup>254</sup> See and for following Bodendorf, *Freimut*, Networked and Mobile Business, P. 77 ff.

<sup>255</sup> Porter, *Michael*, Competitive Strategy: Techniques for analyzing industries and competitors; The Free Press, New York, 1980.

<sup>256</sup> Hilbert, *Martin*, From Industrial Economics to Digital Economics, P. 60 f.

distance delay and restrict the adjustment process Walras coined *tatonnement* in 1874<sup>257</sup>. In essence, the adjustment process is reduced to real-time speed. In a pure digital economy the market is always in equilibrium, because the price, as in stock exchange markets, can always precisely reflect current demand and the appropriate supply thanks to the continuous real time information flow.

Transferred to the economic democracy theory of Schumpeter and Downs, this also applies for the democratic equilibrium between voters and party politicians. Opinion polls, email contact, informative websites and other applications reduce the information asymmetry between citizens and representatives. There is already a large number of supporting computer programs. For example, people can use the application Vote Match Europe [www.votematch.net](http://www.votematch.net) (read January 2005) or Wahl-O-Mat [www.wahl-o-mat.de](http://www.wahl-o-mat.de) (read January 2005) to compare their views with the agendas of parties. Individual preferences are determined using 30 simple propositions and statements and compared against the party manifestos in the current election campaign. The [www.campaignsearch.com](http://www.campaignsearch.com) (read January 2005) application for example enables a targeted Internet search for certain audio and video files on the 2004 American presidential election. The National Tax Payers Union in the USA offers voters an ICT application where they can check politicians' long-term voting behaviour on tax issues<sup>258</sup>. In 2003, the US citizens' initiative [www.vote-smart.org](http://www.vote-smart.org) (read January 2005) contained information on over 40,000 candidates in categories such as personal and professional background, campaign finances, public statements on various issues, ideological position, and voting behaviour. The "National Political Awareness Test (NPAT)" questionnaire enables voters to compare their political views with those of the candidates. During the 2001 general election in Great Britain, the Fantasyelection2001 initiative presented a fantasy prime minister that could be configured to test how it compared with public opinion. Voters could gain a general impression of whether they were on their own with their opinion or perhaps part of an unexpected majority<sup>259</sup>.

A hybrid competitive strategy that combines advantages of product-quality differentiation with scale-based cost leadership not only requires a resource intensive organizational structure, but also favours the creation of large business entities that can exploit economies of scale and scope. Whereas in the beginning of the worldwide web almost anybody was professional enough to compete on the web, the increasing maturity of ICT applications will enable the stronger, better and more professional provider to offer the masses more attractive information services and products and canalize traffic<sup>260</sup>. The resulting **concentration process** in information-processing industries is a well-known phenomenon<sup>261</sup>, which is due to the large economies of scale and scope of information contents, entailing high fixed and minimum variable costs. Whereas in 1910 there were still 2,202 daily newspapers in the USA, by 2000

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<sup>257</sup> *Walras, Marie-Esprit-Leon*, Elements of pure Economics, first edition 1874, George Allen and Unwin, translated by W. Jaffe, London, 1954.

<sup>258</sup> *National Tax Payers Union*, NTUF's Bill Tally and Vote Tally, 2003, <http://www.ntu.org>, (read 08.2003).

<sup>259</sup> See *Siedschlag, Alexander, Arne Rogg und Caroline Welzel*, Digitale Demokratie, P. 32, 54 f, 80 f.

<sup>260</sup> "Thus, any effectiveness of early adopters will soon be matched by their rivals and will simply lead to an accelerated, expensive, and mutually canceling political arms-race of investment in action techniques and new-media marketing technologies". *Noam, Eli*, Why the Internet will be bad for democracy, P. 34.

<sup>261</sup> See also *Habermas, Jürgen*, Strukturwandel der Öffentlichkeit, P. 277 ff.

there were only 1,483<sup>262</sup>. While the number radio stations in the USA rose 16% (to 12,717) between 1996 and 2000, the number of radio station owners fell in the wake of the aggressive acquisition policies of radio station chains<sup>263</sup>. Such a concentration process can also be seen in the Internet content provider industry. Between March 1999 and March 2001, the number of providers controlling 50 percent of the consumed online minutes in the USA fell from eleven to four. The number of providers controlling 60 percent of the online minutes in the USA fell in the same two years from 110 to 14<sup>264</sup>. The dominance of Google over the original host of search engines is a further example. The consequence is "that the medium is continuing to grow exponentially with respect to content and user base but despite this variety an ever smaller group of sites is attracting the bulk of web users"<sup>265</sup>.

This trend will be reinforced with the growing sophistication of net contents. The horrendous costs of advanced information offerings, such as via digital TV, raise the entry barriers for even the largest multimedia corporations. For example, five of the normally highly competitive major Hollywood studios (MGM, Warner-Bros owned by AOL-Time Warner, Universal Studios owned by Vivendi Universal, Paramount Pictures owned by Viacom and Sony Digital Entertainment) agreed in 2002 to set up a new firm specializing in the production of Internet films. Walt Disney (Walt Disney Pictures and Touchstone) and News Corp (Twentieth Century Fox) combined forces so that they could enter the expensive Internet film market<sup>266</sup>. These developments are a cause of concern above all in Europe. "Media pluralism remains an essential public interest objective in the digital television environment, in the interest of democracy and the full cultural development of societies. In this respect, although the latter will offer more channels and more services, it is difficult to ascertain whether this will be matched by a corresponding rise in the pluralism of content"<sup>267</sup>.

### Consequences of the development economic democracy

Two trends for the development of the economic democracy in the information society can be derived from the development of the digital economy. On the one hand, the fragmenting of the public into small partial publics, which is based on a representative system driven by the political class, in contrast to the citizen-driven retribalization of the public sphere identified in the polis democracy<sup>268</sup>. On the other hand the commercialization of political information managements through economies of scale and scope of digital contents that result in a

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<sup>262</sup> Demers, David, Media Concentration in the United States, Center for Media Studies, University of Laval, Quebec, 2001, P. 5.

<sup>263</sup> Demers, David, Media Concentration in the United States, P. 10 f.

<sup>264</sup> Jupiter Media Matrix, Rapid Media Consolidation dramatically narrows number of companies controlling time spend online, 2001, <http://www.jmm.com> (read January 2005).

<sup>265</sup> Egloff, Daniel, Digitale Demokratie, P. 90.

<sup>266</sup> On this and further consequences of multimedia concentration, see Hilbert, Martin, e-Media, in Hilbert, Martin and Jorge Katz, Building an Information Society, P. 281 f, [www.eclac.cl/id.asp?id=11672](http://www.eclac.cl/id.asp?id=11672) (read January 2005).

<sup>267</sup> Council of Europe, Report on Media Pluralism in the digital Environment, adopted by the Steering Committee on the Mass Media, October 2000, P. 4, [http://www.coe.int/T/E/human\\_rights/media/5\\_Documentary\\_Resources/2\\_Thematic\\_documentation/Media\\_pluralism/CDMM\(2000\)pde%20E%20Digital\\_environment.asp#TopOfPage](http://www.coe.int/T/E/human_rights/media/5_Documentary_Resources/2_Thematic_documentation/Media_pluralism/CDMM(2000)pde%20E%20Digital_environment.asp#TopOfPage) (read January 2005).

<sup>268</sup> See footnote 152.

concentration among few big players. While both trends seem to point into opposite directions, CRM-based mass-customization techniques might complement them, similar to the development in e-business.

Thanks to the use of CRM-based citizen profile databases with the corresponding preference patrons, it is not only a great deal easier in the information society to ascertain the majority will, the particular fragments of Schumpeter's mosaic can also be identified. Similar to product versioning and the individualization of customized services in the digital economy, the supplying politician could also tailor a policy program to his policy demanding voting customer. "The Internet offers a new kind of interaction between policy supplier and policy demander... an interleaving of policy production and policy consumption"<sup>269</sup>. Cluster analyses in digital databases of information about voter preferences can very quickly identify interest groups, interest loops and conflicts within voter groups. Political parties or candidates can use information-processing systems to identify which combination of opinions and opinion groups delivers the maximum number of votes, or to specialize in a certain political opinion fragment and make tailored policy offerings to this partial public.

Since the various ideologies of interest groups and hence the opinion heterogeneity are now identifiable, more representatives could become independents as they will opt for representing a special interest group. In a first stage, this would result in a **multi-party landscape**. A noteworthy side effect of this development is the ever greater ideological flexibility of political leaders and their parties. In the past, a political party was forced to adhere to dyed-in-the-wool ideologies in order to keep their core voters. This core electorate was preferably an unchanging interest group, whose preferences were not subject to continuous ideological fluctuations, such as workers, Christians, businessmen and suchlike. Economies of scale were necessary to cover the immense costs incurred to present the party manifesto to the voters<sup>270</sup>. The ignorance about the true preference structures in the mosaic of the *volonté de tous* dictated such a coarse approach. It can be seen ever more frequently nowadays that the increased information flow on prevailing sentiments enables party manifestos and the political convictions of party leaders to be adjusted quite flexibly. Rigid party ideologies are no longer absolutely necessary. In a world in which representatives can identify voter preference structures very inexpensively and yet very precisely, Downs predicts that "the parties' election manifestos will not contain any ideological elements at all"<sup>271</sup>. In such a scenario "parties need not formulate any worldview at all and can concentrate on responding ad hoc to practical problems as they arise"<sup>272</sup>.

The consequence is that the representative represents the interests of a particular partial public. He is not the "representative of the whole people" (See for example Article 38 Para. 1 Sentence 2 German Constitution), but legitimates himself through an imperative mandate from "his partial public"<sup>273</sup>. Similar to plebiscitarian leadership democracy, there is a clear trend to an imperative mandate here as well. Unlike plebiscitarian leadership democracy, which strives in its republican endeavours to achieve the *volonté générale*, the liberalist focus of the economic democracy theory leads to a **fragmentation of the public**. Citizens cede only as much

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<sup>269</sup> Siedschlag, Alexander, Arne Rogg und Caroline Welzel, Digitale Demokratie, P.

<sup>270</sup> See footnote 148.

<sup>271</sup> Downs, Anthony, Ökonomische Theorie der Politik, S 94 f.

<sup>272</sup> Downs, Anthony, Ökonomische Theorie der Politik, S 95.

<sup>273</sup> Siedschlag, Alexander, Arne Rogg und Caroline Welzel, Digitale Demokratie, P. 11.

sovereignty to their representatives as necessary and demand in return a customized policy product tailored to their particular wills. Successful politicians will make themselves representatives of partial publics with a particular issue. Since, according to Schumpeter, the main driving force for politicians is the struggle for office, it is essential for the political survival of the politician to emphasize and accentuate the difference between the issues of his interest group and those of other partial publics. For as soon as the difference between his policy program and the program offering of his rival disappears, the *raison d'être* of his special imperative mandate also disappears, and thus the justification of his position of power. In this sense, representatives will be more likely out to polarize rather than conciliate opinions.

Another consequence of the digitization of democratic processes with dynamics “analog to commercial advertising techniques”<sup>274</sup> is a change of the political content. In the economic democracy of the information society, politics must successfully sell itself in the hotly contested market for the short and valuable good 'attention'. Large and powerful interest groups are better equipped for this. Reflected in the catch-word *infotainment* or *Politainment* (*information/ politics + entertainment*) a "theatralizing of politics"<sup>275</sup> is the logical result. Consumers expect politics to be packed with intrigue, action and humour just like a daily soap or *reality show*. "What is communicated political will, what is entertaining props and attention grabber, but not political program? In the digital democracy the two tend to blur"<sup>276</sup>. In *infotainment*, it is not necessarily the case that the "best suited are given the mandate"<sup>277</sup> but the most entertaining and friendly actors, those who can best market their personality to the information-hungry masses, among them populists and demagogues.

The multimedia possibilities of ICT can play into the hands of opinion manipulators. Goethe noted in his poem "Zahme Xenien": "Nonsense you can talk aplenty, can write it too, shall kill neither life nor soul, unchanged appears the truth. But nonsense placed before your eyes, has a magic right; because the senses are enthralled, the spirit is enslaved to this might"<sup>278</sup>. "No doubt technical images have a particular claim to truth, as they offer a rich illusion of reality"<sup>279</sup>. The faster presentation and processing of moving images by multimedia channels can be used to reinforce and accentuate word propaganda<sup>280</sup>. According to Rheingold, infotainment in politics could therefore more likely lead to a "disinformocracy" than a "democracy"<sup>281</sup>. The 'how' of the political presentation becomes more important than the 'what' of the content of the political discourse. "Academics and other professionals mistakenly assume... that so important topics and a thorough discussion by important people is enough to attract the audience. In certain

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<sup>274</sup> See footnote 239.

<sup>275</sup> Glotz, Peter, Freiheitliche Demokratie in der Informationsgesellschaft, P. 14 ff.

<sup>276</sup> Siedschlag, Alexander, Arne Rogg und Caroline Welzel, Digitale Demokratie, P. 24.

<sup>277</sup> Schachtschneider, Karl Albrecht, Verbände, Parteien und Medien in der Republik des Grundgesetzes, in Die Rolle der Medien im Gefüge des demokratischen Verfassungsstaates, P. 85.

<sup>278</sup> Goethe, von Johann Wolfgang, Zahme Xenien, Erste Reihe, II. Mit Bakis Weissagen vermischt, Wissen im Netz, First edition 1827, 2004, <http://www.wissen-im-netz.info/literatur/goethe/gedichte/24.htm#Zahme%20Xenien> (read January 2005).

<sup>279</sup> Glotz, Peter, Freiheitliche Demokratie in der Informationsgesellschaft, P. 13.

<sup>280</sup> In this sense: "The image prohibition in Judaism and Islam and the iconoclasm of the Reformation ... have their roots in deeper justifications". Glotz, Peter, Freiheitliche Demokratie in der Informationsgesellschaft, P. 13.

<sup>281</sup> Rheingold, Howard, The Virtual Community.

instances that is enough. But generally the format of a programme is more important than the content."<sup>282</sup> What counts are repartee, humour, sex appeal and entertainment, not the priority of the "better argument"<sup>283</sup>.

Resource rich interest groups are in a better position to provide infotainment. Huge organizations can send their candidates into the race for votes and equip acting showstars with a modern and attractive multimedia backup. As a result, the agglomeration of financial resources and democratic power go hand in hand, in the information age even stronger correlated than during the industrial age. Such market failures of the economic model of democracy are not new. As a consequence, public sector interventions and regulations are in place since the early days of today's broadcasting mass medium, aiming at objectivity and the provision of a minimum amount of independent information in protection of resource poor interest groups (see box).

The public media as a measure to balance the informative power of commercial interest groups

The 1920s and 1930s saw the birth of the British public radio station (the present British Broadcasting Company BBC), which was copied throughout Europe. The underlying logic is that public and independent broadcasting should not be at the mercy of either powerful social interest groups or the state and must therefore be independent financially and in its decisions. The activities of public broadcasting organizations are generally controlled by supervisory bodies in which all the socially relevant groups and organizations are represented. The independence of public broadcasting organizations was important for "securing the variety of opinion ... the highest goal of broadcasting policy in European states"<sup>284</sup>, "since the market itself cannot and will not produce it. ...How could the democratic, social and cultural needs of society, and the need to preserve media pluralism, be served by a marginalized broadcasting organization catering only for cultural elites or other minority interest groups and essentially concentrating on those types of programmes which - for understandable economic reasons - the commercial broadcasting sector will not provide? To fulfil their role, public broadcasting organizations need to be a major force on the national audiovisual scene, and they must cater for all sections and groups of society, through, in particular, quality mass-appeal programming"<sup>285</sup>.

The logic of public media is however very similar to the logic of public political parties. While the difference is that political parties are driven by the desire of attaining political power, both aim at contributing to the formation of the democratic will of the people. Political parties however, are by definition partial, such as commercial interest groups, while public media is designed to be neutral. The question is therefore which role both should play in a certain model of democracy, how they should be financed and how they interact. We will come back to this question in the closing chapter of this study.

Summing up, the digitization of democratic processes in a scenario of economic democracy outlines two trends in the information society. On the one hand, a trend towards a multi-party landscape is imaginable, whereas politicians are given an imperative mandate from partial publics. The people's representative will become a representative of a particular interest group and his political survival will depend on how well he polarizes and separates this partial public from other interests. On the other hand, the increasing focus on non-content, presentational

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<sup>282</sup> *Slaton, Christa*, *Televote – Expanding Citizen Participation in the Quantum Age*.

<sup>283</sup> See footnote 125.

<sup>284</sup> *Rossnagel, Alexander und Peter Strohmann*, *Die duale Rundfunkordnung in Europa*, P. 19.

<sup>285</sup> *European Broadcasting Union*, *The Public Service Broadcasting Remit: Today and Tomorrow*, Legal department, DAJ/ew/mp, 1998, P. 1, [http://www.ebu.ch/CMSImages/en/leg\\_public\\_service\\_tcm6-4364.pdf](http://www.ebu.ch/CMSImages/en/leg_public_service_tcm6-4364.pdf) (read January 2005).



elements in politics (*infotainment*) requires large amount of resources to compete for the scarce good of attention. Lessons learnt from e-business suggest that mass-customization techniques enable economies of scope, producing individualized information products by nurturing them with citizen profiles from large information databases. This suggests that political parties could send different representatives into the race, who might somewhat compete to defend the rights of their particular interest group, while at the same time being bound to the same information basis as their colleagues. Those representatives will have to find a balance between the benefit of accessing the resource rich base of their mother party<sup>286</sup>, while assuring that they differentiate themselves sufficiently from their colleagues to obtain legitimization as the representative of a diverging interest group. In this sense, similar to the digital economy, the trend of power concentration among a few big players might be combined with the fragmentation of consumers, delivering individualized schemes of representation to the most important pieces of the preference-mosaic of the public<sup>287</sup>. This can become the right of the stronger, in which the interest group with the most resources stands the best chance of marketing its issues. In a competitive-democratic system based on the liberalistic principle, the various particular wills ultimately clash with the stronger prevailing. Majority tyranny is a probable and undemocratic consequence.

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<sup>286</sup> This mother party could be one single party, controlled by the public and supervised by an institution of privacy protection, or competing information basis, that use their own creative means to obtain, filter and process the gathered information about their potential voters.

<sup>287</sup> An arising question centers on the direction of dependence between the political class and the electorate in such scenario. While in Schumpeter's economic model political institutions are the supply-side and the citizens the reactive demand-side of the democratic market place, the direction is not clear when digitizing democratic processes. The question is whether the will of the partial public will become the driving force of the political process (in a sense of the marionette-representative of the plebiscitarian leadership democracy), or whether smart policy suppliers will so manipulate the electorate that they can succeed in retaining their positions of power through a suitable manifesto offering (in a sense of the Big Brother democracy).

## Pushbutton democracy in the information society

Similar to economic democracy theory, the model of pushbutton democracy is based on the postulate of the rule of law and a liberalist social contract. In contrary however, the citizens do not delegate the task of ascertaining the truth to representatives and are directly involved in determining right. In contrast to cyber democracy, pushbutton democracy depends on central democratic institutions that organize the formal participation process through the rule of law and separation of power. In pushbutton democracy, direct democracy via popular initiatives, plebiscites and referendums is not included as a "second pillar"<sup>288</sup> of a democratic system as in modern representative democracies, but is the sole instrument for ascertaining the law in the legislative<sup>289</sup>.

### Theoretical foundations of pushbutton democracy

As a direct democracy, pushbutton democracy is based on the conviction Theodore Roosevelt expressed with the words: "the majority of the plain people will day in and day out make fewer mistakes in governing themselves than any smaller body of men will make in trying to govern them"<sup>290</sup>. At the centre of this idea is the digitization of votes through electronic applications (e-voting). The process of a democratic vote is one based 100% on information and communication processes and thus completely digitizable. With e-voting it would be possible to stage "pushbutton votes on a screen at home"<sup>291</sup>. "There would be nothing to hinder the introduction of a direct democracy: citizens could decide on absolutely anything by pushing a button"<sup>292</sup>. This vision sees "the citizenry sitting before a video and allegedly self-governing itself by responding to the issues in the air by pressing a button"<sup>293</sup>. In this "Vote-from-home revolution"<sup>294</sup> enfranchised citizens vote repeatedly on a very wide range of issues quickly and cheaply, even several times a day. As a result, the opinion of voters is reflected much more precisely and accurately than is the case in representative systems in which citizens emit (in the sense of "give away") their votes only every few years<sup>295</sup>. "Public opinion would surely be better reflected if electors were free to vote on the separate policies as they come up, rather

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<sup>288</sup> Schiller, *Theo*, *Direkte Demokratie*, P. 16 f, 36, 47.

<sup>289</sup> In order to preserve the accuracy of the presentation, it should be noted that there are hardly any advocates of pushbutton democracy who are not in favor of a mixture of representative and direct democracy, much like with the advocates of direct democracy. See Jung, *Otmar* and *Franz-Ludwig Knemeyer*, *Im Blickpunkt: Direkte Demokratie*; Schiller, *Theo*, *Direkte Demokratie*; Budge, *Ian*, *The new challenge of direct democracy*; Barber, *Benjamin*, *Strong Democracy*.

<sup>290</sup> Quoted in Barber, *Benjamin*, *Strong democracy*, P. 261.

<sup>291</sup> Eurich, *Claus*, *Der Verlust der Zwischenmenschlichkeit – Neue Medien und ihre Folgen für das menschliche Zusammenleben*, in: *Technologie und Politik* 19, Reinbeck, Rowohlt, 1982, P. 105.

<sup>292</sup> Brepohl, *Klaus*, *Die Massenmedien. Ein Fahrplan durch das Zeitalter der Information und Kommunikation*, Nymphenburger Verlag, München, 1974, P. 268.

<sup>293</sup> Sartori, *Giovanni*, *The Theory of Democracy Revisited*, 1987, P. 246. quoted in: Budge, *Ian*, *The new challenge of direct democracy*, 1996, P. 28.

<sup>294</sup> Hollander, *Richard*, *Video Democracy*.

<sup>295</sup> Jung, *Otmar*, *Im Blickpunkt: Direkte Demokratie*, P. 27.

than being constrained to a once only, overall choice of a general packet every five years"<sup>296</sup>. Pushbutton democracy can thus contribute to producing a more realistic picture of the current mood among the citizenry. "...a series of decisions on specific issues gives more opportunity to shift the majority on some questions than does a once and for all general election where a government is then given a mandate to go ahead with a range of policies for 3-5 years."<sup>297</sup>

The potential of this idea had already been recognized in the 1960s and 1970s (see box). The practical relevance of e-voting is found nowadays more in the electing of people's representatives rather than direct voting on issues. Apart from expediting the count and the possibility of perhaps increasing voter turnout, since Internet voting, much like voting by mail, accommodates the voter<sup>298</sup>, no fundamental structural changes in the democratic system can be expected. The structural realignment of pushbutton democracy is however directed at the digitization of referendums and plebiscites. The organizational workload of an election is reduced by e-voting to such an extent and thus the related costs reduced so much that it becomes feasible to hold continuous, even parallel votes. The various topics to be decided can be presented on a website at which citizens can cast their votes during a certain period. As Toffler states in his prominent vision on the Third Wave: "...the old communication limitations no longer stand in the way of expanded direct democracy. Spectacular advances in communications technology open, for the first time, a mind-boggling array of possibilities for direct citizen participation in political decision-making"<sup>299</sup>. "The new challenge of direct democracy lies in the startling fact that it is now technically possible."<sup>300</sup>

#### Electronic voting as a promise for democracy since the 1960s

In his "Computer Revolution" Berkeley writes in 1962: "Imagine that a device is connected to the telephone of each registered voter: a three-digit number can be stored in it for the number of a certain question; you could set a switch to >yes<, >no<, >abstain< and >it depends<. During the day, the voter reads in the newspaper that his representative in parliament is considering this or that question. He goes to his telephone, enters the number of the question and sets the switch to his opinion. During the night... his telephone is polled by an electronic pulse. The information stored by his device – his vote — is sent to the representative's office and registered by a computer there. The next morning the representative knows what his voters think about the question that he has been considering"<sup>301</sup>. In the days when radio and TV and room-sized mainframe computers were still separate communications systems, Krauch defined computer democracy in 1972 as "a structured and well organized state in which the important questions were decided by direct voting after thorough preparatory discussions over the

<sup>296</sup> Budge, Ian, The new challenge of direct democracy, P. 15, 133 ff.

<sup>297</sup> Budge, Ian, The new challenge of direct democracy, P. 161.

<sup>298</sup> See footnote 250.

<sup>299</sup> Toffler, Alvin, The Third Wave, P. 429.

<sup>300</sup> Budge, Ian, The new challenge of direct democracy, P. 1.

<sup>301</sup> Berkeley, Edmund C., The Computer Revolution, Garden City: Doubleday & Co, 1962, P. 169. For a historical outline of the development of the following concepts Westermayer, Till, Politik im Internet, P. 1-16. Kleinstauber, Hans J. and Martin Hagen, Konzepte elektronischer Demokratie in den USA und Deutschland, P. 20-30.

radio."<sup>302</sup> In the 1980s people were talking about "tele-democracy"<sup>303</sup>, direct-democratic system comprising TV technology and the emerging "videotext system"<sup>304</sup>. The ultimate goal of tele-democracy was captured in the slogan "bringing the power back to the people"<sup>305</sup>. For many tele-democrats the step towards tele-democracy is a normal evolutionary step in the recent 200-year history of the continuous expansion of democratic participation<sup>306</sup>, which, from the point of view of a liberalistic tradition, is the logical continuation of the democratic expansion since constitutional monarchy.

