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The Internet and the Nation State

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Creative destruction is how *Joseph Schumpeter* described the effect of competition¹. Of course this sounds scornful in the ears of the affected companies, their shareholders and employees. Today, nation states also suffer from competitive pressures and consequently feel similarly affected. Under competition their performance degenerates to being providers of a bundle of services. Many of the elements of this bundle are available from other government or private providers. Economically speaking, monopolistic competition² reigns instead of the monopoly of the state. This term is used by economists to describe a state of affairs in which a competitor offers a reasonable substitute, not an identical product³. The Internet is, of course, not the only reason for the competition between various systems growing more intense⁴. But, the Internet is simultaneously both a factor and an indicator of globalisation. Conversely, the effect of the Internet on the nation state is not restricted to the possibility of avoiding national regulation. This is just the phenomenon which has drawn the greatest public attention to itself.

While technology does not determine social and political processes, it is not without influence⁵. This examination therefore begins with a short description of the Internet phenomenon. Less of relevance

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¹ *Schumpeter, Joseph A.*, *Kapitalismus, Capitalism, Socialism and Democracy*, New York 1942 (German version *Kapitalismus, Sozialismus und Demokratie*, Tübingen 1993) 134 et seq.; see also *id.*: *Theorie der wirtschaftlichen Entwicklung. Eine Untersuchung über Unternehmergewinn, Kapital, Kredit, Zins und den Konjunkturzyklus*, 1917 /Berlin⁹ 1997, 88 et seq.

² *Wolf Schäfer*: *Globalisierung: Entmonopolisierung des Nationalen ?*, in: *Hartmut Berg* (editor): *Globalisierung der Wirtschaft: Ursachen - Formen - Konsequenzen* (Schriften des Vereins für Socialpolitik NF 263) Berlin 1999, 9-21 (10 and passim).

³ The concept has been developed by *Edward H. Chamberlin*: *The Theory of Monopolistic Competition. A Reorientation of the Theory of Value*, Cambridge, Mass. 1933; *Joan Robinson*: *The Economics of Imperfect Competition*. London 1933. A modern overview is offered by *Jean Tirole*, *The Theory of Industrial Organization*, Cambridge, Mass. 1988 (chapter 7).

⁴ Enlightening on this concept the collective contributions in the following volume *Lüder Gerken* (Ed): *Competition among Institutions*. Houndmills 1995.

⁵ More under III.

is the Internet in its present form, as its potential for the future. Because of its stormy development, a forecast is only possible assuming a whole series of indeterminate factors (II). Since this is the case, the effect of the Internet on the nation state is not a causal one (III). It does, however, result in consequences for domestic power (IV) as well as external sovereignty (V). It follows from both that many tried and tested solutions of the international community for overcoming international conflicts are losing their effectiveness (VI). On the other hand, the need for supranational solutions will become greater rather than smaller on account of the Internet (VII). But this does not necessarily mean anarchy. However, grounds do exist for searching for newer solutions that are better suited to the characteristics of the Internet (VIII). Looking at these solutions as a whole, the elements of a new international order of both power and values can be found (IX).

I. Characteristics of the Internet

The reason why the Internet potentially has considerable influence on social and political processes can be deduced from a short list of its characteristics. The Internet is global (1), decentralized (2), timeless (3), very cheap (4), very simple (5), digital (6), individual (7) and, if so desired, also wireless (8), very secure (9), secret (10) and anonymous (11).

1. Global

In the Internet, distance no longer plays a role⁶. This is true both economically as well as technologically. Internet users only pay telephone charges for the connection between their Internet provider and the next interface point. Nowadays, such interface points are to be found in almost every local loop. Frequent users of the Internet can avail themselves of package offers. Having no infrastructure of its own, the Internet uses all transmission paths currently available. Technically speaking, the Internet is a service rather than a net. The infrastructure of the Internet is completely international⁷.