Electronic votes on various issues will "reflect" the will of the people in real time. The aim is to be able to constantly read the public opinion of the people as in a "mirror"<sup>307</sup>. "In the mirror model the main task of the public sphere is the greatest possible acquisition of issues and opinions in society"<sup>308</sup>. This stands in contrast to the Madisonian filter, whose objective is not to simply reflect the public opinion of all the citizens, but "...to refine and enlarge the public views by passing them through the medium of a chosen body of citizens..."<sup>309</sup>. "The 'filter' creates counterfactual but deliberative representations of public opinion. The 'mirror' offers a picture of public opinion just as it is, even if it is debilitated or inattentive"<sup>310</sup>. Through its liberalist focus, pushbutton democracy aims not at intensive deliberation to ascertain the *volonté générale* through the republican principle of *audi alteram partem*, but at aggregating the opinions of the citizens, so to speak in their "raw form"<sup>311</sup> to a *volonté de tous*.

#### Development of pushbutton democracy in the information society

In the development of pushbutton democracy in the information society, the equality of access to the digital networks, the protection of the voter from coercion and oppression from fellow-citizens and the consequences of the extreme speed of digital voting must be heeded.

In order to create a faithful reflection of public opinions, it must be ensured as a first action that all citizens have access to this public. Habermas teaches: "The civil public stands and falls with the principle of general access. A public from which assignable groups were excluded *eo ipso*, is not just only incomplete, it is in fact not a public at all ... a public is guaranteed when the economic and social conditions give everybody equal chances of fulfilling the entrance

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<sup>302</sup> Krauch, Helmut, Computerdemokratie, VDI-Verlag Düsseldorf, P. 37.

<sup>303</sup> Becker, Ted, Teledemocracy. Bringing the Power Back to the People, The Futurist, December, 1981.

<sup>304</sup> Haefner, Klaus, Mensch und Computer im Jahre 2000. Ökonomie und Politik für eine human computerisierte Gesellschaft, Basel/Boston/Stuttgart, Birkhäuser, 1984, P. 290.

<sup>305</sup> Becker, Ted, Teledemocracy.

<sup>306</sup> See for example Grossman, Lawrence K., The Electronic Republic. P. 4. Budge, Ian, The new challenge of direct democracy, P. 191.

<sup>307</sup> Luhmann, Niklas, Soziallogische Aufklärung, Konstruktivistische Perspektiven, Opladen, 1990, P. 181 ff. Fishkin, James, Virtual Democratic Possibilities. Wagner, Ralf, Demokratie und Internet, P. 23 f., 105 ff.

<sup>308</sup> Wagner, Ralf, Demokratie und Internet, P. 23 f.

<sup>309</sup> See footnote 55.

<sup>310</sup> Fishkin, James, Virtual Democratic Possibilities, P. 4.

<sup>311</sup> "We will term public opinion, in the form we normally find it, lacking significant deliberation, 'raw'". Ackerman Bruce and James Fishkin, Deliberation Day, in James Fishkin and Peter Laslet, Debating Deliberative Democracy, P. 27f.

criteria"<sup>312</sup>. The notorious digital divide<sup>313</sup> that separates the ones that have access to digital information and the digital excluded distorts the picture in the democratic mirror because of the unequal distribution of ICT access.

How such a distortion may appear can be seen from statistics on the access and the participation of various language groups in digital networks (see table "Distorted reflection in the democratic mirror model of the pushbutton democracy"). For example, English native speakers account for 12.4 percent of the world's population, but 41.9 percent of Internet users in 2000. Looking at which language groups provide the most Internet content reveals a positive relation with the later number, but a closer look shows that it is not always correlated one to one with the user community. Even though in 2000 'only' 41.9 percent of the Internet user community spoke English as their native language, 57.0 percent of the Internet content was in English. However, the relative share of the English Internet content is declining constantly, whilst the Internet is spreading around the world and the relative share of the English-speaking Internet user community is falling. Whereas 75.0 percent of the web content was English in 1998, four years later this language accounted for 'only' 49.0 percent of the web pages. Nevertheless English is still over-represented. The distortions deteriorate when a part of the population is under-represented because of a lack of ICT access.

Distorted reflection in the democratic mirror model of pushbutton democracy

Language	Actual share of the language group in the world population	Internet users per language as % of total, 2000	Internet users per language as % of total, 2002	Web pages per language as % of total, 1998	Web pages per language as % of total, 2000	Web pages per language as % of total, 2002
English	12.4	41.9	37.2	75.0	57.00	49.00
German	1.6	7.2	7.0	no information	6.27	7.06
Spanish	6.1	4.4	5.4	2.35	4.79	5.68
French	3.1	3.4	4.0	2.81	4.18	4.70
Portuguese	3.6	1.8	2.6	0.82	2.25	2.75
Italian	1.0	3.4	3.2	1.50	2.62	3.19
Rest	71.7	38.7	43.5	17.5	22.7	27.5

Source: *International Telecommunications Union (ITU) and Funredes, Languages and Cultures Observatory, 2003, <http://funredes.org/LC>.*

If we now equate a language group with an interest group (for example the interest group of English speakers), it can easily be seen that some interest groups are over-represented and others under-represented in digital networks, compared with their real-world weight. The mirror model does not faithfully reflect the distribution of interests in society because some groups are discriminated against, be the restriction of participation of an economic, geographic, demographic or socio-cultural nature. As long as the possibility of ICT access and usage is not universal, the digital divide distorts the presentation of population proportions in the mirror model and undermines the applicability of pushbutton democracy.

<sup>312</sup> *Habermas, Jürgen, Strukturwandel der Öffentlichkeit, P. 156 f.*

<sup>313</sup> See *ECLAC (Economic Commission for Latin America and the Caribbean), Roadmaps toward an Information Society, P. 22 ff.*

However, even if universal access would be assured, the vote-from-home revolution still faces other challenges for democracy. A strong argument against home-based e-voting is that not all spheres of social life are free of power relations and therefore it cannot be assured that the voting citizen is not under coercion by a peer citizen who has some kind of economic or social power over the elector. The **dependency relationships in these coercion structures** can be used by the stronger to impinge on the coercion-free sphere of democracy. Kant reminds that "the quality required for it [for being a citizen with voting rights, author's addition] is ... that he is his own master, ... consequently that he serves nobody other than the common essence in the actual sense of the word"<sup>314</sup>. The individual must thus be sufficiently independent in order to be a morally capable co-legislator. This was also the theoretical justification why workers, slaves and women were deprived from voting during the last century. As they were bound by strong dependence relationships, so the argument in these days, they could not in any case dare to vote against their employer, master or husband<sup>315</sup>. Therefore, they should rather not vote at all, in order not to distort the result. Since the democratic principle is not extended to all aspects of the common life –in other words, since there are many aspects of the social life that are not free of coercion—it is surely very difficult in practice to set up an institutional system which ensures that each citizen can reveal his preferences publicly freed from dependency relationships of any nature and therefore without having to fear reprisals of any kind. The common solution to this problem are secret ballots, which are preferable for protecting employed workers, young adults and family members who are dependent on relatives, among others.

The secret ballot has become a constitutional criterion for elections in most democracies. Votes are cast in publicly accessible election booths, albeit secretly (see for example article 38 I German Constitution: "elected in universal, direct, free, equal and secret elections"). This cannot be guaranteed in a "vote-from-home revolution"<sup>316</sup> as conceived in pushbutton democracy with e-voting. Direct coercion, control, influence or manipulation by third parties cannot be ruled out. It cannot be checked whether the person is sitting alone at the computer to vote or whether another person, on whom the voter is dependent in some economic or social way, is influencing the decision. "The probability that the voter is not alone and can be observed or manipulated by comments must therefore be regarded as considerable with a home PC"<sup>317</sup>. This makes home-based e-voting unconstitutional for most democracies and presents an almost insurmountable theoretical obstacle for its implementation. From this viewpoint, especially in a capitalistic society where economic power-relations are part of the nature of the system, digital elections and democratic votes ought to be carried out in publicly accessible places, albeit using screened off election computers<sup>318</sup>.

Apart from this distinctive feature that has to be heeded in pushbutton democracy, a direct-democratic system always raises questions about the stability, continuity, durability and

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<sup>314</sup> Kant, *Immanuel*, Über den Gemeinspruch, P. 46.

<sup>315</sup> See *Habermas, Jürgen*, Strukturwandel der Öffentlichkeit, P. 187. Also *Mill, John Stuart*, Considerations on Representative Government, P. 127 ff.

<sup>316</sup> See footnote 294.

<sup>317</sup> *Wagner, Ralf*, Demokratie und Internet, P. 145.

<sup>318</sup> The same problem arises with voting by traditional mail, and since voting by letter is regarded as constitutional in some democracies, existing e-voting procedures will be deemed as variations on postal ballots. Given the massive use of "home ballot procedures" however, the validity of the system must be reconsidered.

fairness of the democratic system. For example, it is said that the pushbutton democracy is an irrational "yes/no democracy"<sup>319</sup>. Also that it reduces the democratic principle to voting and leads to irresponsible *ad-hoc* decisions. "The very speed of electronic voting will shrink the time for deliberation and debate, persuasion and argument."<sup>320</sup> Real-time communication in digital networks becomes more of a disadvantage than an advantage<sup>321</sup>. "Modern information technology is incredibly quick, democratic will formation extremely slow"<sup>322</sup>. Political decisions would be taken on a whim and at the push of a button. "Government by direct referendum would be possible, but this simply means that even the dumbest ideas of a minority or a majority could prevail over long-term interests - without a moment of reflection."<sup>323</sup>

### Consequences of the development of pushbutton democracy

It is worthwhile to take a closer look at the digital divide. It should be noted that ICTs are not a static packet. Technology is continuing to make advances, especially driven by the forces of ICT convergence. Even if in a few decades the whole of society has ICT access via a 56 Kbit modem, some will have broadband access. The divide will be defined by those that can run data-intense applications and those that are only able to use only a few simple applications. It must therefore be borne in mind that the digital divide is not only quantitatively wide or narrow but also has a qualitative depth. Ultimately, the digital divide will never be closed because it will be reopened with each technological innovation. This does not mean that the digital divide cannot be bridged, in a sense the even the deepest abyss can be overcome by a small overpass. The question is about the width of the overpass. Bridging the digital divide means that every member of the information society has continuous access to sufficient resources to be able to maintain minimum connectivity with its fellow-citizens. This is a constant challenge and depends on the temporary definition of the terms "sufficient" and "minimum", which are measures of the entrance criteria to the Habermasian definition of public<sup>324</sup>.

This leads to the question of the adequate minimum level of digital information and communication capabilities required by an individual to proclaim being a member of the information society. It introduces the concept of "digital poverty" with segments of society being below the information and communication poverty line and others above<sup>325</sup>. This notion is subject to the same criteria as other considerations of the combined requirements of "*liberté, égalité, fraternité*". As with all other means of socio-economic distribution of access to the

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<sup>319</sup> Kuhn, Fritz, Bildschirmtext. Einstieg in das Zeitalter der Neuen Informationstechnologien, in: F. Kuhn und W. Schmitt, Einsam, überwacht und arbeitslos. Technokraten verdaten unser Leben, Die Grünen, Stuttgart, 1984, P. 145.

<sup>320</sup> Abramson, Jeffrey, Christopher Arterton and Gary Orren, The Electronic Commonwealth, P. 177.

<sup>321</sup> Eurich, Claus, Der Verlust der Zwischenmenschlichkeit, P. 104 ff. more on this in Westermayer, Till, Politik im Internet, P. 8 ff., 13 ff.

<sup>322</sup> Schmillen, Achim, Stau auf dem Datenhighway, P. 673.

<sup>323</sup> Warner, Malcolm and Michael Stone, Die Computergesellschaft, first edition 1970, The Data Bank Society, London: Allen & Unwin, Munich: List. 1972, P. 26.

<sup>324</sup> See footnote 312.

<sup>325</sup> DIRSI (*Diálogo Regional sobre Sociedad de la Información*), Digital Poverty: Latin American and Caribbean perspectives, edited by Hernan Galperin and Judith Mariscal, IDRC, 2005.

public life of society, the fraternity among citizens should assure that every member of society has sufficient means to participate as a morally capable fellow citizen. If deprived from access to basic requisites, it cannot act as an equally respected member of society. The logical conclusion is that every member of the information society requires a minimum level of access to ICT, in order to be able to participate democratically. If the individual cannot achieve such a level by own means, “*fraternité*” needs to be applied and the public at large, in other words the public sector needs to assure such democratic inclusion through state regulation or intervention.

Besides such challenges, critics of pushbutton democracy see the danger of the technology being used “as a **lever of a populist revolt**”<sup>326</sup>. Scenarios in which bored citizens sitting on the couch of an evening and, because there just happens to be nothing better on TV, just vote on building a new hospital or on government spending for the education system in the coming quarter, recall Plato's parable of the irresponsible citizen: “He lives on, yielding day by day to the desire at hand. ...He often engages in politics, leaping up from his seat and saying and doing whatever comes to mind”<sup>327</sup>. As part of the infotainment, citizens 'click' in what they just happen to think about a marketing campaign on their favourite football team, to win a free ticket and in the next 'click' they vote on the EU accession of new member states. This can have devastating consequences, at least for such matters that call for long-term planning, continuity and trust. Tocqueville reiterates the critics of ancient Athens when affirming that direct democratic methods have a problem with “suppressing the needs of the moment for those of the future”<sup>328</sup>. This causes major problems for some key issues, such as foreign or budgetary policy<sup>329</sup>. In the extreme case, war would be declared on Monday evening with a narrow majority and after the first hostilities stopped again on Wednesday afternoon, only to be continued again on Friday morning when there is another majority in favour of it, and so forth. Here Max Weber's famous quip springs to mind that the masses can only think as far as the day after tomorrow<sup>330</sup>. At this point memories of the alleged negative experiences of plebiscitarian democracy in the German Weimar Republic (1919-1933) are unavoidable. The way Hitler's Third Reich was paved by popular initiatives that were held on highly charged and politically marginal issues in order to polarize the public and then bring about irresponsible long-term decisions. A widely heard suggestion is to define boundaries for the range of subjects for direct democratic voting through procedural rules<sup>331</sup>. For example, many referendum systems have restrictions for decisions relating to finance. Applications for referendums with a significant impact on budget issues are generally rejected, because of the danger of reducing a detailed and sophisticated budget to chaos. The result of such regulations is a strong limitation of the degree of influence via direct legislation referendums. “Everything objectively important and subjectively exciting tends to be made a taboo”<sup>332</sup>. This is of course not the idea of the pushbutton democracy.

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<sup>326</sup> *Leggewie, Claus*, Netizens oder: der gut informierte Bürger heute, P. 18.

<sup>327</sup> See footnote 108.

<sup>328</sup> *Tocqueville, Alexis*, Über the Demokratie in Amerika, P. 258.

<sup>329</sup> See also *Kant, Immanuel*, Über den Gemeinspruch, P. 50 f.

<sup>330</sup> See footnote 190.

<sup>331</sup> *Schiller, Theo*, Direkte Demokratie, P. 37 ff. *Jung, Otmar* und *Franz-Ludwig Knemeyer*, Im Blickpunkt: Direkte Demokratie, P. 48 ff, 53, 97.

<sup>332</sup> *Jung, Otmar* und *Franz-Ludwig Knemeyer*, Im Blickpunkt: Direkte Demokratie, P. 49.



Besides the challenges of the never-closing digital divide and the traditional critics to direct democracy which is worsened by the speed of digital communication, it becomes clear that home-based e-voting raises problems which are very profound. In a capitalistic society socio-economic inequalities are part of the nature of the system. The dilution of the principle of the secret ballot and the possibility of power abuse through home-based e-voting systems are real and make the pushbutton model undemocratic. Therefore, the model of the Roman Republic returns to the reliance on select group of moral representatives. Besides it builds not on the competitive-democratic *volonté de tous*, but on the foundations of the republican concept of liberty and the *volonté générale*.

## Roman republic in the information society

Separation of power and rule of law are unmistakable features of the Roman Republic. The representative form of government and the republican social contract were already characteristic for the Roman state in the period between the end the rule of kings (about 510 BC) and the beginning of the Roman Empire (27 BC).

### Theoretical foundations of the Roman republic

Unlike the mirror model in pushbutton democracy, the Roman Republic relies on Madison's representative democratic opinion filters<sup>333</sup>. "The filter can be thought of as the process of deliberation through which representatives, in face to face discussion, may come to considered judgments about public issues"<sup>334</sup>. The requirement of an extremely high morality of the representatives is reflected in the conviction of **Cicero** (106 – 43 BC) that each citizen – according to his dignity – should share in governing, for which some citizens however were more worthy than others<sup>335</sup>. The morality of the "more virtuous citizens" (i.e. of the consul and of the senate) would equip them to fulfil their duties to the benefit of the weaker. The leading nobility, which held the posts of the magistrate and senate, had to be morally so well advanced and free from self interest that it could determine the *volonté générale* of all, in other words of the strong and the weak. They had to be the best of the people: "... in the republic the best are the citizens with the greatest moral competence, the citizens with the most propriety"<sup>336</sup>. Only through their wisdom and love of justice can Cicero's slogan be fulfilled: "*Est igitur... res publica res populi*"<sup>337</sup>.

John Stuart Mill makes it clear that he considers the "private citizen" to be morally too weak to always decide in the sense of the *volonté générale*. This was however indispensable for republican legislation. Mill calls the morality needed for finding the common will the "*school of public spirit*"<sup>338</sup>. Since, in contrast to their morally outstanding representatives, private citizens in practice do not act according to this school, Mill concluded that "the ideally best form of government is representative government"<sup>339</sup>.

An institutional framework condition for promoting the morality of legislators is the principle of public transparency, which Habermas also terms **publicity**<sup>340</sup>. According to Habermas, publicity is the first precondition for a democracy. The principle applies for both sides. The work of the representatives must be transparent for voters and ideally the voter's decisions would also be publicly justified. According to Kant, any secrecy in the political sphere on one of the two sides would be unjust. "All the actions related to the right of other people whose

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<sup>333</sup> See footnote 55.

<sup>334</sup> *Fishkin, James*, Virtual Democratic Possibilities, P. 5.

<sup>335</sup> *Cicero*, De re publica I, 25 (39).

<sup>336</sup> *Schachtschneider, Karl Albrecht*, Res publica res populi, P. 123.

<sup>337</sup> *Cicero*, De re publica I, 25 (39).

<sup>338</sup> *Mill, John Stuart*, Considerations on Representative Government, P. 54 f.

<sup>339</sup> *Mill, John Stuart*, Considerations on Representative Government, P. 36 ff, 55.

<sup>340</sup> *Habermas, Jürgen*, Strukturwandel der Öffentlichkeit, P. 154.

maxims are not in agreement with publicity are unfair. This principle is not to be regarded merely as ethical, and as belonging only to the doctrine of virtue, but it is also to be regarded as juridical and as pertaining to the rights of men. For a maxim cannot be a right maxim if I cannot allow it to be published without thereby at the same time frustrating my own intention, which would necessarily have to be kept entirely secret in order that it might succeed, and which I could not publicly confess to be mine without inevitably arousing thereby the resistance of all men against my purpose. It is clear that this necessary and universal opposition of all against me on self-evident grounds, can arise from nothing else than the injustice, whereas such a maxim threatens everyone"<sup>341</sup>.

The publicity of the action promotes morality in that a public opinion must address the resistance of all the others. If an action remains concealed there is no need to justify it before other people and it is thus tempting in such cases to follow one's particular will. The liberalist "I wish" represents the *volonté particulière* and has the potential to excite the "resistance of all against my intention". "To be engaged in political debate we must argue in terms that any other participants could potentially accept, and 'It's good for me' is not such an argument"<sup>342</sup>. It is to be shifted closer to the republican "we wish" through the revealing of my will in the public, i.e. to the *volonté générale* which in detail is shaped by the categorical imperative<sup>343</sup>. For if the individual acts according to the maxim that his action can become general law<sup>344</sup>, then there would be no reason for concealing the action from the public. According to this logic, there is no need at all for all to deliberate with all, it suffices that representative discussions take place publicly. This will compel an "inner deliberation" by the individual. He must reflect on how his decisions go down in public. Thus the principle of publicity promotes the "**democratic deliberation within**... a familiar internal-reflective aspect..., [which] ultimately must take place within the head of each individual..., making them [the other citizens, author's addition] imaginatively present in the minds of deliberators"<sup>345</sup>.

For example, John Stuart Mill suggested that individuals' preferences about public issues can change once they take place in public<sup>346</sup>. However it cannot be assumed that the voters would cast their votes "as honestly in secret as in public"<sup>347</sup>. "Once the voter is liberated from the need to stand up in public..., she is all too prone to forget the difference between citizenship and consumerism, and vote her personal preferences and interests without bothering to ask whether

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<sup>341</sup> Kant, *Immanuel*, Zum ewigen Frieden, P. 50.

<sup>342</sup> Miller, *David*, Deliberative Democracy and Social Choice", in: Fishkin, James and Peter Laslet, *Debating Deliberative Democracy*, P. 189.

<sup>343</sup> "Giving reasons that others could reasonably accept implies accepting reasons that others give in this same spirit". Gutmann, Amy and Dennis Thompson, *Deliberative Democracy Beyond Process*, in: Fishkin, James and Peter Laslet, *Debating Deliberative Democracy*, P. 42.

<sup>344</sup> See footnote 82.

<sup>345</sup> Goddin, *Robert E.*, Democratic Deliberation Within, in: Fishkin, James and Peter Laslet, *Debating Deliberative Democracy*, P. 54 f.

<sup>346</sup> Mill, *John Stuart*, Considerations on Representative Government, 1958, Chapter X "Of the mode of voting", P. 154 ff. see also footnote 126 and other works by James Fishkin, for example *Ackerman Bruce* and *James Fishkin*, *Deliberation Day*, in *James Fishkin* and *Peter Laslet*, *Debating Deliberative Democracy*, Philosophy, Politics and Society 7, Blackwell Publishing Ltd, 2003, P. 7 ff.

<sup>347</sup> *James Fishkin* and *Peter Laslet*, *Debating Deliberative Democracy*, P. 163.

they are in tension with her considered judgment about public good"<sup>348</sup>. The goal should be "by publicity, to make the voter responsible to the public for his vote"<sup>349</sup>. Rousseau even saw **secret ballots** as one of the greatest undesirable developments in the Roman Republic, one that was introduced through corruption<sup>350</sup>. The result for the democracies of today is not a *school of public spirit* in Mill's sense but, as Barber cynically expresses it, more desolate. "In contrast, our primary electoral act, voting, is rather like using a public toilet: we wait in line with a crowd in order to close ourselves up in small compartment where we can relieve ourselves in solitude and in privacy of our burden, pull a lever, and then, yielding to the next in line, go silently home. Because our vote is secret –'private'—we do not need to explain or justify it to others (or, indeed, to ourselves) in a fashion that would require us to think publicly or politically"<sup>351</sup>.

In favour of secret ballots on the other hand is that there are spheres of social life which are not democratically decided, i.e. not free of coercion, as analyzed in the preceding investigation of the pushbutton democracy. This is why in representative democracies importance is attached to ensuring that at least the representatives of the people are under no kind of coercion by fellow-citizens. The idea is that at least they enjoy mutual independence, in order to enable publicity in their deliberations without having them to fear reprisal. One could say that the people's representatives in this sense represent the people in their equality and mutual independence. There should be no coercion relationships between them. They should be given sufficient material remuneration and their salaries should come from the public purse, in other words they should not be dependent on private sources of income and thus private interests. In many democracies they also enjoy parliamentary immunity, which must be revoked by a higher court before they can be prosecuted in various matters. They are not bound by orders and instructions and are subject only to their conscience (see for example article 38 Para. 1 sentence 2 German Constitution). These independent people's representatives constitute the appropriate group for Madison's opinion filter through which those maxims are to be found that represent the best for the good life of all. "Under such a regulation, it may well happen that the public voice, pronounced by the representatives of the people, will be more consonant to the public good than if pronounced by the people themselves, convened for the purpose"<sup>352</sup>.

#### Development of the Roman republic in the information society

ICTs can foster the principle of publicity through public expressions of opinions by citizens and through transparency of the representatives' actions. With respect to citizens, an extended publicity is not conducive to democracy at its present stage of development. As discussed in the previous chapter, given the existence of socio-economic power-relations among citizens, the use of force by third parties cannot be ruled out without a secret ballot.

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<sup>348</sup> Ackerman Bruce and James Fishkin, *Deliberation Day*, in: *Fishkin, James and Peter Laslet, Debating Deliberative Democracy*, P. 21.

<sup>349</sup> Mill, *John Stuart, Considerations on Representative Government*, 1958, P. 157.

<sup>350</sup> Rousseau, *Jean-Jacques, The Social Contract*, IV. Book, Chapter 4.

<sup>351</sup> Barber, *Benjamin, Strong Democracy*, P. 188.

<sup>352</sup> See footnote 55.

Since representatives enjoy special privileges that protect them from dependency relationships within and outside parliament, such reservations apply on a very much smaller scale for them. The publicness of their actions therefore does not require any particular protection. Quite the opposite. Everything that is contrary to the principle of publicity is in this context undemocratic. The general discussion on better transparency of actions in the public sector is being conducted under the term **freedom of information** (FOI). Freedom of information is the principle that in general all papers, documents and files of public bodies are freely accessible by each citizen. Personal involvement of those requiring the information or even a reason for the application is not required<sup>353</sup>. Freedom of information legislation thus reverses the legal principle of official secrecy. Instead of the principle of confidentiality under which all official information is of an internal nature unless made accessible by particular provisions, freedom of information assumes the principle of publicness. If a government agency is of the opinion that it cannot release information because of some exceptional reasons, then the burden of justification lies with it and not with the person seeking the information. Protection of personal data, company and commercial secrets, intellectual property rights and information protecting criminal investigations at all levels are excluded on the grounds of confidentiality or data protection.

More than 50 countries around the world have already adopted far-reaching laws to support and promote freedom of information in the public sector and more than 30 countries are currently in the process of passing such legislation<sup>354</sup>. Even though freedom of information legislation has already been in place for a hundred years in some cases<sup>355</sup>, over half of the laws valid today were passed in the last ten years, accompanied by the development of the information society<sup>356</sup>. For example, many freedom of information laws require public authorities to regularly publish certain information on the Internet, which can include not only job descriptions and internal rules, but also revenue and spending, employees and other decisions.

For example, since January 1995 the US government has been publishing government bills and all kinds of legislative information about the work of the Congress and the Senate at <http://thomas.loc.gov> (read January 2005). Whereas there is normally a one-day delay in publication here, the Scottish parliament has opted for real time transparency. At <http://www.holyrood.tv> (read January 2005) people can follow debates in the six committee rooms and the chamber live via webcam. The authorities in Norway and Estonia are already using email to respond to individual requests for information. In the latter case, email queries

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<sup>353</sup> *Redelfs, Manfred und Thomas Leif*, Mehr Transparenz wagen: Warum die Informationsfreiheit unverzichtbar ist – und die Politik sich damit schwer tut, Hintergrundtext zu [pro-information.de](http://www.pro-information.de), 2004, P. 1, <http://www.pro-information.de> (read January 2005).

<sup>354</sup> For an overview of related legislation around the world, see *Banisar, David*, Freedom of Information and Access to Government Record Laws around the World, The Freedominfo.org Global Survey, May 2004, P. 2 f, <http://www.freedominfo.org/survey.htm>, also <http://www.privacyinternational.org/issues/foia/foia-laws.jpg> (read January 2005).

<sup>355</sup> For example, Sweden and Finland (1766), France (1789), Netherlands (1795), Denmark (1865), Colombia (1888). see *Banisar, David*, Freedom of Information and Access to Government Record Laws around the World, P. 2 f.

<sup>356</sup> For example, after a study of 57 freedom of information laws Banisar comes to the conclusion in 2004: "The expansion of the Internet into everyday usage increased demand for more information by the public, businesses and civil society groups. Inside governments, the need to modernize record systems and the move towards e-government has created an internal constituency that is promoting the dissemination of information as a goal in itself". *Banisar, David*, Freedom of Information and Access to Government Record Laws around the World, P. 4.

must by law be treated as official requests<sup>357</sup>. Such applications make use of the bi-directionality of ICTs, which in contrast to traditional information diffusion media, such as TV or radio, opens up new possibilities. The cost-effective possibility of giving citizens a better insight into representative democratic systems by means of ICTs also helps to boost the transparency of the actions and behaviour of the people's representatives and directly or indirectly their morality.

A more elaborated application is so-called "**e-rulemaking**"<sup>358</sup>. The participative use of ICTs assists to make the drafting of new administrative rules and regulations in areas such as environmental protection, economy and safety more transparent, inclusive and democratic. "E-rulemaking has the potential to help government officials create higher quality rules, induce higher compliance rates, and foster greater and deeper public participation"<sup>359</sup>. Depending on the legislation in question, drafting administrative rules and regulations normally involves three steps. Firstly, the idea of the new regulation has to be published. Secondly, professional opinions are sought so as to incorporate experts' views on the effect of such a regulation. Thirdly, the new regulation is publicly presented or in the best case publicly discussed before being adopted. The use of ICTs is helpful in all three cases. The idea of the new regulation is presented on a website. Interested citizens can register with email groups and if they wish be automatically informed about an intended administrative regulation in a particular area. Hyperlinks to important information and the provision of information material elucidate the context of the new regulation. Expert opinions can be solicited by Delphi surveys or free email comments. The third step of public participation, offers the greatest potential for ICTs<sup>360</sup>. Comments can be sent by email in free form, with or without attachments and links, or comment templates can be provided for filling in. The comments can then be evaluated either internally or publicly, made available for discussion before or after adoption of the new regulation. Unlike paper-based comments, the digital format of the submitted contributions simplifies their publication and distribution. Where there is a great number of public contributions, these can be sorted or indexed and entered in a search engine.

"One of the most notable characteristics of rulemaking is its information intensity... the volume of both text based and data based information associated with making even a single rule can be vast, and all this information can be formatted in different ways... In one form or another, the tasks of gathering, processing, analyzing, and communicating information make up

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<sup>357</sup> *Banisar, David*, Freedom of Information and Access to Government Record Laws around the World, P. 29.

<sup>358</sup> See <http://www.regulations.gov> (read January 2005), also: <http://www.ksg.harvard.edu/cbg/rpp/erulemaking> (read January 2005).

<sup>359</sup> *Coglianesi, Cary*, E-Rulemaking: Information Technology and Regulatory Policy, new directions in digital government research, Harvard University, John F. Kennedy School of Government, 2004, P. vi, [http://www.ksg.harvard.edu/press/pdfs/E-Rulemaking\\_Report.pdf](http://www.ksg.harvard.edu/press/pdfs/E-Rulemaking_Report.pdf) (read January 2005).

<sup>360</sup> For an overview of a number of possibilities for public participation already in use, see *Waxman, Henry* and *Joseph Lieberman*, Federal Rulemaking: Agencies' Use of Information Technology to Facilitate Public Participation, United States General Accounting Office, General Government Division, June 2000, P. 6 ff, [http://www.ksg.harvard.edu/cbg/Conferences/rpp\\_rulemaking/Rulemaking\\_IT\\_Participation.pdf](http://www.ksg.harvard.edu/cbg/Conferences/rpp_rulemaking/Rulemaking_IT_Participation.pdf) (read January 2005). *United States General Accounting Office* (GAO), Electronic Rulemaking, Efforts to facilitate public participation can be improved, Report to the Committee on Governmental Affairs, U.P. Senate, September 2003, <http://www.gao.gov/new.items/d03901.pdf> (read January 2005).

most of the administrative costs associated with rulemaking"<sup>361</sup>. The goal is not only to reduce costs but above all to improve the democratic legitimacy of the new regulation and thus its quality. The better the public is informed about a proposed regulation, the more informed will be the public deliberation<sup>362</sup>. The public's better understanding of the purpose of the regulation also helps to increase the willingness to comply with the new regulation right from the start<sup>363</sup>.

### Consequences of the development of the Roman republic

The decision-taking power in the Roman Republic model remains with the representatives, who are subject only to their conscience and are not meant to follow the capricious moods of the people. The representatives represent the people as they think fit by dint of a free mandate and are not representatives with an imperative mandate. In this sense, the 2003-04 Report of the Committee on Modernisation of the House of Commons underlines with respect to online consultations of the British parliament: "The purpose of on-line consultations must be made clear to participants—they are being asked to provide advice and information, not to make policy"<sup>364</sup>. The fostering of the publicity of democratic will formation processes through ICTs should not lead to direct democracy as in pushbutton democracy. Likewise, the imperative mandate, in the sense of plebiscitarian leadership democracy and economic democracy, should be avoided. The people's representatives are merely to be provided with more and better focused information in order to support the moral reflection process, in which they are subject only to their own conscience. ICTs increase the pressure of an imperative mandate, thus limiting the independence of the representative, and are therefore not necessarily conducive to the ideal of independence from instructions.

However, one of the strongest criticisms of the Roman Republic model can be solved by the focused use of ICTs. Similar to plebiscitarian leadership democracy, this model is namely open to the charge of having a **tendency to elitist processes for determining right**. Representatives in the Roman Republic are assigned a particular responsibility<sup>365</sup>. According to Cicero, some citizens are "more worthy" than others to hold public office. Since it is difficult to judge a person's morality, those with an academic, professional or charismatic standing tend to be chosen for such office. However, morality and good judgment are not automatically associated with expertise in a particular field or charm. Morality is a principled act of reflection and not always compatible with the expert's passion for his or her profession<sup>366</sup>. At bottom exactly the opposite is often more advantageous: "public evaluation [must] be in other hands ... than in those of the technical expert"<sup>367</sup>. These tend to play an advisory role. In this sense it is better

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<sup>361</sup> *Coglianesi, Cary*, E-Rulemaking, P. 10, [http://www.ksg.harvard.edu/press/pdfs/E-Rulemaking\\_Report.pdf](http://www.ksg.harvard.edu/press/pdfs/E-Rulemaking_Report.pdf) (read January 2005).

<sup>362</sup> "One way to facilitate the receipt of informed public comments is to permit electronic access to regulatory supporting materials, such as economic analyses and the comments of others". *Waxman, Henry and Joseph Lieberman*, Federal Rulemaking, P. 17

<sup>363</sup> For the relationship between e-rulemaking and "increased regulatory compliance", see: *Coglianesi, Cary*, E-Rulemaking, P. 22 f, [http://www.ksg.harvard.edu/press/pdfs/E-Rulemaking\\_Report.pdf](http://www.ksg.harvard.edu/press/pdfs/E-Rulemaking_Report.pdf) (read January 2005).

<sup>364</sup> *House of Commons*, Connecting Parliament with the Public, P. 21.

<sup>365</sup> See *Schachtschneider, Karl Albrecht*, Die Freiheit in der Republik, 6. Kapitel, II, 2.

<sup>366</sup> *Heinrichs, Johannes*, Revolution der Demokratie, P. 182 f.

<sup>367</sup> *Heinrichs, Johannes*, Revolution der Demokratie, P. 182 f.

according to Barber, "...[to] make possible a government of citizens in place of the government of professionals"<sup>368</sup>. While the Roman republic sticks to the principle of representation, the influence of the citizens can be improved, fostered and implemented by procedures such as e-rulemaking.

We can thus conclude that while in the information society the problems related to the secret ballot on side of the citizens cannot be solved, there is a trend towards greater transparency on the part of the representatives, whereby we can observe the right of access to, and even the intensified inclusion of the people in, work that previously fell under the doctrine of official secrecy. Besides, the system of institutions meant to support the Roman Republic in the information society must be capable of creating a balance between the citizens' direct power of instruction (in an extreme case the imperative mandate) and the independence of representatives. This is then the Kantian doctrine: "Namely binding each legislator such that he makes his laws as they could have emerged from the united will of a whole people, and to regard each subject in so far as he wants to be a citizen as if he had consented to such a will with the others. For that is the touchstone of the lawfulness of each public law. If this has namely been so created that an entire people could impossibly give its consent ..., then it is not just; if it is however only possible that a people agree to it, then it is a duty to regard the law as just: even if the people would now be in the mood or mindset to probably refuse its approval, if asked about it"<sup>369</sup>. The necessary independence of the representatives can be fostered by tried and trusted institutional framework conditions. Prohibiting the re-election of representatives, for example, is one the possible elements for releasing representatives from the compulsion of the information-societal trend towards an imperative mandate.

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<sup>368</sup> Barber, Benjamin, Strong Democracy, P. 262.

<sup>369</sup> Kant, Immanuel, Über den Gemeinspruch, P. 49.



## Deliberationware democracy in the information society

Deliberationware democracy aims to combine the advantages of the Roman Republic with those of direct citizen participation through republican mass-deliberation, institutionally guided by the rule of law. Thus deliberationware democracy focuses on the search for the *volonté générale* in a digitized public discourse involving the greatest number of citizens possible. In order to achieve this, it concentrates above all on the development of suitable technological solutions for such a model.

### Theoretical foundations of deliberationware democracy

As the term “deliberationware” already seems to suggest, the focus of this model of democracy is set on technology. The deliberationware democracy is without doubt the most futuristic vision of the information society democracy models. The basic idea lies in the complete digitization of the societal will formation process by using intermediary software systems to blend the various opinions into the *volonté générale*. The deliberationware is seen as a value-neutral intermediation system that renders any delegation or representation tasks unnecessary. In a “republic of technology”<sup>370</sup>, digital channels make it possible for the entire people to be involved in Madison's opinion filters and not just small elites. “The greatest potential of new information technology to improve democracy lies in its ability to enhance mediated democracy”<sup>371</sup>. The aim is for the common will of all citizens to be incessantly identified and registered. Unlike the vision of pushbutton democracy, this is not a question of mirroring political opinions through ad hoc e-voting, but “using new media to permanently register the will of the people and thus increase democratic stability”<sup>372</sup>. “With the help of teledemocratic processes, public opinion will become the law of the land”<sup>373</sup>. This is only partly possible using quantitative polls. “Particular interests can be counted and aggregated, but a will that is general entails a seeing that is common — which is something that numbers can neither measure nor certify”<sup>374</sup>. Thus it is essential for the deliberationware not merely to address surveys and voting results and identify the *volonté de tous*. Intermediary information systems must help to extract from the various individual wills (*volonté particulière*) the *volonté générale*. Therefore, the deliberationware must also be able to handle qualitative and contentual deliberation processes for “without talk, there can be no democracy”<sup>375</sup>.

As a system for intermediating deliberation contributions, the deliberationware tries to use the neutrality and “**value-free correctness**” of computers<sup>376</sup> to channel and institutionalize the will formation process into rational and logically formalized paths. The procedural rules used by the

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<sup>370</sup> Boorstin, Daniel, *The Republic of Technology, Reflections on our future community*, Harper & Row, New York, 1978.

<sup>371</sup> Snider, James, *Democracy On-Line. Tomorrow's Electronic Electorate*, in: *the Futurist*, September/October, 1994, P. 17, <http://www.wfs.org/futurist.htm> (read January 2005).

<sup>372</sup> Eurich, Claus, *Der Verlust der Zwischenmenschlichkeit*, P. 105.

<sup>373</sup> Becker, Ted, *Teledemocracy*, P. 9.

<sup>374</sup> Barber, Benjamin, *Strong Democracy*, P. 202.

<sup>375</sup> Barber, Benjamin, *Strong Democracy*, P. 267.

<sup>376</sup> Steinbuch, Karl, *Falsch programmiert*, in: *Amtsblatt des Landes Berlin, Teil I*, 18 1968, P. 174.

intelligent software programs to analyze and evaluate the citizen's interests before merging them to the *volonté générale* need to be objectively unbiased in ideologies and values. Back in 1968, Steinbuch had already noted: "In the era of superintelligent computers it is no longer the role of politicians to identify the optimum decision in the sense of a given value system in the light of the prevailing situation"<sup>377</sup>. Value-neutral computers, which conceptually come very close to Rawls' "veil of ignorance"<sup>378</sup>, will handle this task using objective decision criteria. Here it is important that all sentiments are captured by the deliberationware and therefore included in the public opinion. This idea is not foreign to the "network of networks", i.e. the Internet. It rather is its *raison d'être*. The subjective selection power of traditional gatekeepers<sup>379</sup> in the public will formation should concede to the priority of the best argument<sup>380</sup>, made possible by the value neutrality of computers. The real *volonté générale* of all people is to be filtered out and expressed in laws that enable the good life for all in general freedom and equality. Such norm can claim that it is in the equal interest of all.

Similar to fastidiously defined rules that govern the deliberation processes in parliament, digitally programmed information flows define the decision taking procedure in an institutional manner. Intelligent software evaluates the contents of texts and contributions (future versions of intelligent Internet search engines) and provides citizens with selective and customized access to the opinions expressed by others. The system characterizes various opinions and arguments, helping the user to gauge the quality and orientation of the contributions of the others. These programs are thus more than mere rigid filters programmed to respond to certain key words. Based on the advances made in artificial intelligence, they are dynamic and self-learning. They are like "digital butlers"<sup>381</sup>, who evaluate absolutely objectively and value-neutrally the discourse between the various individual wills, making suggestions on how to reformulate them in order to convert the "I want" into the "we want"<sup>382</sup>.

The challenge of deliberationware democracy consists in programming the procedures and subprocesses of the will formation process. A seamless set of rules and regulations need to be agreed to independently balance diverging interests. By definition deliberationware democracy aims to produce the republican *volonté générale*, i.e. it must not be programmed as a competitive democracy majority system but must be geared to the general acceptance the laws derived. Besides, it must include the whole people in a coercion-free deliberation sphere. Rules and lawfulness steer these processes, not human intervention. Habermas teaches: "The coercion of the law has an intention of removing all coercion whatsoever ... The civil idea of rule of law, namely the binding of all state activity in the most tightly meshed system of standards and norms that are legitimated by public opinions, aims at eliminating state as an instrument of coercion .... The coercion of the public is by its own notion a structure in which all coercion whatsoever is eradicated; *veritas non auctoritas facit legem*"<sup>383</sup>. The deliberationware strives to

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<sup>377</sup> Steinbuch, Karl, Falsch programmiert, P. 172.

<sup>378</sup> See Rawls, John, A Theory of Justice, P. 118 ff.

<sup>379</sup> See Wagner, Ralf, Demokratie und Internet, P. 117 ff. Wesselmann, Christoph, Internet und Partizipation in Kommunen, P. 92 ff.

<sup>380</sup> See footnote 125.

<sup>381</sup> Negroponte, Nicholas, Being Digital, P. 149 ff.

<sup>382</sup> See footnote 77.

<sup>383</sup> Habermas, Jürgen, Strukturwandel der Öffentlichkeit, P. 152 f.

set up such a perfect and impermeable set of just procedures. The rule of law becomes the governor, eliminating the chance of power abuse and domination of some over others.

### Development of deliberationware democracy in the information society

The focus of deliberationware democracy quickly centres on the technical implementation of an intelligent information system for deliberations among such a large number of citizens. Aristotle offers two ways of realizing the democratic inclusion of the people in the democratic truth determination process<sup>384</sup>: either the number of participating citizens or the scale of the opinions expressed must be restricted.

If each citizen held a 30-minute speech, no more than 16 citizens could take the floor during an 8-hour day. In a small village with 5,000 citizens it would thus take almost a year (313 days) until everybody had presented their opinion on the various issues<sup>385</sup>. Furthermore, prose-speeches are often more difficult for deliberation partners to understand because of their rhetorical ambiguities. "The standard process we use to run conferences or conduct other forms of deliberation are highly inefficient and seldom enhance either shared clarity or justified consensus. Why? Because we stumble around in a fog of verbiage, missing much of what is said, asking a scattering of uncoordinated questions, making misinferences and misassociations, grabbing only bits and pieces of arguments and clinging to our own for all we are worth"<sup>386</sup>. In order not to lose the thread in the cut and thrust of opinions and argumentation strategies expressed in multifaceted group deliberations, it takes comprehension skill and rhetorical training<sup>387</sup>. Normal citizens are not credited with such skills<sup>388</sup>, nor is there sufficient time to involve everybody. Therefore, "typically a few persons do most of the talking"<sup>389</sup>, which results in representative democracy with a restricted number of deliberation participants.

If the number of citizens is kept large, the scale of the opinions expressed must be reduced, i.e. abridged and simplified<sup>390</sup>. The most extreme shortening and simplification of an expression of opinions in a mass democracy is the simple "yes/no" vote. The expression of opinion is predefined and standardized, which enables the various opinions to be aggregated and unambiguously evaluated. A pre-formulated question is provided. This is a major restriction on the individual citizen as the opinion cannot be expressed in own words and thought schemata<sup>391</sup>. If the individual rejects the type or the wording of the question as such, he can at

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<sup>384</sup> Aristotle, Politics, 1298a.

<sup>385</sup> Example taken from Dahl, Robert, On Democracy, P. 106 ff.

<sup>386</sup> Monk, Paul and Tim van Gelder, Enhancing our Grasp of Complex Arguments, Plenary address to the 2004 Fenner Conference on the Environment, Australian Academy of Science, May 2004, P. 1, <http://www.austhink.org/monk/Fenner/Fenner.htm> (read January 2005).

<sup>387</sup> Dryzek, John, Legitimacy and economy in deliberative democracy, Australian National University, 2001, S.13 f., <http://socpol.anu.edu.au/pdf-files/W15.pdf> (read January 2005).

<sup>388</sup> Van Gelder, Tim, Enhancing Deliberation through Computer supported Argument Mapping, P. 8 ff.

<sup>389</sup> Dahl, Robert, On Democracy, P. 107.

<sup>390</sup> Goddin, Robert E., Democratic Deliberation Within, in Fishkin, James and Peter Laslet, Debating Deliberative Democracy, P. 59.

<sup>391</sup> Pingree, Ray, None of the Above: creating Mass Deliberation without discussion, University of Wisconsin-Madison, 2003, P. 5 ff; <http://www.meaningmap.com/noneoftheabove.doc> (read January 2005).

best abstain. However, it does help to boost the definiteness of the expressed opinion. "Resource classification schemes typically impose a perspective, and leave little or no room for ambiguity, dissent or uncertainty"<sup>392</sup>. As a result of this extreme simplification of the expressed opinion, it is thus possible to obtain the clear "opinion" of a very large number of citizens without allowing anybody express an individual opinion. As a result, long and ambiguous prose-speeches by a few are in contrast to brief and predefined, by unmistakable opinion expressions of the many.

The deliberationware is meant to find a third way between the quantitative reduction of the number of contributions and their qualitative simplification. On the one hand, the greatest number of citizens possible should be included (more than in a small circle of representatives), and on the other hand, the nature of the will expressed by the citizens should be as unrestricted as possible (more detailed than a yes-no vote). Walking the tightrope over the bipolar logic of the trade-off between group size and depth of argument, ICTs can move the two ends of this axis in a third direction. The aim is to give more and more citizens an insight into the opaque and impenetrable tangle of formal democratic deliberations of the kind that take place among representatives and to be constantly easing the straitjacket of simplification around the choices offered for public approval by voting on predefined questions. In the end, the faithful reflection of the will of the people is a problem of information processing. The key contribution of ICTs lies in the effective employment of information structuring techniques. The purpose of these is to chart a middle course between spoken and written prose, which is information-rich but often confusing, and the oversimplification of a single statement that is presented to the public for voting. The method consists in identifying the classifiable information content of the different opinions expressed so that these can then be used as harmonized inputs for a subsequent intermediation process. Once the information content of the expressed will has been classified in accordance with a standard lying somewhere between the wide-ranging codification of common language and a tight "yea/nay" terminology, it can be used as an input for the democrat's internal reflections – deliberation as defined by Hobbes<sup>393</sup> – and for the process of reconciling the incompatible opinions of different members of the group. Artificial intelligence can help to handle the overflow of information produced and to provide value-free intermediation.

In line with Habermas's discourse theory, it is essential to combine methods that facilitate internal reflection (in the sense of republican "ethical self-communication") with liberal "interest compromises" through external negotiations<sup>394</sup>. Information structuring therefore has to provide inputs for the republican ambition to work out a common will best suited to the community at large (satisfying all citizens as much as possible) and, at the same time, for the liberal drive to reconcile conflicting, pluralistic interests as satisfactorily as possible (satisfying the greatest possible number of citizens). ICTs can contribute to a method of discourse that takes up elements of both sides and integrates them in the notion of an ideal procedure for discussion

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<sup>392</sup> *Buckingham Shum, Simon and Albert Selvin, Structuring Discourse for Collective Interpretation, P. 13.*

<sup>393</sup> *Hobbes, Thomas, Leviathan, oder Wesen, Form und Gewalt des kirchlichen und bürgerlichen Staates, First edition 1651, Rowohlt's Klassiker der Literatur und der Wissenschaft, in the translation by Dorothee Tidow, Ed. Ernesto Grassi und Walter Hess, München, 1965, P. 45 ff.*

<sup>394</sup> *Habermas, Jürgen, Die Einbeziehung des Anderen, Studien zur Politischen Theorie, Suhrkamp Wissenschaft, Frankfurt am Main, 1999, P. 277 ff, 285.*

and decision-making, as demanded for democratic discourse by Habermas<sup>395</sup>. To see how this can be done it is necessary to include concepts of modern information engineering, such as used in commercial information management and artificial intelligence.

The following sections look at possible communications structures to implement such a system. The first section identifies a series of possible techniques of information structuring, such as hyperlink quoting procedures, automatic and semi-automatic text classification and argumentation visualizing procedures. The second section looks at advances in artificial intelligence to assure value-neutrality of the system, including technological solutions such as semantic text orientation and intelligent software agents. In order to channel the various will expressions towards the *volonté générale*, the third section of this chapter suggests consociational-democratic mechanisms.

### *Information structuring as fine adjustment between prose and yes/no*

The idea of **hypertext linking** is as old as the Internet<sup>396</sup>. Based on the foundations of traditional citing in academic texts, a hyperlink ties one piece of information with another and thus makes explicit that the linked ideas are related. "The difference lies however in the immediateness between link and access to the information ... since everything can be linked with everything and the information blocks are available immediately and apparently spacelessly"<sup>397</sup>. This enables non-sequential processing of a text with hyperlinks, since the text "opens out to many sides and the reader can choose how to navigate it ... here the readers themselves provide the structure of the text and derive their own narrative linearity by clicking through the network"<sup>398</sup>. Thus the reader is not bound by a unique structure defined by the author but can consume the presented information in a different sequence on each reading, i.e. look at it from different perspectives. The rearranging and adding of information blocks from various co-authors creates a network in which the various links to individual pieces of information can offer different overall information<sup>399</sup>.