The ordinary user is often unable to tell where an addressee is permanently resident. This is because of the so-called domain names. In order for two computers to be able to communicate via the Internet, both must have an a unique address. This occurs with the aid of so-called IP-addresses. But no person could remember the long series of numbers that one needs in order to be able to correctly identify all the computers around the world that have been networked. The task of the domain name is to transform these combinations of numbers into abbreviations with which our imagination can identify. Two parallel systems exist according to the rules used to date. One class of domain names ends with a national abbreviation, for example .de. This signifies a country classification. But there is no national abbreviation .us, a circumstance which is easy to explain, since the Internet originated in the United States. Even today, by far the majority of Internet users are Americans. A second system exists with the abbreviations .edu, .com, .net, .org, .gov, .mil and .int. All these classes of domain names are used globally, and not just in the USA⁸. The email address of a German customer of America Online reads, for example,@aol.com.

Most users cannot infer the place of origin from a domain name, but a state can do so. However, it must then conduct a considerable amount of investigation work. It becomes even more difficult when the use of the Internet technically also no longer takes place within a single territory. There are mainly two reasons for this. From the point of view of an Internet user, distance hardly plays a role any longer. But it does make a difference to the network architecture whether an Internet page has to be downloaded from the USA or whether it is available on a local server. That is why Internet pages that are commonly used are 'mirrored' onto local servers. They are then available for downloading not only once, but possibly many times in the most diverse variety of countries.

⁶ *David G. Post: Governing Cyberspace*, in: *Wayne Law Review* 43 (1996) 155: [at footnote 15]: "Cyberspace [...] does not merely weaken the significance of physical location, it destroys it"; [at footnote 16]: "events in cyberspace [...] do not cross geographical borders [...], they ignore the existence of borders altogether".

⁷ *Ditmar Brock: Wirtschaft und Staat im Zeitalter der Globalisierung. Von nationalen Volkswirtschaften zur globalisierten Wirtschaft*, in: *aus politik und zeitgeschichte*, 33-34/97, 12-19 (16 et seq.).

⁸ A very good, easy to read introduction into the system of domain names by *Klaus W. Grewlich: Governance in "Cyberspace". Access and Public Interest in Global Communications* [forthcoming], Chapter Seven.

In addition, the situation arises more and more frequently that data is processed on a combination of several computers rather than on a single computer. A classic example is the employee who dials from home into his company's central computer and works on a document with his colleagues there⁹. Lufthansa, for example, processes used flight tickets in India¹⁰. Surfing the Internet, possible through the use of hypertext, also belongs at this juncture. Hypertext is commonly highlighted in blue on most Internet pages. Clicking on it brings the user to another page. In this manner, the user often changes back and forth between servers in various countries during a single session.

2. Decentralized

Regulation is much easier when it only has to control a few linked interfaces instead of thousands of people or processes¹¹. That is why it is of significance for the likelihood of regulation that the degree of centralization in the Internet is extremely small. It was originally created in order to maintain communication paths in the event of a nuclear strike¹². One can state, without exaggeration, that 1% standardization stands in opposition to 99% diversity¹³. The only items that are standardized are the routing of the signal, quality standards, protocol standards, the IP addresses already mentioned and the domain names¹⁴.

Since the Internet is not a single network but a net of networks, control of it is, on the one hand, made more difficult but, on the other hand, entry into the market of network providers is facilitated. To be an Internet provider, one only needs a single server, costing less than US \$ 50,000¹⁵. The customers of this one provider are not only able to communicate amongst themselves, but also with people and computers all over the world. Economically speaking: since the Internet is standardized at such a low level, it is easy for a new provider to exploit the network externalities of the whole Internet. The critical mass problem that represents a key market entry barrier for other network goods plays only a marginal role with the Internet¹⁶.

⁹ *Michael Dertouzos*: What Will Be. How the New World of Information Will Change Our Lives. San Francisco 1997, 109 et seq.

¹⁰ More under IV 2 c) on the interconnected possibility of cutting value creation chains.

¹¹ The plastic notion "regulation targets bottlenecks" comes from *Paul David*.