**Groupware** is based on a similar cooperative idea of the digital linking of a work group, whereby the structure is even less dominated by a central author and actively involves the various information producers as equal co-authors in the process of providing the information. This can be done through real-time contributions or in an asynchronous form, by access to common documents and databases, collectively managed calendars and email or chat. The different sequencing of hyperlinks allows the same information to be contrasted with various viewpoints, being placed in different contexts. Thanks to the exchange between the various participants, there is a possibility of a collective interpretation process that structures the common thoughts, in other words the collective discourse. The software takes over the function

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<sup>395</sup> Habermas, Jürgen, Die Einbeziehung des Anderen, Studien zur Politischen Theorie, Suhrkamp Wissenschaft, Frankfurt am Main, 1999, P. 285.

<sup>396</sup> See footnote 38 and 39.

<sup>397</sup> Egloff, Daniel, Digitale Demokratie, P. 95.

<sup>398</sup> Egloff, Daniel, Digitale Demokratie, P. 15 f.

<sup>399</sup> Selvin, Albert, Supporting Collaborative Analysis and Design with Hypertext Functionality, Network system Advanced Technology, Bell Atlantic Corporation, Journal of Digital Information, Volume 1 Issue 4, Article No. 16, P. 10 f; <http://jodi.ecs.soton.ac.uk/Articles/v01/i04/Selvin> (read January 2005).

of a discussion intermediary. "A discourse-oriented approach to supporting collective interpretation ... means activities involving two or more people who are trying to make sense of an issue. The common theme linking the examples is that each mediates interpretive activity via a software environment which structures discourse: participants construct their interpretation within a representational framework which in return provides computational services. As a by-product, this persistent trace of the sense making process can serve as a collective memory resource for subsequent reinterpretation"<sup>400</sup>.

The result of groupware discourses is predictable. Similar to a gathering in which a large number citizens come together and all talk at once, large digital deliberation groups produce a **large quantity of unstructured information**. A host of long contributions, supported by complex and various arguments and evidence, creates an opaque network of argumentation. Pioneers that have implemented such technological systems report: "Early users of the tool produced long, unusable strings of positions and arguments. Maps quickly grew large and unmanageable. Attempting to use the tool to capture discussion during a meeting often resulted in failure"<sup>401</sup>. The "lost in hyperspace problem" and the disadvantage of the "disorientation and cognitive overhead" in hypertext structured discussion groups are the well-known outcome of such "information overflow"<sup>402</sup>. Following this negative experience with hypertext based deliberation groups in the late 1990s, the new research goal is to develop focused and structured digital discussion support systems, "groupware designed to support structured, goal-directed discourses"<sup>403</sup>.

Following Aristotle's logic on the "trade-off between group size and depth of line of argument"<sup>404</sup>, there remains the possibility of either reducing the number of those deliberating, which is not meant to happen in the case of the direct-democratic deliberationware, or simplifying the depth of the opinions expressed. The first step in the simplification of contributions is to classify them on the basis of their semantics. Text classification is crucial here. The applied concept is similar to the one of search engines in libraries, but pinpoints at the semantic meaning of information. Documents in digital libraries are normally arranged into various topic categories by a classification of key words. Besides traditional categories such as publication dates, document type and availability, this meta-information (i.e. information about information) can also include descriptions of the opinion expressed in the text. If the same opinion appears twice in two different texts, this can be quickly spotted and then grouped under one class of argument. If the arguments are exactly the same, they can be categorized as one single argument. The principle of equally entitled participation is not affected this way. Similar to a P2P file exchange, the role of the deliberationware is to structure vast amounts of information, combine identical and similar arguments so that the clarity of the system does not

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<sup>400</sup> Buckingham, Shum, Simon and Albert Selvin, Structuring Discourse for Collective Interpretation, Conference on Collective Cognition and Memory Practices, Paris, September 2000, P. 1, [http://www.limsi.fr/WkG/PCD2000/textes/fichiers/Shum\\_Selvin.pdf](http://www.limsi.fr/WkG/PCD2000/textes/fichiers/Shum_Selvin.pdf) (read January 2005).

<sup>401</sup> Selvin, Albert, Supporting Collaborative Analysis and Design with Hypertext Functionality, P. 3.

<sup>402</sup> Selvin, Albert, Supporting Collaborative Analysis and Design with Hypertext Functionality, P. 4 f

<sup>403</sup> Gordon, Thomas and Gernot Richter, Discourse Support Systems for Deliberative Democracy, Frauenhofer, 2002, P. 1; <http://www.tfgordon.de/publications/Gordon2002a.pdf> (read January 2005).

<sup>404</sup> See also Pingree, Ray, Democratically Structured Deliberation, A new solution to democracy's problem of scale, University of Wisconsin-Madison, 2004, P. 4 ff; <http://www.meaningmap.com/DSD.doc> (read January 2005).

suffer but benefit from a large number of participants<sup>405</sup>. The second step consists in the establishment of the relations between the pieces of information that are semantically different. If there are contributions that do not directly affect the issue under discussion, they can be skipped without any loss of time<sup>406</sup>. Among the remaining arguments, the connections between the various contributions have to be ordered by their significance. Text visualization is of major help here.

Let us take a concrete example to picture this process<sup>407</sup>. The contents of a special paper under the broad key word "energy sources" could be described with '*environmental compatibility of various energy sources*'. The aspect of environmental compatibility is a sub-aspect of energy sources in this particular information structure. In addition, the concept or result of the paper could be described as '*solar and water power are the most environmentally friendly of all energy sources*'. In this case, the sub-aspect of environmental compatibility was concretized by a reference to two technical solutions and their status regarding the achievement of environmental sustainability. A different contribution under the same key work could however state that '*solar power is without doubt more environmentally friendly than water power*'. While both contributions agree that solar power contributes to environmental compatibility, they are contradictory regarding the usefulness of water power. The relation between both contributions can thus be described by a link with certain characteristics. Among these classifying properties can be the positive or negative polarity and the weighting of the relation, depending on the view of the classifier (for example '*contribution 1 supports/contradicts contribution 2*', or '*contribution 1 strongly/weakly/partly contradicts contribution 2*')<sup>408</sup>. Thus the content, assertions and arguments of contributions can be combined and the relationships between contributions classified in various properties.

This network of various contributions can be presented graphically with the help of **argument visualization** (see box: Argument visualization). Various techniques are available for this, such as "Mind Maps"<sup>409</sup> or "Argument Mapping"<sup>410</sup>. "The paradigmatic argument map is a visual display, much like the familiar paper maps of towns, subway systems, treasure islands etc ... the point of argument mapping is to present complex reasoning in a clear and unambiguous way, and mappers should use whatever resources work best in achieving this goal"<sup>411</sup>. For

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<sup>405</sup> One could imagine that the deliberationware functions much like a P2P music exchange site where several million participants swap digital files. Identical and similar files are combined and bundled.

<sup>406</sup> Pingree, Ray, Democratically Structured Deliberation., P. 15 ff.

<sup>407</sup> The following passages are based a semantic software solution in the field of classifying research papers called "ClaiMaker". See Buckingham Shum, Simon, Victoria Uren Gangmin Li, John Domingue and Enrico Motta, Visualizing Interneted Argumentation, Knowledge Media Institute, Open University, UK, PrePrint, to appear in Visualizing Argumentation: Software Tools for Collaborative and Educational Sense-Making, 2002, P. 4 ff; <http://kmi.open.ac.uk/projects/scholonto/docs/VizNetArg2002.pdf> (read January 2005).

<sup>408</sup> Buckingham Shum, Simon, Victoria Uren Gangmin Li, John Domingue and Enrico Motta, Visualizing Interneted Argumentation, P. 4 ff.

<sup>409</sup> See Buzan, Tony, Mind Map: Expanding the mind, Buzan Centers, 2004, <http://www.mind-map.com> (read January 2005).

<sup>410</sup> Van Gelder, Tim and Andrew Bulka, Reason!Able, Melbourne, The Reason Group, 2000, <http://www.goreason.com> (read January 2005).

<sup>411</sup> Van Gelder, Tim, Enhancing Deliberation through Computer supported Argument Mapping, University of Melbourne, PrePrint, to appear in Visualizing Argumentation: Software Tools for Collaborative and Educational

example, contributions can be depicted as circles, relationships between contributions as lines. As a result, important contributions in this network can be spotted very easily from a bird's-eye view, in other words contributions with an above-average quantity of links (see upper part of the graphic "argumentation network from a bird's-eye view"). Furthermore, directed relationships can be represented as arrows and the weighting of the relationship as the distance between the circles. In traditional key word citation counts, "we cannot even tell if a paper is referenced because the authors support or are diametrically opposed to it"<sup>412</sup>. Therefore, the relations between the texts need to be described in a separate classification. The classification of the semantic direction between the contributions can be mapped by boxes beside the arrows. This way, the user can zoom to a certain contribution and view the differing semantic interpretation of the links between the contributions (see lower graphic "Zooming in on exchange of arguments on solar versus water power").

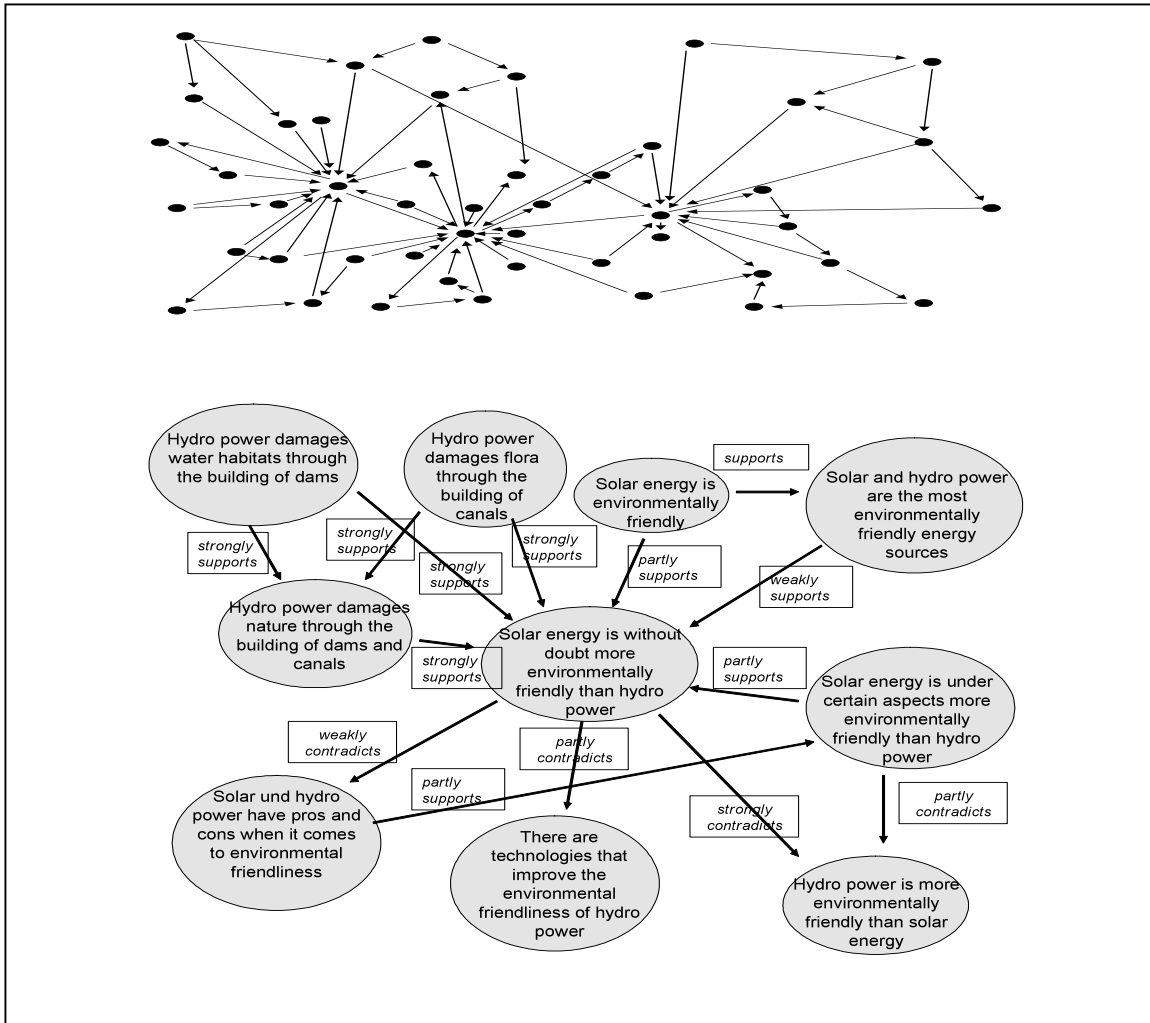
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Sense-Making, 2002, P. 4; [http://www.philosophy.unimelb.edu.au/reason/papers/Enhancing\\_Deliberation.pdf](http://www.philosophy.unimelb.edu.au/reason/papers/Enhancing_Deliberation.pdf) (read January 2005).

<sup>412</sup> *Buckingham Shum, Simon, Victoria Uren Gangmin Li, John Domingue and Enrico Motta*, Visualizing Inter-networked Argumentation, P. 18th



Argumentation network from a bird's-eye view (top) and Zooming in on exchange of arguments on solar versus water power (bottom)



Source: own presentation, based on *Buckingham Shum, Simon, Victoria Uren Gangmin Li, John Domingue and Enrico Motta, Visualizing Internetworked Argumentation*

Each new contribution or link between contributions can change the entire argumentation structure of the deliberation<sup>413</sup>. Classified information processing enable users not only to search by keywords (for example on "solar power"), but also on all contributions that "contradict", or "strongly contradict" a certain contribution. This enables a more precise and semantically directed search for arguments, viewing the same information from different perspectives<sup>414</sup>.

<sup>413</sup> Van Gelder, Tim, *Enhancing Deliberation through Computer supported Argument Mapping*, P. 15.

<sup>414</sup> Li, Victoria Uren Gangmin, Enrico Motta, Simon Buckingham Shum and John Domingue, *ClaiMaker: Weaving a Semantic Web of Research Papers*, Knowledge Media Institute, The Open University, Milton Keynes, P. 4 f; <http://kmi.open.ac.uk/projects/scholonto/docs/ClaiMaker-ISWC2002.pdf> (read January 2005).

### Argument visualization

Compared with argument visualization, a prose text is like a written list of chessboard moves compared with the plastic visualization of such moves on a chess on a chessboard. For an untrained player it is difficult to follow moves in a sequential listing such as "from A-3 to B-4" and "from F-6 to G-8". On a chessboard, visualization forms, structures and symbols are available to help the player to follow and appreciate the game. In a similar way, argument visualizations support the deliberator with a number of forms, symbols and structures and present the complex and constantly changing argumentation network in a structured way. Using a similar metaphor, argument visualization is like a street plan compared with written directions<sup>415</sup>. Whereas the latter can present the route only with the help of a single, very limited, classification system (through language, such as "straight on to the small tree, then second left, third right", and so forth), a street plan presents the same information with various symbols, colours, forms, arrows and other visual instructions. A map shows the various alternative routes to the destination. In addition, a prose text would have to start all over again in order to present a route change in sequential order: "An alternative route would be straight on, then the forth left to a blue house", and so forth. Describing all the alternative routes would call for a host of impenetrable written directions put together in a thick book. Now if the destination changes, it is almost impossible for the traveller to draw the right conclusions for reaching the destination from the large number of written directions in the book without drawing a map.

Visualization in a map brings out non-sequential relationships, and changes in the route or destination can be integrated dynamically. The traveller himself can now choose the "best route" (or in the argumentation map, the "best route of argumentation"<sup>416</sup>). As a result, lines of argument can be efficiently presented in their complex relationships and interdependencies<sup>417</sup>. Also, digressions in the deliberation from its actual core can be recognized more easily, as the relationships are clearly presented. The classification system ensures that the same argument is classified in the same category, thus preventing a repetition. "At every point in the structure of meaning, one can still benefit from the related ideas of all who have ever been at the same point before"<sup>418</sup>. Following the analogy of the street plan, deliberation without argument visualization is like exploring an unknown, impenetrable, complex, rapidly changing jungle area without making a map. The explorer would very probably be forever "just going around in circles"<sup>419</sup>.

With a finer classification it also becomes increasingly more difficult for the deliberator to conceal his opinion in the uncertain area between a black or white choice and he has to opt for one of the clearly distinguishable grey tones. "Opinions will appear more clear-cut, and added to their increased visibility, we might witness the rise of a legitimate fear of commitment"<sup>420</sup>. This fear of commitment and decision taking by those using a more precise classification system relates back to the loss of the possible ambiguities in prose texts. In a prose text the speaker can resort to concealing his opinion with rhetorical tricks without having to commit himself to a concrete alternative. The indistinctness of prose gives masters of rhetoric and demagogues dangerous instruments to wield. In the other extreme, voting on a pre-formulated question leaves only very narrowly defined alternatives. Here a very clear decision is required, either yes or no. Every kind of classification thus constitutes a decision that increasingly concretizes the content of the argument<sup>421</sup>. Depending on the structure and complexity of the classification system, the deliberator gradually and systematically moves towards an ever more concrete argument. The user needs to "make up his mind". "[The] role that a discourse structuring scheme can play is to reduce complexity in order to help participants tackle an ill-structured problem systematically. An effective scheme serves as a filter on the universe of possible issues by focusing attention on a subset and providing a vocabulary on which to conduct this interpretive discourse"<sup>422</sup>.

<sup>415</sup> *Monk, Paul and Tim van Gelder*, *Enhancing our Grasp of Complex Arguments*, P. 5 f.

<sup>416</sup> See footnote 125.

<sup>417</sup> *Monk, Paul and Tim van Gelder*, *Enhancing our Grasp of Complex Arguments*, P. 1.

<sup>418</sup> *Pingree, Ray*, *Democratically Structured Deliberation*, P. 16.

<sup>419</sup> *Van Gelder, Tim*, *Enhancing Deliberation through Computer supported Argument Mapping*, P. 12 f.

<sup>420</sup> *Sereno, Bertrand, Victoria Uren, Simon Buckingham Shum and Enrico Motta*, *Semantic Annotation Support in the Absence of Consensus*, P. 3.

<sup>421</sup> *Shipman, Frank and Catherine Marshall*, *Formality considered harmful*, P. 3 f, 14 f

<sup>422</sup> *Buckingham Shum, Simon and Albert Selvin*, *Structuring Discourse for Collective Interpretation*, P. 2.

In this sense, argument visualization supports the clarity of argumentation relationships compared with prose texts<sup>423</sup>. "Take any group of people ... [and] give them a sample of good argumentative prose, such as a well-argued opinion piece from the newspaper. ... then compare the resulting argument maps. You'll find that you have as many different argument maps as there are people doing the exercise; in many cases the argument maps will be wildly different... Take any group of people... [and] present them with an argument map, and ask them to identify the reasoning presented in the map, and represent it in whatever form they like (map, prose, point-form etc.). ... You'll find that they all understand exactly what the reasoning is, and ipso facto all have the same sense of the reasoning".

The **precision** of the relationships in the argumentation network grows with the possibilities made available to users for describing a document or a relationship between contributions. The alternatives are standardized by a classification system so as to permit aggregations. While the precision of the description grows, the complexity of the system also increases. The example of the graphic merely provides the variables "supports/ contradicts" with the weightings "strong/ weak/ partly" for the links. A participant may not be satisfied with this limitation and so add a time-related variable to detail the sequence of argumentations, such as "is based on/ receives input from ". Another participant may want more than the distinction "supports/ contradicts" and would like to describe the context between two contributions with "proves/ refutes". Complexity can also be added by aggregating new categorization classes. The various contributions could be divided into academic papers or simple assertions and expressions of opinions. The academic papers could in turn be differentiated into theoretical and normative argumentations and empirical studies, and so forth. In addition, a single contribution or an argument can be based on different sub-arguments that can be categorized differently. This can help to fine tune the weighting of the contribution in its semantic focus<sup>424</sup>. Another possible category to add would be to divide the various contributions into problem-identifying and solution-oriented contributions, as suggested by Pingree<sup>425</sup>. This has the advantage that the comparison of the two could help a newcomer to identify the problem being discussed, and it also permits an indexed search to locate all the alternative solutions that have been put forward.

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<sup>423</sup> On this and following see *Van Gelder, Tim*, Enhancing Deliberation through Computer supported Argument Mapping P. 4 ff.

<sup>424</sup> For example, in the summary "*solar and water power have pros and cons in their environmental compatibility*" the various advantages disadvantages can be based on different evidence. A distinction can be made between where the author is basing his argument on other empirical studies or where he is applying generally assumed basic knowledge. If for example all the listed advantages of solar power are backed up by empirical studies, but all the disadvantages are based on subjective and uncertain assumptions about the future, a skeptical reader would probably tend to prefer solar power and change the semantic links to other works accordingly. A not so critical participant will not be influenced by such subtleties, however. See *Sereno, Bertrand, Victoria Uren, Simon Buckingham Shum and Enrico Motta*, Semantic Annotation Support in the Absence of Consensus, Knowledge Media Institute, The Open University, Milton Keynes, 2004, P. 9 f; <http://kmi.open.ac.uk/projects/scholonto/docs/Sereno-ESWS2004.pdf> (read January 2005).

<sup>425</sup> For example, the contribution "*water power damages the flora through the building of canals*" can be classified as a problem-identifying paper in the field of energy generation (category "problem"), whereas the contribution "*solar power is environmentally friendly*" is directed more to problem solving in energy generation (category "solution"). Contribution classification using the schemata "Problems/ Causes/ Solutions/ Reasons/ Principles" is based on a system called "Democratically Structured Deliberation DSD" and is implemented in the software [www.meaningmap.com](http://www.meaningmap.com) (read January 2005). See *Pingree, Ray*, Democratically Structured Deliberation, P. 17 ff.

Apart from presenting the problems and solutions for an issue, the cause of the problems and various principles for justifying the proposed solution can be added<sup>426</sup>.

The finer the classification system, the more precisely can the semantic focus, and thus the role of the contributions in the deliberation, be determined, albeit making the contribution more complex. Here one is moving on the bipolar axis between the two extremes of a simple "yes/no vote" and a complex open prose contribution. The challenge is to create a classification system that is as clear as possible and as complex as necessary<sup>427</sup>. Which categories to offer is decided by the software designer. "A consistent design concern, however, is to walk the tightrope between overwhelming the user with subtly different link (and optional note) types that they cannot differentiate, and straightjacketing them into a frustratingly small vocabulary in which they cannot express themselves"<sup>428</sup>. Thus it can be seen that "formalising means translating, and potentially losing, a part of the original opinion held by an analyst. These opinions will have to fit in the schema of relations, which means leaving aside all the nuances that could not be represented by it"<sup>429</sup>. "Each standard and each category valorises some point of view and silences another. This is not inherently a bad thing – indeed it is inescapable"<sup>430</sup>. Information and communication classification systems, like the argument visualization presented above, try to find a middle way between the information-rich, but often confusing spoken and written prose, and oversimplification through a pre-categorized yes/no decision.

### Artificial intelligence for ensuring the value neutrality of the system

It would be theoretically possible to conduct this kind of structured deliberation **without ICTs**<sup>431</sup>. Like on the stock exchange at the beginning of the last century, it would be done with a large quantity of boards and index cards, with the help of card sorters, hustling message boys and with a thick rule book that has to be learned by each participant. Digitizing the information and communication-intensive coordination process in a discourse provides the advantages of error reduction and speed. Contributions are analyzed, categorized and reorganized persistently, with the argumentation being constantly adapted to reflect the current development of the deliberation<sup>432</sup>. The resulting increases in efficiency for information classification and visualization systems are so immense that it would not be worthwhile conducting an exercise as described in the preceding section without ICTs.

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<sup>426</sup> Pingree uses five categories for contribution classification: problem, solution, grounds, cause, principles. *Pingree, Ray*, Democratically Structured Deliberation, P. 17 ff.

<sup>427</sup> See *Boker, Geoffrey and Susan Leigh Star*, Sorting things out, 10 f.

<sup>428</sup> *Buckingham Shum, Simon, Victoria Uren Gangmin Li, John Domingue and Enrico Motta*, Visualizing Inter-networked Argumentation, P. 10

<sup>429</sup> *Sereno, Bertrand, Victoria Uren, Simon Buckingham Shum and Enrico Motta*, Semantic Annotation Support in the Absence of Consensus, P. 3.

<sup>430</sup> *Boker, Geoffrey and Susan Leigh Star*, Sorting things out: classification and its consequences, Massachusetts Institute of Technology MIT Press, 1999, 6 f; <http://weber.ucsd.edu/~gbowker/classification> (read January 2005).

<sup>431</sup> *Pingree, Ray*, Democratically Structured Deliberation, P. 5.

<sup>432</sup> *Gordon, Thomas*, An open, scalable and distributed Platform for Public Discourse, Fraunhofer FOKUS, Berlin, 2003, P. 3; <http://www.tfgordon.de/publications/Gordon2003a.pdf> (read January 2005).