¹² Fitting on the history of the Internet is *Raymund Werle*: The Impact of Information Networks on the Structure of Political Systems. in: *Christoph Engel/Kenneth Keller (Ed.)*: Understanding the Impact of Global Networks on Local Social, Political and Cultural Values ***.

¹³ *Sharon Eisner Gilett/Mitchell Kapor*: The Self-Governing Internet. Coordination by Design. <http://ccs.mit.edu/CCSWP197.html> (15.02.199) [8-10].

¹⁴ Id.

¹⁵ *Henry H. Perritt*: Cyberspace and Sovereignty, in: *Journal of International Legal Studies* 3 (1997) 155-204 (161).

¹⁶ Main texts on the economic background: *Michael L. Katz/Carl Shapiro*: Technology Adoption in the Presence of Network Externalities, in: *Journal of Political Economy* 94 (1986) 822-841; *id.*: Product Introduction with Network Externalities, in: *Journal of Industrial Economics* 40 (1992) 55-83; an overview of the literature published since then is provided by *Manfred J. Holler*: Modellierung von Netzwerkeffekten und Ansätze industriepolitischer Aussagen, in: *Jahrbuch für Neue Politische Ökonomie* 16 (1997) 90-114.

3. Timeless

The composer *Wolfgang Rihm* described the Internet as the medium "in which time and space meet".¹⁷ Initially, this sentence appears to have a very superficial meaning, but those academics who work together with American colleagues quickly learn to value e-mail and not only because of its cost effectiveness. It is more a case of the marginalization of time zone differences between the two continents in their communication exchanges. They no longer need to squeeze everything into the short afternoon interval, in which both are seated at their desks. Companies that are globally active possess even finer-tuned instruments in order to maximize quasi-simultaneous timing¹⁸. Nowadays, some multinational companies develop products 24 hours a day. When a German engineer goes home, he hands his half-finished product to his American colleague who, in turn, passes it to a Japanese colleague several hours later.

The Internet bridges long periods and not just ones of a few hours length. This characteristic is shared with all retrieval services. However, in contrast with services such as pay-per-view, the decentralized Internet is missing a regular clean-up facility. It also lacks a culture of forgetfulness¹⁹. Information which is made available on the network stays there for an indeterminate amount of time. Search engines will discover it even years later and give it - almost²⁰ - the same weighting as a message from the same day. Even if the originator wanted to remove the message, he cannot be sure of success, thanks to the mirror technology already mentioned. The fact that the message is erased from the original server does not remove it from the net. While a special search software does exist that is also intended to find mirror images, it does not normally enjoy complete success.

4. Very Cheap

It costs the same amount to communicate via Internet with one's neighbours as with an islander from Fiji, and this amount is minute. This not only holds true for transmission costs to the next interface, but also for the activities of an Internet provider and for the services that can be used via the network. Free e-mail is almost standard, and some companies even exist that charge users no fee at all for their whole Internet access²¹. It is almost an integral part of the Internet's culture for a user to be able to access any services offered free-of-charge. Those seeking user fees must offer very attractive contents indeed.

All these reasons point to Internet use being a low-cost decision. In the past few years, economists have shown much interest in such decisions²². People act differently in such situations. Cost calculations are relegated to playing only a marginal role. People even forego the consequent pursuit of a coherent utility function. The desire to participate, the feeling of solidarity, or even a type of activity on the off-chance, increases. Instruments to control human behaviour that assume rational behaviour, no longer fit. It therefore makes little sense to make decisions a little cheaper or a little more expensive. That does not mean that such behaviour is completely incapable of being guided. But the state's well-tryed knowledge in directing people in high-cost situations is of little use in this one²³.

¹⁷ I thank *Ernst-Joachim Mestmäcker* for this tip.

¹⁸ *Dertouzos* (footnote 9) 93 and passim.

¹⁹ I owe this thought to *Nicole te Heesen*.

²⁰ All search engines sort the hits. Under the criteria there is also regularly the number of occurrences in which they have recently been accessed.

²¹ They must then of course finance themselves indirectly; more on this under II 3b).

²² This thought is primarily attributable to *Gebhard Kirchgässner*. He expounded on this idea in three essays: Towards a Theory of Low-Cost Decisions, in: *European Journal of Political Economy* 8 (1972) 305-320; *Gebhard Kirchgässner/Werner Pommerehne*: Low-Cost Decisions as a Challenge to Public Choice, in: *Public Choice* 77 (1993) 107-115; *Gebhard Kirchgässner*: Bemerkungen zur Minimalmoral, in: *Zeitschrift für Wirtschafts- und Sozialwissenschaften* 116 (1996) 223-251.

²³ This is one of the reasons why the Internet leads to the restructuring of statehood, more under IV 4 and V 7.

5. Very Simple

The Internet community uses its own language. What is generally called a letter by most people, is derogatively called snail-mail. E-mail is not only much faster, but is also a lot simpler for a computer user, since he would also write an ordinary letter on the computer. Now, instead of having to print it out, put it in an envelope, attach a stamp and bring it to the postbox, with e-mail, he simply points the mouse to the 'send' icon or key. Responses to incoming mail can be made within two minutes using the 'reply' function. One can also simultaneously send the same piece of mail to an infinite number of persons via a mailing list. Academics working from home soon value access to databanks and electronic newsletters. Instead of previously having to go to a library and switch on a photocopier, an academic now has the necessary information at his fingertips on a PDF-file within the space of a minute. He can even conduct electronic research on the file.

All this appears trivial, but it brings about a fundamental change in the user's behaviour. Hardly anyone would exchange 30 letters a day with others, but no-one considers 30 e-mails to be shocking. Because it has become so simple, one sends three lines to someone with whom one would previously not even have corresponded. It costs scarcely any additional effort to allow other persons to participate in the exchange of ideas via copies or blind copies. Those who threaten to sink under the weight of information can use filters to divide it into manageable units.

6. Digital

All Internet communication takes place digitally. Texts, sounds and images are separated into yes/no combinations. This has a series of important consequences. Firstly, all these types of content can employ the same method of transmission. There is no more need, technically speaking, for separate channels for data transmission, for different telephone and television cables²⁴. More precisely formulated: all these transmission paths are in competition with each other.

In addition, digital information can be attached to any chosen product. Users can add images, sounds or video sequences to their home pages. Individual components can also be compiled ad hoc from diverse sources and the visible or audible information can be given control signals. In this manner, a differentiated copyright protection can be established²⁵.

A final point is that one can also compress digital information. Using video sequences as an example: images not registered by the human eye are immediately cut out of the amount of information via a special programme. Moreover, the retina gains the impression of moving images through the rapid sequencing of static pictures. But only a small part of the image changes from one static image to the next, an effect which is exploited by image compression, which only transfers changes in previous images. Since compressed files need much less band width and memory, narrow band information channels can also be used to transfer complex contents.

7. Individual

The Internet is an ideal instrument for transforming mass media into an individual medium. The coarsest filter is a search engine. Those who know how to operate these engines elegantly can find the information they seek relatively quickly by connecting several search terms. Frequently used search sites can be stored. Some newspapers supply filters that the user places like a grid over the complete range of news offers. This procedure can be expanded to the whole programme of a publishing house, or even larger parts of the Internet²⁶. Even more effective are search engines with a learning ability. They store information about what sites a user has actively accessed in the past, and then compare this user profile with those of other users. This allows technology, so to speak, to draw analogies with a good success rate²⁷. The recommendation lists of Amazon.com function in this

²⁴ See II 2 below on band-width problems.

²⁵ See further VII 2.

²⁶ More on this by *Dertouzos* (footnote 9) 121.

²⁷ *Dertouzos* (footnote 9) 114 f. describes an example for a choice of music.

fashion. Each book offers links to other books that previous buyers have also purchased in significant numbers²⁸.