A further advantage of ICTs in discourse moderation is the **value neutrality of computers**. At the present point in time there are human discourse moderators. "The argument mapping guide must be able to take the raw verbal material and rapidly massage it into a coherent argumentative structure. This means taking what a participant is saying and reformulating it in some text which is recognized by the participant as expressing her point, captures the essential underlying logic, and plugs appropriately into the existing argument tree"<sup>433</sup>. Value-loaded and bias interpretations by the moderator cannot however be ruled out, or are even unavoidable. "To rephrase it, interpreting a document implies taking a perspective on its contents and viewing it through a prism which bends it to one's own interests"<sup>434</sup>. If two people have to decide whether an argument is to be classified under the one or other category, there are quite often differences in opinion<sup>435</sup>. "People seldom agree on how information can be classified and related in [a] general scheme... there is always information that falls between the cracks, no matter how well thought out the formal representation is"<sup>436</sup>. In some approaches, the author of the contribution is therefore asked to integrate his contribution in the "appropriate position" in the discourse structure<sup>437</sup>. In other systems authors are asked to categorize contributions themselves and to describe the relationships between their and other contributions, and then the software creates the overall structure of the relationships<sup>438</sup>.

The problem that all these possibilities share is the subjectivity of the people doing the interpreting. The related danger is that they cannot hold back their particular wills and value judgment from the process of classification. In order to find the *volonté générale* however, the individual must thus be absolutely value-neutral, without a particular will and act objectively in the interest of everybody. "A perfect and altruistic moderator might in some cases manage to create a perfectly fair discussion agenda balancing diverse viewpoints and at the same time avoid influencing the outcome"<sup>439</sup>. The advantage of an automated intermediation system is the objectivity and the procedural fairness of computers in classifying arguments and producing the common argumentation. The bottleneck up to now is the capacity of computers to take over the cognitive interpreting tasks of the moderator. The current challenge concerns the ability of computers to take over cognitive interpretation tasks<sup>440</sup>. For the machine to understand a contribution, it must understand its contents, in other words, classify them with respect to a context and relate the semantic significance of the pieces of information logically to that of others. Research into **automatic text classification**, the automatic categorization of text

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<sup>433</sup> Van Gelder, Tim, Enhancing Deliberation through Computer supported Argument Mapping, P. 16.

<sup>434</sup> Sereno, Bertrand, Victoria Uren, Simon Buckingham Shum and Enrico Motta, Semantic Annotation Support in the Absence of Consensus, P. 3.

<sup>435</sup> Sebastiani, Fabrizio, Machine Learning in automated text categorization, P. 3.

<sup>436</sup> Shipman, Frank and Catherine Marshall, Formality considered harmful, P. 6.

<sup>437</sup> Such as for example the solution in Pingree, Ray, Democratically Structured Deliberation, P. 18 f.

<sup>438</sup> Li, Victoria Uren Gangmin, Enrico Motta, Simon Buckingham Shum and John Domingue, ClaiMaker: Weaving a Semantic Web of Research Papers, P. 2 ff. Buckingham Shum, Simon, Victoria Uren Gangmin Li, John Domingue and Enrico Motta, Visualizing Internetworked Argumentation, P. 5 ff.

<sup>439</sup> Pingree, Ray, Democratically Structured Deliberation, P. 16.

<sup>440</sup> Russell, Stuart and Peter Norvig, "Artificial Intelligence: A modern Approach", 2nd Edition, Prentice Hall, 2003.

(passages) to certain categories, has made great advances in this field over the last ten years<sup>441</sup> (see box: Automatic text classification as value-neutral discourse moderator).

Automatic text classification as a value-neutral discourse moderator

The effectiveness of automatic text classification has increased significantly over the past few years above all thanks to theoretical refinements and the development of new algorithms<sup>442</sup>. This applies to various fields of research such as information filtering, automatic text categorization and indexing, text clustering, text tracking and text mining<sup>443</sup>, data and knowledge engineering<sup>444</sup>, among others. Owing to the great dynamics between these various subdisciplines the debate about boundaries and terminology is still ongoing.

In the 1980s, a so-called expert system of rules and causalities was programmed that could make text-classifying decisions. "Such an expert system would typically consist of a set of manually defined logical rules, one per category, of type 'if' (disjunctive normal form formula) 'then' (category)"<sup>445</sup>. A typical example is keyword-based rule systems as used in simple email filters. If the message contains a certain keyword, it is classified and filed in the appropriate category (mailbox or trash). Much more sophisticated rules need to be applied if the classified contribution is to be put into the necessary context with other contributions, as the mere existence of a keyword may be misleading<sup>446</sup>. The obvious disadvantage of this rule-based approach is the "knowledge acquisition bottleneck"<sup>447</sup>, i.e. the fact that the rules and causalities first have to be defined manually by a knowledge engineer, which can lead to misinterpretations and subjectivity.

In the 1990s, a new line of research into the concept of **machine learning** in artificial intelligence led to significant advances in the discipline of text classification and semantic interpretation of texts<sup>448</sup>. The underlying idea is based on human learning processes. The easiest and most effective way to teach a small child to recognize an automobile consists in showing a selection of various types of automobiles to the apprentice. As a result the child learns a complex combination of characteristics that constitute a car. If the child were presented with a rule-based classification model for automobiles, this would contain rules such as: "a car has four wheels" and "a car is between 3 and 7 meters long". A small 2-meter car would thus not be recognized as a car. If the learner (be it a

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<sup>441</sup> For a historic overview see *Sebastiani, Fabrizio*, Machine Learning in automated text categorization, P. 1 f.

<sup>442</sup> *Sebastiani, Fabrizio*, Machine Learning in automated text categorization, P. 2 f.

<sup>443</sup> "Text mining is about looking for regularities, patterns or trends in natural language text, and usually is about analyzing text for particular purposes. Inspired by data mining, which discovers prominent patterns from highly structured databases, text mining aims to extract useful knowledge from unstructured or semi-structured text", *University of Texas in Austin*, A Roadmap to Text Mining and Web Mining, UTCS Department of Computer Sciences, 2004, <http://www.cs.utexas.edu/users/pebronia/text-mining> (read January 2005).

<sup>444</sup> Data and knowledge engineering covers a great number of rule-based collaborative coordination processes, up to now primarily in business management. See for example *Elsevier*, Data and Knowledge Engineering, Volume 1, June 1985 to Volume 51, October 2004, <http://www.sciencedirect.com/science/journal/0169023X> (read January 2005).

<sup>445</sup> *Sebastiani, Fabrizio*, Machine Learning in automated text categorization, P. 8.

<sup>446</sup> For example, a rule could be made that all contributions containing the keyword "canal building" is automatically assigned a negative connotation for the aspect of the environmental compatibility of hydropower generation. If this system is to be perfected, such a set of rules requires a very dense network of exceptions and subrules. For example, the sentence "canal building does not cause lasting damage to the environment" would be wrongly classified by the keyword-programmed classification system as an argument against hydropower generation, even though the author of the contribution probably wants to defend the environmental compatibility of water power.

<sup>447</sup> *Sebastiani, Fabrizio*, Machine Learning in automated text categorization, P. 8.

<sup>448</sup> *Massachusetts Institute for Technology* (with), Journal of Machine Learning Research, Volume 1, October 2000, to Volume 5, December 2003, <http://www.ai.mit.edu/projects/jmlr> (read January 2005).

child or a machine) is trained using examples however, it is very probable that he would also classify exceptional cars with five wheels as such<sup>449</sup>.

The machine-learning method functions as follows: a human expert manually classifies a certain number of typical examples into certain categories (training set). An inductive process (the learner) observes the characteristics of the manually classified examples and automatically develops a classification system that models a connection between the perceived characteristics of the object and the classification. From the learned relationships between characteristics and classification the system can now categorize unknown examples. This kind of machine learning is known as supervised learning<sup>450</sup>, because the human defines the categories. This contrasts with unsupervised learning, in which the system itself uses cluster analysis to turn certain set of characteristics into a certain category and thus creates its own categories<sup>451</sup>. In these systems automatic text classification tools analyze the characteristics of a text by calculating the relative similarity between documents. "Most fundamentally, automatic, or machine-driven classification is built on the idea that mathematical concepts capture relevant properties of reality and this software can translate back and forth between reality and mathematics"<sup>452</sup>.

In the simplest form, each document is seen as a **bag of words**. The words in it are then statistically compared. As a first step it can be recognized that the documents are either identical or completely different. Looking for meaning, the problem is the context in which a comment appears. For example, for a simple bag-of-words analysis the sentences "*solar power is worse than water power*" and "*water power is worse than solar power*" are identical, since the same words appear, whereas they mean the exact opposite. The sentence "*solar power is less good than water power*" is statistically different from the first sentence, whereas their meaning is the same. To avoid this, the grammar and document structure, and also causalities and the relative importance of certain words in the text have to be taken into consideration. Synonyms and homonyms must be allowed for, the weighting of these words differentiated and the right interpretation of the sentence's syntax must have priority. For example, text classification can be structured so that whole sentences, clauses or expressions or combinations thereof are processed rather than individual words<sup>453</sup>. The characteristics of these terms can also be analyzed, for example the localization of the term in relation to the total text length, and where in the text the term appears and how often (beginning, end, middle). Similar expressions can be classified as the same or weighted differently, and thus reduce or increase the semantic classification. In more complex systems, the context of the information is determined by assigning each word to multi-dimensional context categories, which significantly improves the accuracy of the information interpretation<sup>454</sup>.

The similarity of the category descriptions is then evaluated using mathematic **algorithms**. There are numerous procedures and formulas for this, based on various concepts. Using the relationships learned in the training

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<sup>449</sup> For a *Machine Learning* based automobile recognition system in static images see *Papageorgiou, Constantine and Tomaso Poggio, A trainable object detection system: Car detection in static images*, Massachusetts Institute of Technology, Artificial Intelligence Laboratory and Center for Biological and Computational Learning, 1999, <ftp://publications.ai.mit.edu/ai-publications/pdf/AIM-1673.pdf> (read January 2005).

<sup>450</sup> *Sebastiani, Fabrizio, Machine Learning in automated text categorization*, P. 8.

<sup>451</sup> Unsupervised learning systems can be very effective, but run the risk that certain categories in the system are meaningless. For example, an unsupervised learning system could be shown vehicles that it assigns to vehicle categories. Instead of classifying them in the categories 'cars', 'motorbikes' and 'mopeds', the system could classify the vehicles in the categories 'red' and 'loud'.

<sup>452</sup> *Adams, Katherine, Word Wranglers, Automatic classification tools transform enterprise documents from bags of words into knowledge resources*, Intelligent Enterprise communities, United Business Media, 2004, P. 3; <http://www.intelligentkm.com/feature/010101/feat1.jhtml?requestid=11> (read January 2005).

<sup>453</sup> *Sebastiani, Fabrizio, Machine Learning in automated text categorization*, P. 11 ff.

<sup>454</sup> *Stamatoiu* uses a 7-dimensional context system to determine the context of each word. For example, each thing is described with a maximum of seven context dimensions: "the action of the thing", "the property of the thing", "the thing is a...", "the thing has...", "the thing can ...", "the thing requires...", "the thing is made of...". see *Stamatoiu, Oana, Learning Commonsense Categorical Knowledge in a Thread Memory System*, submitted to the Department of Electrical Engineering and Computer Science in partial fulfillment of the requirements for the degree of Master of Engineering in Computer Science and Engineering at the Massachusetts Institute of Technology, May 2004, P. 28 f., <ftp://publications.ai.mit.edu/ai-publications/2004/AITR-2004-001.pdf> (read January 2005).

examples, the similarity of two characterizations can be calculated using probability (for example Naive Bayes). This distinction can also be presented geometrically using vector analysis. In this case, the concepts are shown as surfaces in a multi-dimensional space and the differences in the semantic significance are presented as the distance between the expressions (for example support vector machine methods, SVM). In the simplest case the decision about a positively-negatively polarized interpretation of a text can be presented by a dividing line in a two dimensional space. The accuracy and success rate of the semantic interpretation depends on the chosen procedures, the applied algorithm and the nature of the analyzed texts.

Even though automatic and semantic interpretations are still in their early stages despite all the progress made (see box: Automatic text classification as value-neutral discourse moderator), there are already a number of initial applications with impressive results. For example, procedures are already being used to classify the **semantic orientation of product assessments** or film reviews<sup>455</sup>. A software program helps to determine from the large number of unstructured online comments and evaluations (in prose text form), whether the majority of consumers are satisfied with the product or not. This can be done in the simplest case with a bipolar classification (positive or negative product evaluation), or with very much finer scales and categories (if the prose text is translated into a scale of 1 to x). Manually programmed keyword lists<sup>456</sup>, supervised<sup>457</sup> or unsupervised and self-learning<sup>458</sup> algorithms can be used. Or a combination of various text classification systems can be used in classification committees<sup>459</sup>. Automatic machine-learning methods can be trained differently and provided with various algorithms, which leads to differences in the success rate. Around the year 2002, the categorization accuracy of such text classification programs was in the order of 80-90 percent<sup>460</sup>. In other words, in almost 90 percent of the texts “read” by the software, the machine can determine if the text is rather positive or negative regarding the evaluation of a certain subject. As digital systems provide that scale is merely a problem of information-processing resources, a simple PC might be enough to analyse millions of contributions from the Internet. For a company in search of a feedback evaluation for its newest product, this hit rate might be more than enough.

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<sup>455</sup> See for example *Turney, Peter*, Thumbs Up or Down? Semantic Orientation Applied to Unsupervised Classification of Reviews, National Research Council of Canada, Ottawa, 2002, <http://cogprints.ecs.soton.ac.uk/archive/00002321/00/turney-acl02-final.pdf> (read January 2005). *Pang, Bo, Lillian Lee and Sivvakumar Vaithyanathan*, Thumbs up? Sentiment Classification using Machine Learning Techniques, 2002 Conference on Empirical Methods in Natural Language Processing (EMNLP), 2002, <http://www.cs.cornell.edu/home/llee/papers/sentiment.pdf> (read January 2005). *Kushal, Dave, Steve Lawrence and David Pennock*, Mining the peanut gallery: Opinion Extraction and Semantic Classification of Product Reviews, Twelfth International World Wide Web Conference, www2003, Budapest, <http://www2003.org/cdrom/papers/refereed/p451/packet/p451-dave.html> (read January 2005). *Hurst, Matthew and Kamal Nigam*, Retrieving Topical Sentiments from Online Document Collections, Intelliseek Applied Research Center, Pittsburgh, 2004, <http://www.kamalnigam.com/papers/polarity-DRR04.pdf> (read January 2005).

<sup>456</sup> *Hurst, Matthew and Kamal Nigam*, Retrieving Topical Sentiments from Online Document Collections, P. 2f.

<sup>457</sup> *Kushal, Dave, Steve Lawrence and David Pennock*, Mining the peanut gallery.

<sup>458</sup> *Turney, Peter*, Thumbs Up or Down?.

<sup>459</sup> "Classifier committees (a.k.a. ensembles) are based on the idea that, given a task that requires expert knowledge to perform, k experts may be better than one if their individual judgments are appropriately combined". *Sebastiani, Fabrizio*, Machine Learning in automated text categorization, P. 30f.

<sup>460</sup> *Turney, Peter*, Thumbs Up or Down?, P. 5ff., *Pang, Bo, Lillian Lee and Sivvakumar Vaithyanathan*, Thumbs up?, P. 5. f., *Kushal, Dave, Steve Lawrence and David Pennock*, Mining the peanut gallery, P. 7 ff.



While this is a rather simplistic form of semantic interpretation, it is an important first step. In order for the machine to really “understand” every aspect of the reflection made in a text it will require more sophisticated techniques. But as the door for this kind of research is already open, the development of such intelligent systems seems like a question of time for the related research community. In search for such systems, the literature has yet to agree about the best procedures and the best algorithm. Noticeable however is that machine-learning procedures are increasingly gaining in importance over other procedures. For example, they can lead to better results than manually programmed knowledge engineering systems<sup>461</sup>. It is also generally expected that machine learning will within the shortest space of time exceed the accuracy of manual classification by trained experts. "Automated text classification... has reached effectiveness levels comparable to those of trained professionals. The effectiveness of manual text classification is not 100% anyway and, more importantly, it is unlikely to be improved substantially by the progress of research. The levels of effectiveness of automated text classification are instead growing at a steady pace, and even if they will likely reach a plateau well below the 100% level, this plateau will probably be higher than the effectiveness levels of manual text classification"<sup>462</sup>.

Artificial intelligence is expected to play an intermediary role and help the individual to cope with the "information overload" by putting various pieces of information in a precise context. Since 2001, Tim Berners-Lee, the inventor of the worldwide web, has been working with colleagues on the idea of using such intelligent software agents to organize the entire www by the semantic orientation of the various web pages<sup>463</sup>. The idea behind the semantic web is that intelligent software **agents** not only seek out simple keywords but also understand the contents of the text and the underlying concepts<sup>464</sup>.

Improving the precision and intelligence of agents is the subject of current research and still face a number of challenges at the present time. Semantic text interpretation needs to consider the pragmatic meaning embedded in the document structure, grammar, causalities and the relative importance of certain words, including the characterization of synonyms, antonyms and homonyms. For a statistical word-count analysis the sentences “A is cheaper than B” and “B is cheaper than A” are identical, whereas they mean the exact opposite. The sentence “B is more expensive than A” would appear different from the first sentence, whereas their meaning matches. Numerical values can be assigned to describe the semantic meaning. “A is slightly cheaper than B and much cheaper than C” can be given a weighted ranking. Given that there

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<sup>461</sup> For example, in the work quoted above Pang, Lee and Vaithyanathan compared a program manually tanked with keywords with various machine-learning methods to assign film reviews semantically to the categories "positive" and "negative". The manual program classified between 58-64 percent of cases correctly. The automatic machine-learning methods achieved a success rate of 78-83 percent, using the Naive Bayes, Maximum Entropy and Support Vector Machines algorithms.

<sup>462</sup> *Sebastiani, Fabrizio*, Machine Learning in automated text categorization, P. 41.

<sup>463</sup> "The Semantic Web will bring structure to the meaningful content of Web pages, creating an environment where software agents reaming from page to page can readily carry out sophisticated tasks for users". *Berners-Lee, Tim, James Hendler and Ora Lassila*, The Semantic Web, A new form of Web content that is meaningful to computers will unleash a revolution of new possibilities, Scientific American, 17 May, 2001, P. 1, <http://www.scientificamerican.com/article.cfm?articleID=00048144-10D2-1C70-84A9809EC588EF21&catID=2> (read January 2005).

<sup>464</sup> *Hendler, James*, Agents and the semantic Web, University of Maryland, preprint, appeared in the IEEE Intelligent system Journal, April, 2001, P. 5 ff., <http://www.cs.umd.edu/users/hendler/AgentWeb.html> (read January 2005).

are basically no information processing restrictions with digital ICT, the level of detail of the classification system describing the semantics is not constrained. However, the ambiguity of human language is often a hurdle. “A is slightly better than B and much better than C” only allows for a clear weighting of the preference ranking in a single parameter space that defines the term “better”. In a multiple parameter space for the evaluation of what is “better”, A can be closer to C than to B, creating the potential for misunderstandings. One way of tackling this challenge is to assign each word to unequivocal context categories in a multidimensional space, so that vague descriptions are broken down into indisputable subclasses. The first systems have already been developed that not only apply relationships they have independently learned through multi-dimensional conceptualization of the context, but can also learn new insights, much like with human "common sense"<sup>465</sup>.

Another, more radical approach is to build machines with multiple hierarchical memories that work on different levels of abstraction of the concepts involved. Similar to how the human brain contextualizes the meaning of information, bidirectional feedback and prediction functions among the different levels of memory might enable a much better cognitive interpretation of information<sup>466</sup>. The research agenda into an "info-mediating" democracy deliberationware is very promising and the potential for the use of artificial intelligence to support democratic discourse is by far not fully explored.

### *Negotiation- and social-choice methods for the intermediation of the common will*

Despite all the technological possibilities that the use of intelligent software offers, it should not be overlooked that discourse in digital networks does not automatically lead to a consensus in the deliberation group. At bottom, this is not even the goal of intelligent information- and communication -supporting software programs. In the preceding two sections the aim was primarily the use of more or less intelligent programs "to lay out all the arguments so that everyone could better see how complex the issues were and that opponents were usually making at least some valid points"<sup>467</sup>. "Thus, the sharing of considerations is not just to help people decide where they stand, but to help people to understand why other groups of people stand where they do"<sup>468</sup>. The better mutual understanding can contribute to removing differences in opinion due to misunderstandings or information asymmetries<sup>469</sup>. "Even if this exposure to each other's reason does not change anyone's evaluations, simply knowing why others disagree can increase tolerance and understanding across lines of political difference"<sup>470</sup>.

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<sup>465</sup> Stamatoiu describes a system that uses multi-dimensional context classification to independently conclude from the sentences "a blue bird flies to the tree" and "a small bird flies to the cage" that birds can fly, and from that in turn, robins can fly, because robins are birds, and so forth. The complexity such a system presumes becomes clear when one bears in mind that the system must independently "understand" that penguins cannot fly, even though they are very similar to robins in many respects. See *Stamatoiu, Oana*, Learning Commonsense Categorical Knowledge in a Thread Memory System. P. 28f.

<sup>466</sup> Hawkins, Jeff and Sandra Blakeslee (2004), "On Intelligence: How a new understanding of the brain will lead to the creation of truly intelligent machines", Times Books, Henry Holt and Company.

<sup>467</sup> *Van Gelder, Tim*, Enhancing Deliberation through Computer supported Argument Mapping, P. 12 f.

<sup>468</sup> *Pingree, Ray*, Democratically Structured Deliberation, P. 10 f.

<sup>469</sup> *Van Gelder, Tim*, Enhancing Deliberation through Computer supported Argument Mapping, P. 17 f.

<sup>470</sup> *Pingree, Ray*, Democratically Structured Deliberation, P. 3.

This is similar to the argument made by the deliberative democracy approach discussed in the polis democracy<sup>471</sup>. However, there are also differences in opinion that cannot be removed by removing misunderstandings. Different value systems, religious and other beliefs can render a consensus impossible even after intensive deliberation. This brings us back to the old dilemma of the republican doctrine: the ambition of finding the *volonté générale* and the challenge of having a sufficiently homogenous group for achieving it<sup>472</sup>.

Striving for the republican *volonté générale* thus means not only using information-processing intermediation systems to present one's particular will as accurately as possible in a network with other particular wills, but also modifying it to the benefit of society (I want versus we want). "Problems of numbers and words" should not be confused with "problems of willing and judgment"<sup>473</sup>. The question is now whether it is possible to institutionally foster problems of "willing and judgement"? Here too information and communication processing technologies can be useful. The underlying method is however very much older than modern ICTs and is known under the concept of **consociational democracy** (also sometimes called "negotiation democracy").

Consociationalism guarantees group representation in a democratic system, and is often suggested for managing conflict in deeply divided societies. In its traditional sense, it is usually linked to considerations on multi-party systems, coalitions among different interest groups, proportional representation and segmentation of various groups<sup>474</sup>. The introduction of digital processes, however, opens up a whole new spectrum of alternatives to fine-tune and exploit the basic ideas behind consociational democracy. The range of possibilities and their applicability in mass democracies are actually not feasible without the use of ICTs.

In consociational democratic solutions, defined decision structures help to evaluate the particular will of various interest groups such that generally acceptable compromises rather than a comparison of aggregated particular wills defines the will of the people. The art of institutionalizing the process to find the *volonté générale* is according to Kant, "to organize and to constitute a multitude of rational beings that require universal laws for their preservation, but each of whom is secretly inclined to exempt himself from them, in such a way that, although their private intentions conflict, they check each other, with that their public conduct is the same as if they had no such intentions"<sup>475</sup>. Negotiation-democratic rules are used to shift the conflicting attitudes of a heterogeneous society in a way to form a mutually acceptable solution, using means of negotiations and institutionalized compromise techniques.

Therefore, if no consensus exists because the group is too heterogeneous, at least the best compromise should be found. The choice between a competitive democratic or a consociational democratic solution boils down to the fundamental question whether democracy is about satisfying as many citizens as possible (liberalist *volonté de tous*) or satisfying all the citizens

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<sup>471</sup> See footnotes 124 to 126.

<sup>472</sup> See footnotes 153 to 155.

<sup>473</sup> Barber, Benjamin, Strong Democracy, P. 205.

<sup>474</sup> Arend Lijphart (1977), Democracy in Plural Societies: A Comparative Exploration, New Haven, CT: Yale University Press

<sup>475</sup> Kant, Immanuel, Werke, Vol. VI, P. 452 f.

together as much as possible (which comes closer to the republican *volonté générale*)<sup>476</sup>. Unlike competitive democracy, which for example is based on the competitive economic democracy model, consociational democracy does not settle conflicts primarily with the help of a majority rule but mainly through decision mechanisms based on "amicable agreement"<sup>477</sup>. This is meant to prevent majority tyranny and also "stop and go" politics, in which the current majority undoes what the preceding majority has done. Consociational-democratic rules use a number of means to ensure that the opinions of minorities are also reflected in the result. A veto right for all involved would be the most obvious and simplest solution<sup>478</sup>. The extreme case of the veto reveals that in consociational democracy the disagreement of one small interest group can influence the entire process.