8. Wireless

Since only yes/no data are transported via Internet, it basically makes no difference whether a wire or wireless transmission path is used. The residents of thinly-populated, rural areas will therefore in future be less severely disadvantaged from the outset than previously the case. Or, more specifically formulated towards the situation in Germany: a wired universal service for the Internet is technical nonsense. In thinly-populated areas, it is sufficient to have a wireless connection, which is consistently much cheaper.

Wireless transmission also opens up completely new possibilities of use. Bluetooth, the most advanced wireless project, comes from the United States. It uses radio frequencies, and produces wireless connections with up to one Mb/s at distances of up to 10 metres²⁹. Using this technology, the electronic household has become a real possibility. By carrying a small transmitter and receiver, one can simultaneously control all household appliances while walking past. Small transmitter and receiver stations, for which one could, for example, consider using the small telephone boxes on the street, would allow practically permanent online use³⁰.

The international impact of the Internet is further increased by satellite transmission. In this respect, however, the traditional direct transmission satellites are of lesser importance. They are put into orbit in such a way as to appear to be located at a fixed point above the earth. However, this point is so far away that a great deal of energy is expended for the return journey. Energy is the scarcest good in space, because it can only be stored via solar collectors. This is where the technical preference for lower orbiting satellites comes in. However, even here, the signal's transmission takes a few fractions of a second which, although not detrimental to some services such as retrieval services or e-mail, poses a big disadvantage to interactive services.

While the lower-flying satellites permit global communication between businessmen, they also represent an attractive alternative for reaching users in countries that cut themselves off completely from the international flow of information or in countries that attempt to force this information to flow through the eye of a needle controlled by them. North Korea and Myanmar belong to the first category³¹, China and Singapore to the second³². A preliminary system is already on the market. A cellular phone for use with this Iridium network currently costs around US-\$ 1,800, with the company charging 80 cents per minute of use, but these prices are expected to drop. The second system, Teledesic, is due to go into service in 2002. It will have a much higher band width and will also allow the transmission of moving pictures, but be no more expensive than Iridium is today. This system is also noteworthy because almost all of its intelligence will be located inside the satellite. Practically the only possibility that will be left to nation states will be to proceed directly against users³³.

9. Very Secure

Internet communication is very secure. Indeed, as already mentioned, it was originally created in order to maintain communication channels even in the event of a nuclear war³⁴. The technical reason for this lies in the packet-switched character of transmission³⁵. The complete message is broken down into small data packets. Each packet is wrapped up, so to speak, with details that give information

²⁸ See VII 3 and VIII 6b) concerning obvious data protection problems.

²⁹ Technical and economic details can be found on the following website: <http://www.sss-mag.com/ssnews.html#3> (23.02.1999).

³⁰ See *Dertouzos* (footnote 9) 113-138 on the fairly futuristic sounding social consequences.

³¹ A. Michael *Froomkin*: Flood Control on the Information Ocean. Living with Anonymity, Digital Cash and Distributed Databases, in: University of Pittsburgh, Journal of Law and Commerce 15 (1996) 395 (445).

³² *Jack Goldsmith*: Against Cyberanarchy, in: University of Chicago Law Review 65 (1988) 1199-1250 (1228 with references)

³³ I owe all this information to *Robert Spinrad*.

³⁴ See no. 2 again above.

³⁵ *Grewlich Cyberspace* (footnote 8), Chapter Two. 3..

about the sender and recipient and which assign the packet to precisely this message. These data packets can now take completely different paths through the network. If a package fails to arrive or is not fast enough, the recipient sends an error message to the sender. The missing packet is then sent via another transmission path³⁶. This all serves to provide protection from the collapse of transmission paths and also from deliberate disruptions by an intervening state³⁷.

10. Secret

Microsoft has just learned the painful lesson in the current cartel process being filed against it: e-mails are no more secure than postcards. The American cartel authorities have intercepted almost 6,000 e-mails from Microsoft and are now able to present an almost perfect trail of evidence against the firm. Users therefore have a great deal of interest in encrypting the contents of an e-mail before transmitting it. Encryption also serves as a tool for authentication purposes. It ensures that the transmitted contents really do originate from the person sending the e-mail and that they have not been changed in the meantime³⁸.

The development of data encryption technology has come a long way. Of greatest practical use are solutions employing two different keys: a public and a private one³⁹. The use of two different keys prevents the key itself being transmitted directly from the sender to the recipient. This is important, because it could be quite easily intercepted at this point. However, with the two key system, the technical instrument needed to de-encrypt the message, i.e. the public key, can be transmitted quite openly. In practice, many people state it on their homepage. They then only have to prevent someone acquiring the second, private key.

Those who would like to do so, may proceed a step further. If an encrypted message is intercepted, only jumbled-up data is received, but one is then immediately aware that someone has sent or received an encrypted message. In western industrial nations, this will hardly be of significance, since most people will routinely encrypt their electronic traffic⁴⁰. This will not fail on account of the cost, since a very good and effective encryption system, Pretty Good Privacy, is available free-of-charge on the Internet⁴¹. This will be different, however, in totalitarian states. But it technically presents no difficulties to hide an encrypted message behind an apparently quite harmless one. This is how a pornographic picture can manage to get into an Arabian country, encrypted as a religious hymn⁴².

No encryption system is perfect. Secret services or criminal investigation authorities are able, albeit with much difficulty, to de-encrypt coded messages. The USA traditionally view encryption technologies as weapons and subject them to strict export controls⁴³. Furthermore, security authorities in many countries insist that the private key is deposited in a location which they can access in an emergency⁴⁴. But there is, once again, a relatively simple countermeasure to this as well. One initially encrypts a message with a private key that has not been deposited. This message that has been encrypted once is then encrypted a second time, with a code whose private portion has been deposited at the deposit location. The message is then unobtrusive to scanners owned by the state. They appear to have been encrypted in a permissible manner⁴⁵. The only real weak spots that remain are a) the moment in which the signal is coded and b) the moment in which it is encoded⁴⁶. If the

³⁶ I owe all these details to *Robert Spinrad*.

³⁷ In the words of *Miles Kahler*: "jamming is hard to implement in the net".

³⁸ *Grewlich Cyberspace* (footnote 8), Chapter Six.

³⁹ An overview of other solutions is given by *Grewlich Cyberspace* (footnote 8) Chapter Six. 1.; for further details see *Dertouzos* (footnote 9) 99-107 and for a comprehensive overview *Kenneth W. Dam/Herbert S. Lin* (Ed.) *Cryptography's Role in Securing the Information Society*. Committee to Study National Cryptography Policy. Computer Science and Telecommunications Board. Commission on Physical Sciences, Mathematics and Applications. National Research Council, Washington (National Academy Press) 1996 and in particular the appendices on pages 343-676.

⁴⁰ See further details under VIII 6 b) on encryption as a means of aiding oneself.

⁴¹ http://www.nai.com/default_pgp.asp (15.03.1999)

⁴² This plastic example is from *Dertouzos* (footnote 9) 290.

⁴³ The investigation of this policy is the central theme of the report *Cryptography's Role in Securing the Information Society* (footnote 39) 113-166 and 249-264.

⁴⁴ See footnote just quoted for a comprehensive explanation, 167-215 and 265-285.

⁴⁵ *Grewlich Cyberspace* (footnote 8), Chapter Six. 2. 2. 3..

⁴⁶ I owe this tip to *Robert Spinrad*.

computer is offline at this point, however, it is extremely difficult for the supervisory authorities to exploit these weak spots.

11. Anonymous

Anonymous letters have always been in existence. But the Internet combines the availability of fairly extensive anonymity together with very little effort needed to employ it. Chat groups even expressly cultivate a culture of pseudonyms, whose attraction lies precisely in the fact that the persons do not meet in real life and that they therefore do not need to fear their pseudonyms being exposed. This is a type of electronic masquerade. If he so desired, the person running the chat group could pull the mask off each visitor's face, because the transmission of the data packets, as we know, only works because each computer is uniquely identified via an IP address⁴⁷. An investigator doesn't even have to simultaneously determine the communications path, since who spoke with whom at any particular time is noted in the so-called log files.