There are however others, very much finer consociational-democratic decision making tools than the veto that take on board the will of all the interest groups. The various interest groups can be represented through a suitable system of proportional representation, whereby the majority delegation, similar to a grand coalition or a strong opposition party is made dependent on the minorities. In connection with certain majority rules, minorities can also be represented over-proportionally and strengthened *vis-à-vis* the majority<sup>479</sup>. In this sense, there are a number of possibilities of using the **social choice approach** to find mathematic solutions for the harmonious resolution of conflict to the benefit of the *volonté générale* (see box: Consociational-democratic approximation to the *volonté générale*). Dropping the idea that a democratic decision should find that solution which has the majority of votes in its favour (competitive democracy) and arguing that democracy aims to attain the greatest possible public assent in the sense of an amicable agreement (consociational democracy), then the intensity of the will, minority opinions and second preferences must be given due heed in the election results "in place of the conventional yea/nay option"<sup>480</sup>. Here ballot papers (or ballot web pages) can be offered that go beyond yes/no alternatives and offer a value scale to choose from<sup>481</sup>. Since minorities often have much stronger feelings about a certain topic than the majority, this can help to avoid entrenched frustrations and conflicts<sup>482</sup>.

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<sup>476</sup> Miller, David, *Deliberative Democracy and Social Choice*, in Fishkin, James and Peter Laslet, *Debating Deliberative Democracy*, P. 194 f.

<sup>477</sup> See Schmidt, Manfred G., *Demokratiethorien*, P. 325 ff.

<sup>478</sup> A veto right is often granted in "pillarized societies", i.e. in societies in which voters are highly loyal to the various interest groups and there is little potential for floating voters. In pillarized societies it is particularly tricky to enforce the majority opinion on the minority. The "world community" for example is an extremely pillarized society since there are only in exceptional cases "floating voters" between the nationalities. Therefore, multinational democratic processes between governments, as in the United Nations, are often based on a consensus with veto rights. Schmidt, Manfred G., *Demokratiethorien*, P. 332 f.

<sup>479</sup> Women's, aliens' or ethnic quotas can prevent majority tyranny by men or the ethnic majority. In the European Union for example, disproportional representation of the countries in the European parliament ensures that the small states do not suffer too much from the majority tyranny of the large states. In 1999, Luxembourg representative represented 65,000 Luxembourg citizens, whereas a representative from Germany represented about 800,000 German citizens. This is meant to ensure that the interests of the few Luxembourgers are not swamped by the majority will of the German Europeans.

<sup>480</sup> Barber, Benjamin, *Strong Democracy*, P. 286 ff.

<sup>481</sup> The idea of evaluation intensities can be seen, for example, in the accumulation and splitting of votes in the Bavarian, Hesse and Rhineland-Pfalz local election systems. Up to three votes can be given to one candidate under accumulation. Voters can also split their votes between various candidates in different party lists. See for example

For example, let us assume an intensity scale of  $-3$  to  $+3$  to fine-tune the will expression beyond a bipolar expression of against versus in favour. We suppose that 5 percent of the population is strongly in favour of a nuclear energy policy ( $+3$  crossed or clicked on the scale) and 25 percent of the population adamantly reject such a policy ( $-3$  on the scale). The rest of society is fairly indifferent about the issue. 20 percent put their cross against  $-1$  as a precaution because they are uncertain about the future consequences and 50 percent vote for the status quo of  $+1$ . Counting on the basis of the  $-/+$  alternatives, the representatives of a nuclear energy program would be in the majority with 55 ( $5+50$ ) against 45 percent ( $25+20$ ). However, 25 percent of society strictly reject the outcome of the policy and cannot identify with such a policy at all. Only 5 percent cheer and the rest of the society is quite blasé about the outcome of the vote. The will of the people is not very truly reflected here and the large disagreement from 25 percent of the population could destabilize society. However, weighting the votes by intensity, nuclear opponents would get  $-95$  points ( $-3*25$  and  $-1*20$ ) and nuclear supporters  $+65$  points ( $+3*5$  and  $+1*50$ ). The nuclear opponents win and the number of outraged citizens drops from 25 to 5 percent of the population. "Taking intensities into account is a way of conciliating minorities without undermining the final power of majority to determine decisions"<sup>483</sup>.

Consociational-democratic approximations to the *volonté générale*

Besides the registration of the intensity of the will, other *social choice* approaches for fine tuning will formation include the consideration of preference rankings. An old method dates back to the mathematicians **Condorcet and Borda** in the 18th century. The so-called Condorcet winner of an election is not the one who wins the majority of first votes, but the one who would win the election in a pair-wise comparison with the other alternatives<sup>484</sup>. Let us assume the following preference rankings in an election, also assuming that each interest group (A, B, C, D, E) is equally strong:

Interest group	Preference ranking for candidates or policies				
	1st Preference	2nd Preference	3rd Preference	4th Preference	5th Preference
A	a	b	c	d	e
B	e	b	c	d	a
C	e	a	b	c	d
D	d	a	b	e	c
E	b	a	d	e	c

The winner of a simple majority vote would be option e, as it is the only option to win two first votes (interest groups B and C). The Condorcet winner is however option a, since in a direct comparison only the two options being compared are counted, the other options are not heeded. Thus in a direct comparison between a and e, three

*Bayerisches Staatsministerium des Inneren, Kommunalwahlen in Bayern, 2000, <http://www.statistik.bayern.de/kw2000> (read January 2005).*

<sup>482</sup> "...the dangers of what social scientists call asymmetrical intensity, where a passive, unconcerned majority overrules an impassioned minority and thereby risks destabilizing the community". *Barber, Benjamin*, Strong Democracy, P. 287.

<sup>483</sup> *Budge, Ian*, The new challenge of direct democracy, P. 167.

<sup>484</sup> *Condorcet, Marquis de*, Essai sur l'application de l'Analyse a la Probabilite des decisions rendues a la Pluralite des voix, Paris, Imprimerie Royale, 1785. in *Arrow, Kenneth*, Social Choice and Individual Values, New Haven, London, 1973.

interest groups vote for a (A, D, E) and only two for e (B, C). Direct comparison can be seen in the case of a run-off vote. In a second ballot between a and e, a would win. Another possibility for valuing preference rankings in the social choice approach is based on Borda<sup>485</sup>. Here preferences are weighted so that the first preference in the example would receive 5 points, the second preference four points and so forth. Applying the Borda method, in the example above option a receives 18 points (5 points from interest group A + 1 point from interest group B +4+4+4 from interest groups C, D and E). Option b wins 19 points (4+4+3+3+5), option c 10 points, option d 13 points and option e 15 points. The winner on a Borda count would thus be option b. Depending on the mechanism chosen, the winner is a, b or e, whereby the competitive democratic winner of a majority count (candidate e) has overall the least support in society.

Borda chose a preference scale with simple increments between the alternatives. This can of course be changed by including intensities. For example, much like in systems that permit accumulation and splitting<sup>486</sup>, voters could be given a certain number of votes to cast which they can allocate to the various options as they think best. Given ten options and ten votes, x points could be assigned to the first preference (with  $x \leq 10$ ), y points to the second preference (with  $y \leq 10-x$ ), z points or (in case  $x+y = 10$ ) no points to the remaining options. As a result, the will expressed by the voters will be reflected very much more finely and can be included in the search for the greatest possible public agreement.

Why such fine tuning of the will formation process is very important from the democratic aspect can be seen from the following example. Again preference rankings are assumed, but this time more realistically assuming that they are not equally strongly represented.

Interest group	Preference ranking for certain options			
	1st Preference	2nd Preference	3rd Preference	4th Preference
A (20%)	<b>a</b>	b	d	c
B (35%)	b	<b>a</b>	d	c
C (40%)	c	<b>a</b>	d	b
D (5%)	d	c	<b>a</b>	b

By definition, option a is the "first choice" for interest group A, in other words its first preference. Interest group B prefers option b and so forth. In a competitive election with relative majority, option c would thus win, as this attracts 40%, the largest quantity of votes. Once an absolute majority is required however (modification of the competitive democratic model), coalitions are formed, as is typical for example in many parliamentary democracies. In this case interest groups A and B would come together, since for interest group A option b is the "second choice" (2nd preference) and also for interest group B option a is regarded as the next best alternative to its own option. The common option of A and B would traditionally be option b, as interest group B is the stronger coalition partner. The clear Condorcet and Borda winner would however be neither option c nor option b, but option a, because it is most popular option all-round on a comparison with the rankings of the other alternatives or from a weighted assignment of ranking points. Option a wins a pair-wise comparison with the other three alternatives. In a Borda weighting, a would win 3.15 points ( $0.2*4$  points +  $0.35*3$  +  $0.4*3$  +  $0.05*2$ ), compared with b's 2.85, c's 2.3 and d's 2.1 points<sup>487</sup>. In the event of option b or c coming to power, this would lead to tensions between the various interest groups, since 55% and 45% of the population respectively regard these options as least desirable. For them b or alternatively c are the last option. In this example, option a would be closest to the *volonté générale*, i.e. not what an individual interest group wants (particular will), but what the group as a whole wants.

<sup>485</sup> Borda, Jean-Charles de, Memoire sur les Elections au Scrutin, first edition 1781, in: Memoires de l'Academie Royale des Sciences Annee 1784, Paris, Academies des Sciences.

<sup>486</sup> See footnote 481.

<sup>487</sup> However the difference between Condorcet and Borda should again be noted. Under Condorcet even minority candidate d would beat the winner of the competitive democracy c in a pair-wise comparison, since d would be supported by groups A and B. Under Borda however c's 2.3 points beats d's 2.1 points.

Through the increasing revelation of the information structures behind the will of the people and the increasingly sophisticated information processing of these structures, it also becomes increasingly difficult to manipulate the will of the people. Nowadays it is for example very simple for political parties to bundle various policies in confusing packets and present them as a combined agenda. There are for example two alternative political manifestos in the election (A and B) each of which can be implemented with three policy measures (x, y and z). As the table below shows, packet A is more frequently preferred than packet B (9 times versus 6 times). If the policy measures x, y and z are however combined in manifestos and each policy given the same weighting, packet B wins (voters 1, 2 and 3 vote for B, since it covers two thirds of their wishes, and voters 4 and 5 vote for A). Even though policy x is popular with all the voters, it would not win because it is not in the victorious packet B. This is of course undemocratic because the person who puts the policy packets together can dictate his will more easily. In this sense, "he who controls the agenda – if only its wording - controls the outcome"<sup>488</sup>. If the information about the preference structures were known to the voters, it would have been difficult, or in the democratic sense not desirable, to present the packets for the election in this way<sup>489</sup>.

	Policy x	Policy y	Policy z
Voter 1	A	<b>B</b>	<b>B</b>
Voter 2	A	<b>B</b>	<b>B</b>
Voter 3	A	<b>B</b>	<b>B</b>
Voter 4	A	A	A
Voter 5	A	A	A

Whereas such and similar manipulation is relatively easy in the present party system, it is the aim of deliberationware democracy to apply various information-processing methods and technologies to generate information from a faithful reflection of citizens' tendencies. Consociational-democratic methods can be used to evaluate this additional information in the sense of the republican *volonté générale* and then seek out compromises.

Most of today's democracies only apply very limited information capturing beyond the yes/no expression and therefore do not consider the revelation of the information structures behind the will of the people. Preference rankings for example, are used only in a very simple form, such as in the case of a first and second vote. This is partly due to tradition because it is very difficult to calculate the Condorcet or Borda winner manually (see box). Each additional preference ranking doubles the workload and the pair-wise comparison of the various alternatives multiplies the evaluation work once again. A manual tally and calculation procedure would take too long and the likelihood of error would be too high. Only with information-processing technologies would consociational-democratic mechanisms be practically possible. "An e-election system makes ... the simultaneous entry of the preference order feasible, so that a possible Condorcet winner is found directly or the impossibility of

<sup>488</sup> Barber, Benjamin, Strong Democracy, P. 181.

<sup>489</sup> In business, especially in the field of *e-business*, there are a number of studies on what effects using ICTs has on the bundling of products. For example, Bakos and Brynjolfsson come to the not all too surprising conclusion that if there are certain preference structures in consumer groups, it very much better for the seller to offer each market segment a customized product bundle instead of putting together and offering product bundles "blind" to the preference structures of the customer segments (without sufficient information). Bakos, Yannis and Erik Brynjolfsson, Bundling Information Goods: Pricing, Profits and Efficiency, Management Science, Volume 45, Issue 12, December 1999, JSTOR.

producing a winner seen straightaway... With five or several options and/or a very large electorate an e-election system gains in importance because of the high evaluation speed."<sup>490</sup> In the information society then it can no longer be argued that the competitive democratic model must be applied as consociational-democratic social choice models are too complicated when it comes to working out the results. If entered via a digital user interface, the preference structures can be automatically passed to information-processing software and evaluated without any lag. Thanks to the large capacity of digital systems this is now relatively independent of the number of alternative choices to be voted on. Since there are no boundaries from the technology aspect to the fine tuning of the will expressed through the number of preference alternatives, these mechanisms can also be used for the intermediation of semantic text contributions.

*An example of deliberationware-democratic intermediation of the common will*

This then closes the circle, integrating the different building blocks that are needed to develop the democracy deliberationware. First, the input information of the democratic deliberation must be structured in order to be able to process it. Second, artificial intelligence interprets the meaning of the contributions, while third, consociational-democratic mechanisms intermediate between the different will expressions in order to attain the greatest possible assent, that is, the agreement closest to the *volonté générale*. For example, words can be weighted differently and contributions evaluated by their intensity and ranking. Consociational democratic compromise techniques can then be applied to find suitable formulations to mediate between two arguments, by applying social choice mechanisms.

In the following we will consider a simplistic example in order to show the combination of the different building blocks of the deliberationware democracy system and the difference it can make in comparison to traditional approaches. As shown, the information content of currently applied democratic mechanisms is very crudely registered and coarsely processed, leading to severe misinterpretations of the common will of the people.

Let us assume that five citizens discuss whether public spending on education should be increased and whether a tax adjustment might be necessary for this purpose. Citizen A claims to “favour education spending, but preferably from existing resources”. Citizen B answers that “education spending must certainly come first, and it is right that taxes should increase accordingly”, as resources are supposedly no limitation. Citizen C is not so sure and argues that he prefers “to keep the status quo, but if anything is to change, then education should be given priority”. Citizen D has “no strong feelings about education, but change is definitely needed, especially in way public spending is currently shared out”. Citizen E claims to have “no strong feelings about education but feels, because of personal health problems, that other sorts of public spending, such as health, should not be discriminated against”. What is the common will of this group? The conventional determination mechanism would be to formulate clear-cut questions for voting, such as “do you want more education without tax increases?” or “do you want to maintain the status quo?”. In the light of the new digital possibilities, the manipulative, opinion-coercing simplification involved in such preformulated questions would amount to throwing out the baby with the bathwater.

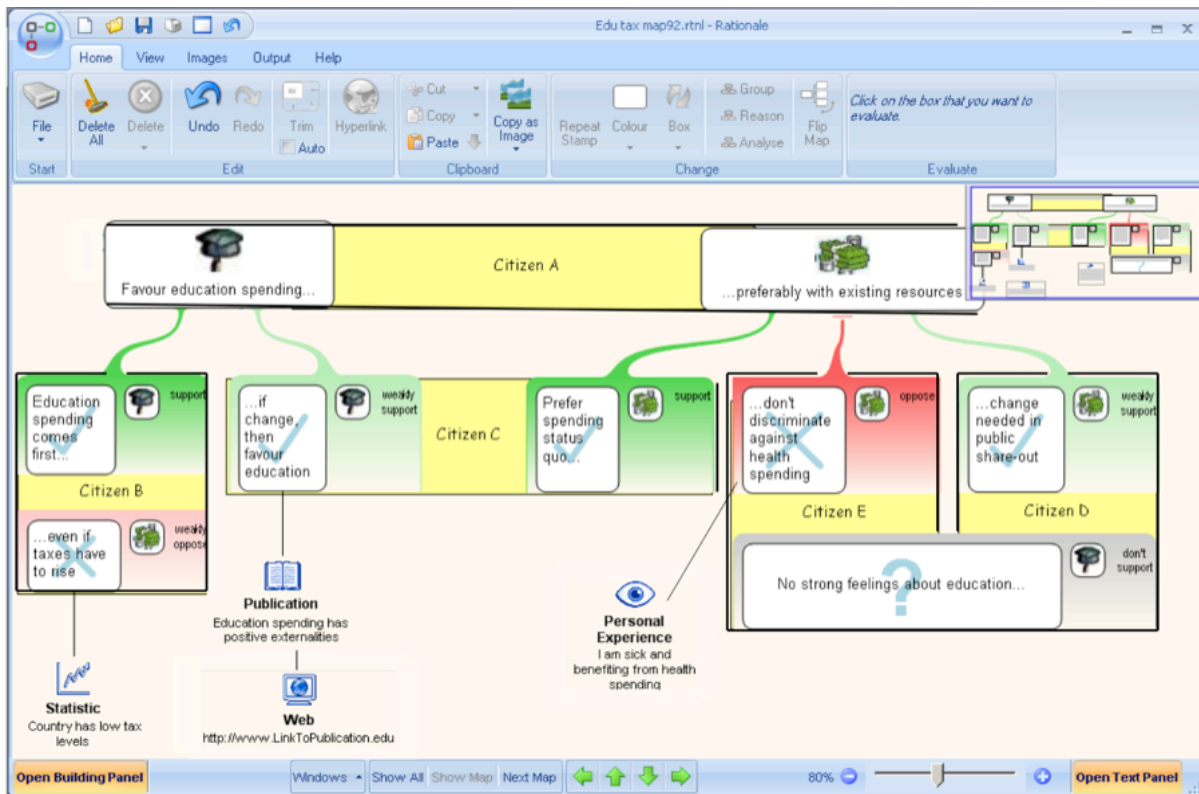
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<sup>490</sup> *Schlifni, Manhard*, *Electronic Voting Systems and Electronic Democracy*, chapter 1.5.



The following figure depicts the relationship between “Citizen A” and the arguments of his fellow citizens. The information classification chosen separates their views about education from their related views about tax and classifies the relationships with a neutral, positive or negative polarity (neutral/support/oppose), including a single weighting (weakly). It quickly becomes clear that Citizen A’s opinion is more supported than opposed. Considering the reasons for the opinions expressed by citizens B and E makes it possible to introduce new parameters in a multidimensional parameter space of all possible explanations (e.g., resource abundance and sickness). In principle, lack of consensus in a parameter space with fewer dimensions can be transcended by a solution in multidimensional parameter space. An ever-present design concern, however, is to walk the tightrope between overwhelming users with subtly different categories and straitjacketing them with a frustratingly small vocabulary in which they cannot express themselves<sup>491</sup>.

Visualization of argument from the point of view of “Citizen A”



Source: own elaboration based on Austhink Rationale Software, with slight adjustments.

Once people’s opinions have been refined and expanded until irreconcilable differences emerge, consociational methods can be used to intermeditate this structured information. The following table shows the five citizens’ individual preference structures in accordance with a selected classification scheme. The decision-making procedure chosen is crucial to the outcome of the intermeditation. By neglecting the small numbers in the upper right-hand corner of each

<sup>491</sup> Buckingham Shum, Simon and others (2002), “Visualizing Internetnetworked Argumentation”, Knowledge Media Institute, Open University, UK, p. 10

cell in the table, a “one man, one vote” procedure would favour the existing tax level while lowering education spending (Citizens D and E). This option is the second-last preference of the majority formed by Citizens A, B and C. If possible, they would probably form a coalition around stable taxes and increased education, and this is nothing other than a manifestation of subordinated preferences by consociational means. A direct comparison of two options at a time, as in a run-off vote, shows that the combination of stable taxes and higher education spending would also be the winner under the Condorcet method. “Only” Citizen E would be opposed to this democratic result, because he would see health spending endangered. This could be dealt with by including health spending in a higher-dimensional parameter space of the classification scheme. Here as well, the failure to achieve consensus in a one-dimensional parameter space can be addressed by means of more detailed intermediations in multiple parameter spaces. Opting for a Borda count (see box above) with simple increments in the preference scale (first preference 5 points, fifth preference 1 point), the result is that increased taxes and educational spending receive the broadest consent (4+5+3+3+4). This option is among the first three preferences for all five citizens. Instead of completely satisfying as many citizens as possible (simple majority vote), consociational methods satisfy all citizens as much as possible.

Democratic intermediation of revealed preference structures

	1 <sup>st</sup> preference	2 <sup>nd</sup> preference	3 <sup>rd</sup> preference	4 <sup>th</sup> preference	5 <sup>th</sup> preference
Citizen A	tax ↔ edu ↑ <sup>50</sup>	t ↑ e ↑ <sup>25</sup>	t ↔ e ↔ <sup>20</sup>	t ↔ e ↓ <sup>05</sup>	t ↓ e ↓ <sup>00</sup>
Citizen B	tax ↑ edu ↑ <sup>50</sup>	t ↔ e ↑ <sup>25</sup>	t ↔ e ↔ <sup>20</sup>	t ↔ e ↓ <sup>05</sup>	t ↓ e ↓ <sup>00</sup>
Citizen C	t ↔ e ↔ <sup>85</sup>	t ↔ e ↑ <sup>10</sup>	t ↑ e ↑ <sup>04</sup>	t ↔ e ↓ <sup>01</sup>	t ↓ e ↓ <sup>00</sup>
Citizen D	t ↔ e ↓ <sup>22</sup>	t ↔ e ↑ <sup>21</sup>	t ↑ e ↑ <sup>20</sup>	t ↓ e ↓ <sup>19</sup>	t ↔ e ↔ <sup>18</sup>
Citizen E	t ↔ e ↓ <sup>22</sup>	t ↑ e ↑ <sup>21</sup>	t ↔ e ↔ <sup>20</sup>	t ↓ e ↓ <sup>19</sup>	t ↔ e ↑ <sup>18</sup>

Source: Own elaboration.

Note: Horizontal, up and down arrows indicate preference for unchanged, higher and lower taxation (t) or education spending (e).

When preference weighting is also allowed for by distributing 100 points among the five preferences (number in upper right-hand corner of table), asymmetrical interest intensities are often exposed. The outcome of a weighted Borda count of intensities is that the status quo is favoured for both taxes and education (163 points). The example shows that Citizens D and E

have relatively mild feelings about the different options, but as they would win a simple majority count under “one man, one vote”, their first preference option would overrule a concerned minority. This “democratic” result would be unstable and would be challenged by Citizen C, who feels very strongly about the issue. He might take to the streets in protest, boycott the outcome and, in the most extreme case, use violence to make his voice heard.

Automating text classification can make it easier to characterize the content of the different opinions, producing a direct input into the intermediation process. A machine reader can clearly assign different intensities to the connotations of “education spending comes first” and “no strong feelings about education”. Efforts to weight more complex expressions of opinions automatically reveal the challenges faced by artificial intelligence in its present struggle to get to grips with the multiple parameter classification systems human language has developed.

The road from here to the point where intelligent information processing can be used to incessantly register and analyze all will expressions, finding and formulating the *volonté générale*, in other words, where “public opinion will become the law of the land”<sup>492</sup>, is still long and windy. However, compared with the large number of intermediation methods made possible by the use of intelligent ICTs, it is at least clear that competitive-democratic majority decisions are very primitive mechanisms. Starting from here, it can be seen that the basic building blocks to build an intelligent democracy deliberationware are already at hand. The necessity to refine democratic information mechanisms is obvious and the idea to realize it is already present. Different research directions contribute to the implementation of these thoughts. In the long or the short run, the new technologic possibilities call for the implementation of such systems and the stage that Kuhn in his “Structure of Scientific Revolutions” condescendingly called “puzzle solving” has began<sup>493</sup>.

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<sup>492</sup> See footnote 373.

<sup>493</sup> Kuhn, Thomas, *The Structure of Scientific Revolutions*, Chicago, University of Chicago Press, 1962.

## Consequences of the development of deliberationware democracy

If a computer system can evaluate the contents of texts, it can intermediate the discourse between the various individual will expressions, assisting both the internal republican transformation from the “I want” into the “we want” and the liberal negotiation of conflicting interests. Habermas’s discourse theory of “subject-free communication forms, which regulate the discursive flow of opinion- and will-formation... [and which] neither concentrate sovereignty with the people, nor exile it to the anonymity of constitutional competences”<sup>494</sup>, would be implemented using digital means. Thus, the existence of intelligent intermediary software systems would help to blend individual opinions into the democratic formulation of the common will.

In the face of so much **faith in technology** there is a great risk of our becoming victim of our tools<sup>495</sup>. This argumentation is directed at the thin line between Big Brother democracy and the likewise centrally structured deliberationware democracy. The difference is that in the first, people are in the centre of control, while in the last one the rule of law governs. However, it must be ensured that the artificial intelligence of the deliberationware program is not manipulated. The form and evaluation of the will expressed by the citizens is dependent on the programming of the information systems. Between simple voting via pre-formulated questions and the comparison of unstructured prose texts are a large number of different types of information classifications and evaluation possibilities.

A manipulation of the definition of the categories introduces changes in the outcome. “Introducing a discourse scheme... is fraught with dangers such as poverty of expression, enforced commitment to hard categories, and inappropriate granularity of formalization”<sup>496</sup>. Even slight changes in the structure of the staging or evaluation of a democratic decision process can lead to different results. Here it is not necessarily the number of votes, but more the nature of the decision mechanism that decides the democratic winners and losers. People talk about “fluctuating majorities”, “out-of-equilibrium majorities” and that the majority is “fictitious, fallible and seducible”<sup>497</sup>. A well-known example of this is the presidential election in the United States of America. Here it is possible for a candidate to win even though his rival gains more electoral votes (as with Al Gore versus George W. Bush in 2000), since it does not depend on how many people vote for the president, but how many states the candidate wins. In this sense, it does not depend on the will of the people but on the decision mechanism.

If in such simple examples the way the decision is taken already leads to such substantial differences<sup>498</sup>, one can imagine how important the programming of the deliberationware is. Besides the counts of the votes, rules need to be established to govern the deliberation process, similar to the carefully defined procedures for deliberations in parliament, just on a larger scale and within a digital setting. The available methods are multifarious. At the end, a software program is nothing more than a chain of causes and effects that guide information flows, which

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<sup>494</sup> Habermas, Jürgen, 1999, Die Einbeziehung des Anderen, Studien zur Politischen Theorie, Frankfurt am Main, Suhrkamp Wissenschaft, p. 291

<sup>495</sup> Haefner, Klaus, Mensch und Computer im Jahre 2000, P. 109.

<sup>496</sup> Buckingham Shum, Simon and Albert Selvin, Structuring Discourse for Collective Interpretation, P. 9.

<sup>497</sup> Schmidt, Manfred G., Demokratietheorien, P. 270 ff.

<sup>498</sup> For other examples see Miller, David, Deliberative Democracy and Social Choice, in James Fishkin and Peter Laslet, Debating Deliberative Democracy, P. 186 ff.

however must first be defined. In essence, the programming of the deliberationware software constitutes the democratic institution that channels and guides public deliberation. Thus **the architect(s) of the deliberationware** is/are very powerful. Even if the artificial intelligence is based on an unsupervised automatic machine learning mechanism, the underlying mathematical concepts still influence the later outcome indirectly. To uphold the democratic principle, there must first be a democratic decision on how to program the deliberationware. That is no doubt difficult because, as shown here, this is a highly complex area. The manipulability of the deliberationware thus lies within the power of its architect(s).

We can sum up that ICTs provide a large number of possibilities for perfecting the democratic discourse process in the republican sense. Since it is not possible in practise for a large number of citizens to deliberate in traditional prose form, the usual conclusion up to now has been that the complexity of the will expressed by the individual must be reduced to a yes/no vote. In the light of the ICT possibilities shown here, in the information society this would amount to throwing the baby out with the bath water. Between a completely unstructured and convoluted prose speech and a pre-determined yes/no vote with a pre-formulated question, there is a vast array of possibilities for deliberative fine tuning<sup>499</sup>. The wealth of information and the possibilities for formalized and structured information processing give a great deal more scope than a simple answer to a pre-formulated yes/no question. It is no longer necessary to leave it to an elite to find out, and in an extreme case guess, what would be the best for the good life of everybody. The art lies in making the best possible use of the wealth of information that can be registered and the available power to process it in order to understand the subtle will structures that make up the democratic will of the people.

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<sup>499</sup> Analog to the well-known adage that even though not everybody is a good cobbler they know where the shoe hurts, in the information society it can be said that there are technological ways and means for the wearer to contribute to making the shoe more comfortable. It is certainly the case that not every wearer has the same skills. However, one can imagine the cobbler helping the wearer to provide this information through information structuring actions. If the cobbler cannot expect the wearer to report to him in a professionally perfect prose speech about the strengths and weaknesses of the shoe to be fitted, a questionnaire with checkboxes will provide the cobbler with more information (where does the shoe hurt: front/back, left/right, strongly/slightly, hurts constantly/only when walking and so forth), which then leads in turn to better provision of information. The information gathered by this very simple classification method can then be processed and lead to a better fitting shoe.

### **Chapter 3: CONCLUSIONS AND OUTLOOK**

During the recent World Summit on the Information Society, the heads of state and government of the world community note: "Information and Communication Technologies (ICTs) have an immense impact on virtually all aspects of our lives"<sup>500</sup>. The effect of this impact is however not yet completely comprehensible. Having studied the influences of using ICTs in various democratic model scenarios, it is clear that the digitization of democratic processes poses various risks and opportunities for the formation of the democratic will of information societies. The consequences might not be obvious immediately. The use of ICT will not destroy the representative democracy model overnight, because of a citizenry that suddenly forms virtual associations to govern itself in direct democracy. Nor will citizens allow the Orwellian big-brother state to manipulate them like puppets in a fake democracy without resistance. "The political process will however change step by step. The classic political actors have not yet noticed that properly"<sup>501</sup>.

In contrary to mainstream literature regarding the topic ICT and democracy, this study comes to the somewhat unexpected conclusion that there is an abundance of undemocratic features in the digitization of democratic processes. All of the investigated models show severe democratic flaws, or at least large challenges. As the democratic effects are fostered or hindered by certain institutional constellations, this might partly be the result of the institutional settings chosen. While this focus is on purpose to make the strong point that digital interaction is not automatically favourable for democracy, the model of the Roman democracy and the deliberationware democracy illustrate fascinating possibilities to foster the democratic principle. This calls for taking a second look to the different institutional combinations and future challenges.

The analysis of polis-, cyber-, plebiscitarian leadership-, and Big Brother democracy makes it clear that the rule of law and strict separation of power are more important than ever in the information society. The augmented information flows and the omnipresent communication processes in the information society require strict control and supervision. It is all too easy for

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<sup>500</sup> See *WSIS (World Summit on the Information Society)*, "About the World Summit", Online Version: <http://www.itu.int/wsis> (read January 2005)..

<sup>501</sup> *Leggewie, Claus*, Demokratie auf der Datenautobahn, in Benjamin Barber, Robert Cailliau, Eli Noam, Claus Leggewie, Christa Maar, Internet und Politik, Bollmann, 1998, P. 16, <http://www.akademie3000.de/1/05/04/00311/> (read January 2005).

the wrong information to get into the wrong hands at the wrong moment, whereas this information can be abused to exercise undemocratic coercion. The danger of political motivated repressive use of media is all-pervading. The rule of law and the separation of power need to set the institutional framework to guide the democratic information flows to safeguard the democratic principle of non-dominance.

The cyber-, economic- and pushbutton democracy have an inherent tendency towards majority tyranny, which shows that the liberalist focus of democratic processes can easily lapse into undemocratic governance systems in the information society. If opinions are expressed in its "raw form", in other words with no attempt being made to use deliberation mechanisms to move public opinion towards the *volonté générale*, but instead various opinions are weighed against each other in the liberalist sense of the *volonté de tous*, the stronger interest group will prevail in the end. Minorities are quickly overruled and discriminated. This liberalistic tendency is worsened when combined with a lack of rule of law (cyber democracy) or direct democracy (pushbutton democracy).

Furthermore, the immediate applicability of digital participation options in polis-, cyber-, pushbutton-, and deliberationware democracy challenges the grounds and justification of a representative democratic system. The reduction of the information asymmetry between representatives and citizens and the resulting trend towards an imperative mandate demand at least a thorough review of this system.

Therefore at the beginning of the new millennium it is high time to analyze in more depth the effects on an old and yet so varied principle such as democracy. It comes as no surprise that the study of a relatively new issue cannot present concrete solutions and policy suggestions. The outcome is more akin to a research agenda that identifies areas in which democratic processes are particularly influenced by digitization and so require further studies. In this sense the following outlook is not meant to produce concrete answers but to sketch out concrete problems as a contribution towards defining future fields of research.

In particular, the preceding analysis indicates five aspects of the democratic processes that call for particular attention. The analysis of polis-, cyber-, plebiscitarian leadership democracy demonstrates the new importance accruing to the rule of law, especially regarding the danger of majority tyranny, while the Big Brother scenario emphasizes the concern for privacy issues. The polis- and economic democracy illustrate the necessity of overhauling the party system and its interaction with multi-channel mass media. The pushbutton democracy underlines the significance of the digital divide and the exclusion of parts of society from the digital public. The tendency towards the imperative mandate, the augmented transparency between citizens and representatives, combined with digital possibilities of participation, all call for reconsidering of the borderline between representative democracy and active citizen participation. Last but not least, the deliberationware democracy shows the potential for the focused development of democracy-enhancing ICT applications to support the formation of the democratic will. All should be seen as various aspects of an integrated and coherent agenda with one single overall rationale. Even though these five aspects are presented and discussed below as separate challenges, they are interdependent parts of a necessary and all-embracing future research agenda on the process of digitizing of the democratic principle.

### Minority rights and privacy issues call for a strict rule of law

The analysis has shown that the rule of law in the information society faces two major challenges: safeguarding the principle of equality among all interest groups and protecting the privacy of the individual.

Regarding **minority protection**, several forces are at work when digitizing democratic processes. Discourse among like-minded people can very quickly lead to group polarization in digital issue groups, which causes opinions to diverge rather than converge. As soon as these groups are not flanked by institutional checks and balances and the rule of law in their attempt to shape the common destiny, it is very probable that the strongest groups will dominate the common life. The democratic influence of the stronger will become domination by the stronger, and hence not compatible with democracy. The political influence of the various interest groups must be equitably institutionalized. "Because man is made of all too crooked wood"<sup>502</sup>, too much faith may be placed on democratic processes alone ("had every Athenian citizen been a Socrates, every Athenian assembly would still have been a mob"<sup>503</sup>), but rule of law must ensure that democracy is not changed into a coercive system.

With regard to the **protection of privacy**, the rule of law has to find the small path between democratic independence of the individual, the increase of information efficiency for the benefit of the individual and the protection of the public from criminal individuals. ICTs now enable for the first time the complete networking, distribution and processing of individual data on a massive scale, without the people concerned even knowing about it. Motivated by the e-government approach and related increases in public transparency and efficiency, it is certainly a laudable intention that underpins the efforts to digitize as much information as possible on individual citizens. The increased information acquisition of public authorities has also been justified by concerns of national security after the terror attacks of September 11, 2001. In the light of these developments it needs to be accepted that in the information society it is not a matter of discussion whether it is technologically possible to register and analyze large amounts of data, or whether the preference structures of the individual will become transparent or not. Like a force of nature, these possibilities will not disappear again. Having said this, it might as well be claimed that social practices might evolve so that people cease to be concerned as much about privacy as in the past. Society might simply write it off as a lost feature of life, accepting the omnipresent transparency as a necessity for self-protection. The Habermasian principle of publicity<sup>504</sup> even claims that through transparency of all activities and communications, the moral behaviour of everybody will be fostered. From the point of view of the executive branch of government, as well as from the perspective of Mill's school of public spirit<sup>505</sup> this might be acceptable. In the sense of the deliberationware-democratic disclosure of preference structures and their subtle intermediation in search of the *volonté générale* such transparency might even be desirable. The threat consists when these possibilities are combined with a system of representative democracy, since representatives can be tempted to abuse the information to manipulate the free will of the people. When the information is used to manipulate the process of legitimization between the elected and the electorate in a

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<sup>502</sup> See footnote 97.

<sup>503</sup> See footnote 160.

<sup>504</sup> See footnote 340.

<sup>505</sup> See footnote 128.



representative system, the Orwellian Big Brother state is implemented. Balancing the benefits and threats the augmented information transparency poses to society is anything but simple. "When the public interest and rights do pose conflicting demands, criteria must be developed as to which should take priority, without assuming that one automatically trumps the other"<sup>506</sup>. Three central points need to be considered for developing such criteria:

Firstly, **old legislations need to be modified to fit the technological reality**. The European parliament notes that until now the boundaries between public interests and private rights "have been set not much by law as by the existing means of the technically feasible"<sup>507</sup>. However, what is technologically feasible is not always democracy friendly. A simple example is the monitoring of emails in comparison to monitoring telephone conversations or the exchange of traditional letters. Surveillance legislation generally makes a distinction on the extent and the nature of the monitored information. Hence, in many countries government investigators requires a more formal court order to ascertain the sender and recipient of a message than for reading the contents of the message<sup>508</sup>. This applies to obtaining lists of dialled telephone numbers compared with the authorization to listen in on telephone calls and also for recording the sender and recipient addresses on envelopes in traditional mail systems compared with the permission to suspend the secrecy of correspondence and open the letter. Applying these concepts to the Internet and email correspondence leads to problems because the borderline between address and content merges. If for example the email header is regarded as the address, this includes the subject line, which often contains useful information about the contents of the message<sup>509</sup>. The US government, for example, regards the URLs (Uniform Resource Locators) of visited web pages as address and sender information, which enables it to monitor people's surfing habits<sup>510</sup>. URLs often reveal very precise information about the content of a website, such as the URL <http://www.google.com/search?hl=en&lr=&rls=GGLG%2CGGLG%3A2005-22%2CGGLG%3Aen&q=criticism+of+the+patriot+act>. Combined with the exact time of the surfing activities and the order of visited sides, this gives a fairly accurate picture about the thoughts and preference structures of the Internet surfer. Court orders for this kind of eavesdropping are not comparable with those before the Internet age.

Secondly, the **global nature of digital ICT networks** must be recognized. Whereas many European are surprised by the new powers of information surveillance in the USA Patriot Act<sup>511</sup>, it is very strange for Americans that Europeans can be identified by a single identification number on their identity card. For Europeans it would in turn be unacceptable to have to state this number for many financial and commercial transactions, as is the case in countries like Chile. The worldwide nature of the Internet is conflicting increasingly with differing national legislation on private spheres. Since citizens are often not even aware of where the website they are visiting is located, it is almost impossible to protect citizens from

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<sup>506</sup> *Etzioni, Amitai*, Implications of select new technologies for individual rights and public safety, P. 259.

<sup>507</sup> *Europäisches Parlament*, Arbeitsdokument, Nichtständiger Ausschuss über das Abhörsystem Echelon, P. 3.

<sup>508</sup> *Etzioni, Amitai*, Implications of select new technologies for individual rights and public safety, P. 261.

<sup>509</sup> *American Civil Liberties Union (ACLU)*, USA Patriot Act, Summaries and Analysis.

<sup>510</sup> *American Civil Liberties Union (ACLU)*, USA Patriot Act, Summaries and Analysis.

<sup>511</sup> *Müller-Maguhn, Andreas*, Interview zum 100. Geburtstag des Schriftstellers George Orwell: Daten Verwendung ist kaum überschaubar, tagesschau.de, Kultur, v. 26.06.2003, <http://www.tagesschau.de> (read January 2005).

gaps in the legislation in various countries. International conventions, cross-border independent controls and a deeper understanding of the relationships and limits to cross-border information gathering in the private sphere are therefore necessary.

Thirdly, the **control over information control** is decisive. Accepting the trend towards more information transparency the challenge is one of detailed regulation. The laws must lay detail which digital information may be used by whom for how long and for what purpose. The arising question is who watches the watchmen? (*Sed quis custodiet ipsos custodiet?* Juvenal, approx. 60 to 130 AD). The rule of law must be reinforced by control agencies and the compliance agencies must be reinforced in their information control work. For example, a report by the European parliament calls upon its member states “to guarantee appropriate parliamentary and legal monitoring of their secret services. Those national parliaments which have no monitoring body responsible for scrutinising the activities of the intelligence services are called upon to set up such a body”<sup>512</sup>. This might be a first step, while in the information society not only specific agents of the central government must be scrutinized by a democratically legitimated watch institution representing the people, but also each local town hall and other democratically relevant information-processing departments. Control over information control is a central task in the information society that ought to be legitimated directly by the people. The work of such supervising institution is to balance public and individual interests, which can be achieved above all by the principle of commensurability, democratic responsibility and civic control<sup>513</sup>. As these principles are vague and broad, further research is required to detail their application in information societies.

#### Digital will formation challenges the party system and interactive mass media

The polis- and economic democracy models have outlined a possible fragmentation of the public into small partial publics, which appears as a citizen-driven retribalization of the public sphere in the polis-democracy and as a differentiation requirement of by political representatives in the economic democracy. The economic model pinpoints furthermore at the resource-intensive competition for the scarce good attention. Financial resources are critical for the political survival of an issue in information society democracy. This opens up questions that concern the difference in information processing tasks between multi-media providers and political parties. As both are protagonists in the process of will formation it seems useful to consider the dynamics of their interdependencies.

Geographically unbound work of interest groups through digital participation of its constituencies could lead so far that "party membership is redefined, thus strengthening the binding power and general acceptance of parties in society"<sup>514</sup>. The tightrope between the traditional approach of due-paying party members organized in local associations offering individual members appropriate involvement and the approach of an unbound membership in

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<sup>512</sup> *Europäisches Parlament*, Bericht über die Existenz eines globalen Abhörsystems für private und wirtschaftliche Kommunikation (Abhörsystem Echelon), P. 20, 30 ff, 145.

<sup>513</sup> *Europäisches Parlament*, Bericht über die Existenz eines globalen Abhörsystems für private und wirtschaftliche Kommunikation (Abhörsystem Echelon), P. 141.

<sup>514</sup> *Marshall, Stefan*, Virtuelle Parteibuchinhaber, in Bieber, Christoph et.al., ParteiPolitik 2.0, P. 45.

virtual communities leads to considerations about "virtual party membership"<sup>515</sup>. The result of this somewhat broader definition of extra-parliamentary organizations can be the fostering of new parties, in particular of so-called "single-issue parties"<sup>516</sup>, with a focused agenda of limited duration. Digital coordination enables the constitution of such temporal lobby groups.

As in the pre-information society democracy, resource-rich interest groups will have an advantage to strengthen their legitimization. However, economies of scale and scope in digital information intensify the lead of affluent groups, while media-effective infotainment can play into the hands of opinion manipulators<sup>517</sup>. From a purely democratic viewpoint, this is in no way a democratic shortcoming, since it is left to the people to vote for media-effective demagogues if it so wants. Such candidates need however be considered as such, and not as the best among the people<sup>518</sup>, "whose wisdom may best discern the true interest of their country"<sup>519</sup>. The critics on the realization of the concept of the impartial representative are commonly known by the discussion about party oligarchy and party-state that reigns in today's democracies<sup>520</sup>. It underlines the fact that political parties are, by definition, partial. They are private associations whose declared goal is "the conversion of the private interests of many individuals into a common public interest"<sup>521</sup>. Parties thus do not strive primarily for finding the good life of all according to the *volonté générale*, but live from taking a stance that differentiates them from the standpoints of other interest groups. "The parties as the constitutional legitimated instances of political will formation [...will] operate virtual communities which never intend to be neutral"<sup>522</sup>. Parties will try to "strengthen their own traditional preferences and strategies with the help of the Internet"<sup>523</sup>. This bears the threat of converting the influence of the strong interest group into undemocratic dominance.

In principle, neutral media are thus better suited to freeing themselves from the particular issues of various particular wills and looking for the *volonté générale*. Such nonaligned and unbiased support is of special importance in the information society, given the trends of the fragmentation of the public and eventual group polarization in particular interest groups. "On the other hand, media companies and publishing houses will only get involved where they can ultimately expect a return on their investment"<sup>524</sup>. Driven by commercial interests, the media frequently do not limit themselves to the pure distribution of information. "The media, above all the mass media, are not content with reporting events, opinions and findings. They formulate their theories and judgments (findings), express their own opinions and create facts

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<sup>515</sup> Marshall, Stefan, Virtuelle Parteibuchinhaber, Chancen und Grenzen internet-basierter Parteimitgliedschaft, in Bieber, Christoph et.al., ParteiPolitik 2.0, P. 28 ff.

<sup>516</sup> Schiller, Theo, Direkte Demokratie, P. 44.

<sup>517</sup> See footnote 278.

<sup>518</sup> See footnote 189.

<sup>519</sup> See footnote 55.

<sup>520</sup> Schachtschneider, Karl Albrecht, Der republikwidrige Parteienstaat, in: Murswiek, Dietrich, Ulrich Storost, Heinrich A. Wolff (Hrsg.), Staat - Souveränität - Verfassung. Festschrift für Helmut Quaritsch zum 70. Geburtstag, 2000, S. 141 - 161.

<sup>521</sup> See footnote 180.

<sup>522</sup> Wesselmann, Christoph, Internet und Partizipation in Kommunen, P. 217 f.

<sup>523</sup> Siedschlag, Alexander, Arne Rogg und Caroline Welzel, Digitale Demokratie, P. 32, P. 20.

<sup>524</sup> Wesselmann, Christoph, Internet und Partizipation in Kommunen, P. 218 ff.

themselves"<sup>525</sup>. In order to protect the independence of financial and strategic decisions of a significant part of the median information offerings a **dual structuring of broadcasting** is resorted to above all in Europe<sup>526</sup>, a mixed model of public and commercial private broadcasting organizations<sup>527</sup>. This has its justification in democratic aspects of social life, such as the protection of minorities and the pluralism of opinions despite the unavoidable media concentration. To ensure the independence of public broadcasters, they are controlled by supervisory boards in which all the socially relevant groups and organizations are represented. Manipulation and targeted distribution of information are such a central component of public life that a democracy must be able to rely on independent information distributors. This applies above all for the information society.

But this proven system for ensuring the variety of opinion and the independence of the media in European democracies is being undermined by **ICT convergence**. "Now that the development of cable and satellite technology has already led to fundamental adjustments in European broadcasting regulations, today's broadcasting policy must meet another technically based challenge, the digitization of transmission channels and audiovisual content"<sup>528</sup>. The current dynamics are used by opponents of the dual structure of public and private media to argue in favour of abandoning state involvement in media work. However, a report by the German parliament comes to the conclusion: "The important democratic function of the public broadcasting offering must not only be ensured for the future, a cautious adjustment of the basic provision to the new framework conditions would seem indispensable. Media and communication legislation of the future must incorporate the central social significance of new possibilities and the dynamics of technological progress"<sup>529</sup>.

In this sense, possibilities for promoting content pluralism in digital media must be studied, such as the obligation to include certain culturally and politically relevant public issues in web portals or search engines<sup>530</sup>, financial subsidies to public sector broadcasters for making contents of interest to minorities (for example for ethnic or language minorities), global media legislation for restrictions of ownership and competition control and other institutional framework conditions which can ensure opinion pluralism in digital networks. In the light of the redefinition of the role of political parties, common considerations and trade-offs between public funding of political parties versus public funding for independent media should not be overlooked. It is a fundamental component of a possible new and harmonious structure for the party and media landscape in information societies.

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<sup>525</sup> *Schachtschneider, Karl Albrecht*, Verbände, Parteien und Medien in der Republik des Grundgesetzes, in: Die Rolle der Medien im Gefüge des demokratischen Verfassungsstaates, P. 101.

<sup>526</sup> In Europe, public providers have an average market share of more than 50 percent. Austria: 78%; Belgium: 41%; Denmark: 80%; Finland: 48%; France: 43%; Germany: 61%; Greece: 8%; Ireland: 68%; Italy: 61%; Netherlands: 57%; Norway: 47%; Portugal: 38%; Spain: 43%; Sweden: 51%; Switzerland: 89%; United Kingdom: 60%. See *Djankov, Simeon, Caralee McLeish, Tatiana Nenova and Andrei Shleifer*, Who Owns the Media?, World Bank and Harvard University, Yale Department of Economics, Draft March 2001, P. 44, <http://www.econ.yale.edu/~egcenter/0305media.pdf> (read January 2005).

<sup>527</sup> *Rossnagel, Alexander und Peter Strohmann*, Die duale Rundfunkordnung in Europa, P. 16.

<sup>528</sup> *Rossnagel, Alexander und Peter Strohmann*, Die duale Rundfunkordnung in Europa, P. 27 f.

<sup>529</sup> *Deutscher Bundestag*, Digitale Spaltung der Gesellschaft überwinden- Eine Informationsgesellschaft für alle schaffen, Drucksache 14/6374, Antrag, Peter Struck und Fraktion, Kerstin Müller, Rezo Schlauch und Fraktion, 20.06.2001, P. 8 f. <http://www.digital-chancen.de/transfer/downloads/md95.pdf> (read January 2005).

<sup>530</sup> *Council of Europe*, Report on Media Pluralism in the digital Environment, P. 8.

### The digital divide hinders the creation of the digital public sphere

"A public from which assignable groups were excluded *eo ipso*, is not just only incomplete, it is in fact not a public at all"<sup>531</sup>. In order to provide all social groups with fair and equal access to the information society, the following three steps are necessary: equal physical access to technology, this means that the cables, computers and radio waves must reach the citizens (physical access). Secondly, it must be ensured that each citizen has the necessary economic prerequisites for actually being able to use this physically available access. The sustainability of the information traffic (Internet traffic) and data transfer must be ensured (economic access). Thirdly, citizens must acquire the necessary skills to use the new technologies for their priorities and so meaningfully participate in the democratic processes (demographic and socio-cultural access). All three steps are necessary if there is to be effective participation by citizens in the digital information exchange. If a significant part of the population is denied access to the information society, they will be dominated by the "information rich" social groups.

The digital divide can be reflected by a number of already existing socio-economic social divides. Looking at the logic of the three prerequisites for access, it is easy to grasp that ICT diffusion trajectories correlates to the structure of geographical localizations (physical access), distribution of income (economic access) and the level of education, age, gender, ethnic origin, among others (demographic and socio-cultural access)<sup>532</sup>. These correlations tend to multiply existing inequalities regarding the meaningful participation of traditionally excluded interest groups in an information societal democracy. But if the democratic principle is to be realized, all interest groups must have equal possibility of participation. Fraenkel assumes that in a democracy every interest group is to be protected and stabilized in its democratic participation to the best extent possible<sup>533</sup>. He demands "equality of arms" for the various social groups. In the information society democracy, in which a significant part of democracy-relevant information and communication takes place via ICTs, it must be ensured that all citizens have equal access to the digital public. If an individual cannot equip himself with adequate means, the state should thus ensure "that the influence of all those groups unable to form and maintain sufficiently powerful associations to represent their interests does not come off second best"<sup>534</sup>. "The state has to ensure a fair fight [of interests, author's addition]"<sup>535</sup>. Ideally the state would provide ICT access for all disadvantaged groups, much like the state provides public health services for disadvantaged groups or a public education system to ensure that nobody is discriminated against with respect to basic education. The definition of such equality in access is subject to the same criteria as all considerations of the triangle "*liberté, égalité, fraternité*", whereas the last one is a question of resources. In capitalistic societies, unequal resource distribution is part of the nature of the system. Even worse than with education and health, ICT

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<sup>531</sup> See footnote 312.

<sup>532</sup> See and for following *ECLAC (Economic Commission for Latin America and the Caribbean)*, Roadmaps toward an Information Society: A Latin American and Caribbean Perspective, Martin Hilbert and Jorge Katz, LC/G.2195/Rev.1-P/1, ECLAC books, No. 72, United Nations, July 2003, P. 22 ff. <http://www.eclac.cl/cgi-am/getProd.asp?xml=/publicaciones/xml/0/12900/P12900.xml&xsl=/ddpe/tpl-i/p9f.xsl&base=\tpl-i\top-bottom.xsl> (read January 2005).

<sup>533</sup> *Fraenkel, Ernst*, *Strukturanalyse der modernen Demokratie*, P. 358.

<sup>534</sup> *Fraenkel, Ernst*, *ebd.*, P. 358.

<sup>535</sup> See *Schmidt, Manfred G.*, *Demokratiethorien*, P. 233 f.

and its application are subject to a continuous process of innovation, providing ever new and better solutions. As a result, the digital divide will never be closed. Some will have better access than others. However, the digital divide might be bridged with a minimum provision of access to the digital public for all.

Providing a minimum level of access to ICT for everybody depends on the resources available in society, as well as on their distribution and eventual systems of redistribution. A society with fewer resources has fewer chances to provide access for all. In contrary to non-tradable goods, such as teachers or health professionals, ICT equipments are tradable goods, which leads to the fact that they are not necessarily cheaper in poor countries. On contrary, they are often more expensive in developing democracies. Estimating the resources required to face up to the digital divide is a daunting task, last but not least because of the scarce statistical data available. However, some rough estimations can provide a first insight to the magnitudes of the digital financing challenge, in order to put the dimensions into perspective. Estimations show that while in high-income countries the average per capita ICT-expenditure is around US\$ 2,500 per year, half of the population in the highly unequal developing region of Latin America only has less than US\$ 100 per capita per year, or US\$ 2 per week, to spend on the technology<sup>536</sup>. ICT access prices in Latin America (calculated as average mobile telephony expenditure, hardware equipment, 1 hour modem Internet access daily and 10 minutes fixed line telephony daily) are around US\$ 1,000 per year. To finance the closure of the digital divide, the poor would either need financial aid in order to subsidize connectivity or ICT prices would need to be lowered decisively. In order to increase Internet connectivity from a 15 percent penetration in 2004 to include the richest 50 percent of society, access prices would need to be cut by a factor of 10. Supposing that it would be possible to reduce ICT access prices to such a level, the poorest half of society would still require financial aid. According to the cited numbers, to subsidize complete and high-quality ICT access of the remaining poorest half of Latin American societies, around 19 percent of Latin America's gross domestic product (GDP) would need to be invested on an annual basis.

As such amount of resources is not available alternative ways of reducing ICT prices and increasing access need to be considered. A very old economic model lowers the individual access price for a product by sharing access collectively among several users. This model is applied for example in transportation. A large number of users who cannot afford access to an individual means of transport are given (often state subsidized) access to a collective means of transport, for example buses, trams or subways. There are qualitative differences here, too. The mobility options of a social group with a Mercedes may be better those for a social group using the public bus system. Nevertheless the public sector bridges the 'mobility divide' with the provision of a minimum level of services for each interest group. Thomas Jefferson applied this model to books during the early days of the United States of America. The opening of public libraries became a national policy in many later democracies. The same idea is being used today in many developing countries in order to offer collective Internet access. With purchasing power for ICTs of less than US\$ 2 per week it is hardly possible to think in terms of having one's own computer but more of a few hours in a publicly subsidized Internet café. Public Internet access in city councils, schools, community centres and libraries is one of the

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<sup>536</sup> For the following see *Hilbert, Martin*, Comment on the Financing Aspect of the Information Society for Developing Countries, MIT Press, The World Summit on the Information Society in Reflection, ITI, Information technologies and International Development, Vol. 1, Issues 3-4, 2005, <http://mitpress.mit.edu/catalog/item/default.asp?tid=15616&tttype=6>

few possibilities open to the public sector in developing countries for providing ICT access to the largest part of the population possible<sup>537</sup>.

Another way for public policies to reduce the digital divide is to seek out cheaper ICT alternatives. Although we used an ICT packet for the above calculations, the concept of information and communications technology is not static but very dynamic. There are many kinds of ICTs and access to the information society can be implemented by very various technologies. The idea to develop cheap ICT equipment is similar to that behind the German "Volkswagen" [people's car]. People are to be provided with access to a new technology through a cheap alternative. A great deal of hope is also based on cheap devices for digital TV. The emerging technical possibilities of "back-channel" or "two-way cable TV"<sup>538</sup> and the related democratic possibilities has inspired a large number of authors since the early 1970s<sup>539</sup>. 30 years later hopes for a TV-based tele-democracy have been aroused once again by the advent of digital TV.

The definition of minimum access to the digital public and its democratic implications for state involvement requires a great more deal of discussion and attention. The real impacts of unequal access to digital information might only be seen in a couple of decades. The new form of discrimination however, might have produced some insurmountable divisions in society by this time.

#### The borders between direct and representative democracy are blurring

The justification of a representative democratic system is open to challenge in the information society. Even though "the Internet will not lead to a new Athenian era nor destroy representative democracy"<sup>540</sup>, digitization does however undermine the foundations of the representative democratic model. While the influence of the citizens grows with the increasing transparency of democratic processes, the institution of the representative democracy is not designed to give the citizens imperative influence over important decisions. Whereas an imperative mandate is not in itself a concrete democracy deficit, a problem arises if the applied democracy model is legally based on a free mandate, as in most of today's democracies. If the representative is forever running after the opinion of the masses, the people's representative becomes a populist puppet of a certain partial public that legitimates him. The Madisonian filter of a "chosen body of citizens whose wisdom may best discern the true interest of their

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<sup>537</sup> *Maeso, Oscar and Martin Hilbert*, Centros de acceso público a las tecnologías de información y comunicación en América Latina: características y desafíos, Economic Commission for Latin America and the Caribbean, United Nations, Santiago de Chile, 2006, <http://www.cepal.org/cgi-bin/getProd.asp?xml=/publicaciones/xml/3/26273/P26273.xml&xsl=/ddpe/tpl/p9f.xsl&base=/socinfo/tpl/top-bottom.xslt> (read January 2006).

<sup>538</sup> *Kleinsteuber, Hans J. und Martin Hagen*, Konzepte elektronischer Demokratie in den USA und Deutschland, P. 21.

<sup>539</sup> *Smith, Ralph Lee*, The Wired Nation: Cable TV, the electronic communications highway, New York: Harper and Row, 1972. Also *Kleinsteuber, Hans J.*, Der Mythos vom Rückkanal. Technische Phantasien und politische Funktionalisierungen in der Kabelfernsehdebatte der 70er Jahre, in *Medium*, Nr.4, 1994, P. 59-62.

<sup>540</sup> *Leggewie, Claus*, Demokratie auf der Datenautobahn, in: Benjamin Barber, Robert Cailliau, Eli Noam, Claus Leggewie, Christa Maar, Internet und Politik, P. 16.

country" so as "to refine and enlarge the public views"<sup>541</sup> can no longer serve as the justification for the representative democratic system.

This accusation of disfunctioning of the representative system is aggravated by new opportunities for digital citizen participation. While this is not so much a technological problem but an institutional one ("Politics can create participation options even without the Internet – in so far as it wants to"<sup>542</sup>), ICTs provide ways of participation that never existed before. Until now this has been done above all through non-binding consultations, such as frequently done by the European Commission<sup>543</sup>. In the sense of e-rulemaking as discussed above, ICTs are also used in areas in which digital participation is directly connected to a decision system. Digital votes are so cost-effective that it is possible to establish a continuing voting or election process, not only for e-rulemaking. For example, each citizen could be entitled to vote once a week. The exact day and time is irrelevant because of the possibility of asynchronous information processing. After four years the accumulated percentages could be added up and the citizen's election decision determined<sup>544</sup>. Furthermore, digital interfaces can also be used to refine the questions in a democratic vote. This pushes into the direction of fine-tuning the information process of creating a common will in the sense of the deliberationware democracy. Since the question asked greatly influences the outcome of the democratic process in a vote or election, it is desirable to use much finer mechanisms here<sup>545</sup>. Such democratic refinements often only become feasible through the application of the new technical possibilities. Moreover, the excuse that it is too complicated from a purely practical point of view to process so many different kinds of information can no longer be accepted in the information society.

Digital citizen participation must however heed certain features. In this sense, important lessons can be learned from current representative democracy models for the gradual integration of digital direct-democracy features. For example, it should not be overlooked that will-forming processes are generally very slow, modern information technology however extremely fast. "Direct legislation referendums are of course protected from knee-jerk reactions precisely because they adopt the principle of the slow procedure"<sup>546</sup>. What is technologically possible is not always democratically desirable. Similar to the various readings of draft legislation in parliament, procedural rules in digital systems could include preliminary deliberation mechanisms<sup>547</sup>. Citizens could be required to click through a number of questions formulated by various political camps before coming to the question to be voted on. The system of representative deliberation is much more complex however. "If the electronic media

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<sup>541</sup> See footnote 55.

<sup>542</sup> *Siedschlag, Alexander, Arne Rogg und Caroline Welzel, Digitale Demokratie, P. 32, P. 18.*

<sup>543</sup> *European Commission, Your voice in Europe, 2005, [http://ec.europa.eu/yourvoice/index\\_en.htm](http://ec.europa.eu/yourvoice/index_en.htm), (read January 2006).*

<sup>544</sup> "...pace of a two- or three-stage procedure would be more than justified". *Barber, Benjamin, Strong Democracy, P. 285.*

<sup>545</sup> Whereas by law in many countries the question must already be suitably formulated for the referendum, it is already possible in Switzerland to vote on several questions and propositions with a conditional vote/ multiple yes and a supplementary question. The voters are entitled to answer yes to both, which they will do if they prefer both to the present situation. If both propositions are accepted, then the one with the most votes for the supplementary question wins.

<sup>546</sup> *Jung, Otmar und Knemeyer, Franz-Ludwig, Im Blickpunkt: Direkte Demokratie, P. 57 f.*

<sup>547</sup> *Barber, Benjamin, Strong Democracy, P. 288.*



are to be used as a forum for debate and voting, like a legislative chamber, they require a similar support apparatus to permit them to serve as a medium of discussion. No one would think of turning legislators into a hall and then expecting them to have ordered discussion and voting without a President and secretariat, no regulations limiting the participants, no rules for how long debates could continue and for voting – without even rules and committees for revising the rules in light of experience<sup>548</sup>. In digital communication rooms such refined communication rules are however only present in the rarest of cases, which then leads to digital deliberations being deemed useless for democracy<sup>549</sup>. Another lesson learnt from representative systems is the need for institutions that provide citizens with sufficient information to form an opinion are extremely useful for direct citizen participation. In this sense, political parties should not be dispensed with because they help to strengthen direct-democratic mechanisms. They can play a wide range of roles, such as the democratic formulation of the question to be voted on, organizing discourse to help crystallize opinions, advisory information processing and other ways of shaping the political will formed by the people. The outcome is a party-intermediated direct democracy. For example, Budge assumes that "any feasible form of direct democracy would have to be party democracy"<sup>550</sup>. And finally, the representative democracy has developed the very useful principle of general and secret ballots. Advocates of the vote-from-home revolution<sup>551</sup> have yet to present a suggestion on how to ensure compliance with this essential measure of protection.

Last but not least, the question must be addressed whether citizens even want more participation and whether the citizenry counts with the sufficient qualifications for participation. The argument is that the average citizen has many other private interests and does not want to get bogged down in political details. The common counterargument is that citizens see no point in participation because of the limited civil influence allowed by political institutions. Political apathy is the consequence. If citizens had more opportunity to participate, it is argued, they would take it. "The taste for participation is whetted by participation: democracy breeds democracy... they are apathetic because they are powerless, not powerless because they are apathetic"<sup>552</sup>. The digital transparency in the public sector would thus stimulate people's willingness to participate in the decision process<sup>553</sup>. Apart from that, it is argued, it is not a matter of yearning for the proactive and highly involved citizen but giving citizens at least the opportunity for constant involvement. This leads to Weber's<sup>554</sup> and Schumpeter's<sup>555</sup> findings that people are not qualified for participation. This is countered by the argument that "whoever challenges this civic competence, cannot logically justify the democratic principle of general elections"<sup>556</sup>. "The question then becomes: if they [the citizens] are themselves so bad at making decisions, why should they be allowed to decide on who is to

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<sup>548</sup> Budge, Ian, *The new challenge of direct democracy*, P. 115.

<sup>549</sup> See for example Wagner, Ralf, *Demokratie und Internet*, P. 103 ff.

<sup>550</sup> Budge, Ian, *The new challenge of direct democracy*, P. 189.

<sup>551</sup> See footnote 294.

<sup>552</sup> Barber, Benjamin, *Strong Democracy*, P. 265, 272.

<sup>553</sup> Leggewie, Claus, *Netcitizens oder: der gut informierte Bürger heute*, 1996, P. 8, 13 ff.

<sup>554</sup> See footnote 190.

<sup>555</sup> See footnote 244.

<sup>556</sup> Jung, Otmar und Knemeyer, Franz-Ludwig, *Im Blickpunkt: Direkte Demokratie*, P. 59.

make them?"<sup>557</sup> "It is foolish to think that a nation can be rescued from the manipulation of elites by reducing the potentially manipulable public's input into the democratic process. One might as well combat crime in the subway by keeping the public at home"<sup>558</sup>. In this sense, denying citizens the right of increased participation because of a lack of qualification is undemocratic in essence, as it goes against Article 1 of the Universal Declaration of Human Rights.

### ICT applications do not automatically fit democratic ideals

The literature on the application of ICTs for democratic purposes often assumes that the nature of ICT applications is a given variable that cannot be changed. Since the Internet and other ICTs were not developed according to democracy theory, but rather as academic networks or economic trading areas, cyberspace fails in many aspects to fulfil the ideal of a coercion-free public. It is however premature to conclude that digital communication mechanisms are not suitable for democratic deliberations just because existing ICT applications have not automatically produced an ideal political public<sup>559</sup>. Suitable applications and networks must be developed that follow the democratic ideal, not the current commercial and academic purposes. As this study is emphasizing, technology is a means to a certain end and not vice versa.

Whereas today's informatics community **equates e-democracy with e-voting**<sup>560</sup>, during the course of this study it has become clear that there are much more complex and useful ICT applications for fostering democratic processes. The effects of digitizing voting procedures are negligible, compared to the elemental effects the digitization of democratic discourse can have on the fundamentals of democracy. Technological research and development must find suitable technological solutions in cooperation with democracy-theoretical principles. Many of the discourse-oriented methods and technologies presented in the Roman republic and deliberationware democracy are still in their early stages. The complete deliberationware democracy will surely not be the next step in the evolution of democracy in the information society. However, as Arthur Clarke famously states in his third law about the profiles of the future: "Any sufficiently advanced technology is indistinguishable from magic"<sup>561</sup>. As the nature of democratic processes is based solely on the coordination of communication and information flows which can be digitized, the idea of a democracy deliberationware for the information society is not a far-fetched conclusion. The willingness of the software industry and the community to invest in this field is thus becoming decisive for influencing the direction in which the democratic principle in the information society will develop.

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<sup>557</sup> *Budge, Ian*, The new challenge of direct democracy, P. 73.

<sup>558</sup> *Barber, Benjamin*, Strong Democracy, P. 282.

<sup>559</sup> Such as for example in *Wagner, Ralf*, Demokratie und Internet, P. 113 f. Also *Egloff, Daniel*, Digitale Demokratie, P. 123 ff and P. 247.

<sup>560</sup> *Schlifni, Manhard*, Electronic Voting system and electronic Democracy.

<sup>561</sup> *Clarke, Arthur*, Profiles of the Future: An Inquiry into the Limits of the Possible, Harper & Row, New York, 1962.

A **scattered collection of laudable applications** can be found. One ICT application already in use is the EU-financed [www.demos-project.org](http://www.demos-project.org)<sup>562</sup> (read January 2005). The demos system has already been used in Hamburg and Bologna, with up to 5,000 citizens in digital online forums discussing issues such as the public transport system or the keeping of pets. This and similar applications strive to "structure Internet-mediated discourses"<sup>563</sup> with a mix of human moderation and intervention, focused use of text-classifying and communication-intermediating ICT applications, online surveys, voting and election options for setting priorities during the discourse and the perhaps necessary inclusion of arbitrating expert opinions. The only criticism is that there is no official mechanism for incorporating the discussed decisions and documents produced in political decision taking. However, the documents created by the demos system are competing with increasing success with proposals drafted by a party elite behind closed doors. A step closer to achieving the deliberationware democracy is the application [www.meaningmap.com](http://www.meaningmap.com)<sup>564</sup> (read January 2005). A mixture of text classification systems and voting mechanisms strives for a "democratically structured deliberation"<sup>565</sup> that formulates problems and presents various possible solutions in their complex relationships. The use of flexible hypertext links and democratic prioritization helps to identify the best argument and provide a deliberation system in which "everyone can participate equally in the framing and agenda setting processes"<sup>566</sup>. The art of including a large group of participants in these systems depends on the design of the discourse structure. As already suggested by Aristotle, the debate can be held for example on a rotating basis<sup>567</sup>. Linking the arguments in networks enables even a small group to pull together a very large number of argumentations<sup>568</sup>.

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<sup>562</sup> See *DEMOS (Delphi Mediation Online System)*, Internet, Discourses and Democracy, Rolf Lührs, Thomas Malsch and Klaus Voss, in: Terano et. al. *New Frontiers in Artificial Intelligence, Information Society Technologies*, European Commission, 2001, [http://www.demos-project.org/resources\\_publications.html](http://www.demos-project.org/resources_publications.html) (read January 2005). *idem*, *DEMOS – Delphi Mediation Online System*, Gernot Richter and Thomas Gordon, in: *ERCIM News, Information Society Technologies*, European Commission, 2002, [http://www.demos-project.org/resources\\_publications.html](http://www.demos-project.org/resources_publications.html) (read January 2005). *DEMOS (Delphi Mediation Online System)*, Offline Online Inline, Zur Strukturierung Internet-mediated Diskurse, Birgit Hohberg und Rolf Lührs, Information Society Technologies, Europäische Kommission, 2002, P. 6 f., [http://www.demos-project.org/resources\\_publications.html](http://www.demos-project.org/resources_publications.html) (read January 2005).

<sup>563</sup> *DEMOS (Delphi Mediation Online System)*, Offline Online Inline.

<sup>564</sup> See *Pingree, Ray*, *None of the Above*. *idem*, *Making Mass Deliberation*, Thesis submitted in partial fulfillment of the requirement for the degree of Master of Science at the University of Wisconsin-Madison, November 2003, <http://www.meaningmap.com/thesis.doc> (read January 2005). *idem*, *Democratically Structured Deliberation*.

<sup>565</sup> *Pingree, Ray*, *Democratically Structured Deliberation*.

<sup>566</sup> *Pingree, Ray*, *None of the Above*, P. 20.

<sup>567</sup> Aristotle: *Politics*, 1298a 13.

<sup>568</sup> If a participant is involved for example in only three deliberation groups and each of these groups has 15 members, without the participants overlapping, then the participant will be confronted directly or indirectly with potentially 2,299,968 exchanges of arguments  $(12^2-12)^3$ , through the law of network externalities. Some of these argumentations will no doubt be meaningless, others however will contain new ways of reaching a compromise. With each further membership in various deliberation groups the possibility of arguments and counterarguments grows exponentially. For example even if the participant in the above case comes into direct contact with only 42 other citizens in three groups  $(3*14 = 42$  fellow citizens), the networked linking of the arguments enables a very much larger number of argumentations to be put together.

The developers of efficient technological solutions for discourse support must design them as **user-friendly** as possible, so that participants can quickly grasp and handle them. Discourse participants used to prose texts must first familiarize themselves with new classification systems. "[It] is a skill, like any technical skill and one that will initially seem foreign and awkward to most of us, because we are so accustomed to the use of other methods for recording, analysing and communicating arguments"<sup>569</sup>. There are a number of reasons for the initial rejection of such new classification systems<sup>570</sup>. With support from intelligent software tools, citizens can be guided through even very complicated communication and election procedures<sup>571</sup>. Such tools also need to be exploited completely to structure and visualize relevant information. "Currently, argument maps are mostly box-and-arrow-diagrams..., but it may turn out that some different approach will work more effectively. For example, somebody may develop a clever way to present arguments in virtual 3D, or even in immersive 'virtual reality' fly-through environments"<sup>572</sup>. Such a 3D presentation of arguments can illustrate complex argumentation relationships better. One can now imagine the individual entering a virtual space to look at various arguments for and against, their mutual relationships and supporting evidence. In this structured 3D argumentation space the participant can now independently order and arguments before looking for the "best argument"<sup>573</sup>. Such structuring and presentation of the variety of arguments enables citizens to make very efficient use of the time they invest in the democratic discourse. Certain arguments can be homed in on, deeper insights can be gained from zooming in on justifications, and citizens can interactively add their thoughts until they form an opinion. At the beginning it may appear unnatural for the participant "to break one's thoughts into discrete units"<sup>574</sup>. Therefore, even with the most user-friendly design, systems should be designed that support a process of "incremental formalization"<sup>575</sup>, which presumes that the required learning and adoption process is realistically interpreted<sup>576</sup>.

Whereas citizens will have to get accustomed to the wealth of new possibilities for discourse support, ICT research must concentrate on the development paths identified in order to put digital systems at the service of democracy. This includes not only improving hyperlink linking processes, computer supported cooperative work and advances in text and argument

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<sup>569</sup> *Monk, Paul and Tim van Gelder*, Enhancing our Grasp of Complex Arguments, P. 12.

<sup>570</sup> "These include rejection due to cognitive overhead of learning a new codification scheme, objections to limited expressiveness, and concerns over the implicit politics of categories and formalisms". *Buckingham Shum, Simon and Albert Selvin*, Structuring Discourse for Collective Interpretation, P. 9. See also *Shipman, Frank and Catherine Marshall*, Formality considered harmful, P. 7 ff.

<sup>571</sup> One example is the use of software to assure that citizens do not unintentionally cast void ballot cards. With standard paper-based votes there is always a risk that votes are spoiled because of wrong markings. Software can be programmed to reject any invalid vote immediately, supporting citizens even in the most complex process of voting.

<sup>572</sup> *Van Gelder, Tim*, Enhancing Deliberation through Computer supported Argument Mapping, P. 4.

<sup>573</sup> See footnote 125.

<sup>574</sup> *Selvin, Albert*, Supporting Collaborative Analysis and Design with Hypertext Functionality, P. 4.

<sup>575</sup> *Shipman, Frank and Catherine Marshall*, Formality considered harmful, P. 15.

<sup>576</sup> *Gordon, Thomas und Oliver Märker*, Mediation Systems, FOKUS Institute for Open Communication systems und AIS, Institute for Autonomous Intelligent Systems, 2001, P. 5; <http://www.tf.gordon.de/publications/Gordon2001a.pdf> (read January 2005).

visualization procedures, but also their combination with the complicated and research intensive fields of automatic and semi-automatic text classification, semantic text orientation and intelligent software agents. Since the industry is not necessarily interested in such applications, thought must be given to financing research projects in this direction with public funds. In principle no reason can be found why such a system as the deliberationware democracy should not eventually exist. To say it with the words of Clarke's second law about the profiles of the future: "The only way of discovering the limits of the possible is to venture a little way past them into the impossible."

The problems that have to be solved in order to ensure that the "arduous search process"<sup>577</sup> in which democracy finds itself will continue to prosper in the information society are thus manifold, complex and still scarcely researched. If the assurances of the political world community at the beginning of the new millennium are to more be than empty promises ("We will spare no effort to promote democracy and strengthen the rule of law"<sup>578</sup>), as a first step science must be encouraged to contribute, above all in those fields of research affected by this essential area of human development.

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<sup>577</sup> See footnote 2.

<sup>578</sup> See *United Nations General Assembly*, Resolution adopted by the General Assembly 55/2, United Nations Millennium Declaration, A/RES/55/2, 2000, <http://www.un.org/millennium/declaration/ares552e.pdf> (read January 2005).