Just as an extortioner is able to put on a pair of gloves and stick letters onto a piece of paper from a glossy magazine, an Internet user can make it very difficult for others to identify him. First of all, he can make the IP address illegible, by passing the connection via an anonymizer. These are so-called remailers. They expressly see their task as removing the sender's original IP address and replacing it with their own IP address. If one uses several remailers, the prosecution authorities cannot even resort to applying pressure to the remailer because only the first remailer would be able to establish a connection to the sender⁴⁸. The user can also employ an electronic agent that executes search and download operations in a preprogrammed, anonymous manner⁴⁹.

If the user is part of a larger community, he can additionally hide behind the firewall which separates the Intranet from the Internet. The task of such firewalls is to precisely make visible no more than a relatively large address space, not the actual IP addresses. And finally, one can normally log into internal networks from any of the computers attached to that net. So even if an investigation authority was able to find out the IP address, it would still not know who had used that computer⁵⁰. The same problem is posed by Internet cafes, of which a poignant example exists: For years, Francois Mitterand hid his cancer problems from the French people. After his death, his doctor wrote a book about this concealment. Just before the book was delivered to retailers, Mitterand's family successfully obtained a court order preventing its delivery to retailers. But a few days later, the cunning owner of a pre-publication copy scanned in the complete text in an Internet cafe and made it available on the net.

II. Unknown Factors

This paper argues *de lege ferenda*, not *de lege lata*. A glance at today's reality allows us to judge whether the Internet poses a problem at all for the nation state. In particular, it helps us determine to what extent features of the Internet clash with historic conditions for the nation state. A reaction by the legal system only makes sense, however, if these effects are still present at the moment the legal instruments are actually employed. We thus face the task of a three-fold prognosis. The Internet can change, and the nation state and the society which supports it can take on a different character. Finally, we have to assess what influence the instruments on hand will have on the changed nation state. The most robust part of this task is an analysis of the effects of technology on state and society⁵¹. To forecast the effect of governance tools is already much more demanding. This is because they impact on social and political processes, and not on a process belonging to natural science⁵². Even more challenging is the prognosis of how reality will develop under these influences. We are already uncertain as to how quickly the Internet will spread (1). The qualitative development

⁴⁷ See no. 9 already quoted above.

⁴⁸ See *Froomkin* for more on anonymity techniques UPittsbJIC 1996 (footnote 31) 414-427.

⁴⁹ *Dirk Baecker*: Networking the Net, in: *Christoph Engel/Kenneth Keller (Ed.) Understanding the Impact of Global Networks on Local Social, Political and Cultural Values* *** [10].

⁵⁰ I owe this information to *Thomas Feldkamp*.

⁵¹ See also below III.

⁵² See more under IV - V.

of the net also contains some unknown factors (2). It is particularly hard to forecast the extent to which the net and the services offered on it will become commercialized (3) and whether the Internet will differentiate into language and culture zones (4). Finally, although there is more or less agreement that the decisive problem in the age of the Internet will be an information flood rather than information scarcity, much remains to be done in developing corresponding instruments to resolve this problem (5).

1. Market Saturation

It is already hard enough to make reliable statements about the number of persons who are currently able to use the Internet. One estimate, which is probably somewhat optimistic, assumes that, in June 1998, 70.2 million persons in the USA (12.2 million in Germany) had access to it. This corresponds to around 35% of the U.S. and around 15 % of the German population⁵³. It is even harder to predict future penetration rates. It can only be said with certainty that the opening of markets in industrial countries is proceeding at a stormy pace.

A conceptual reason can at least be found for this that lies in the dynamic characteristics of network goods, as already discussed⁵⁴. There are two thresholds, if one stylizes the experience that has so far been gained with the spread of such goods. The first threshold decides on whether the service on offer can continue to exist or whether it must be removed from the market. This threshold has almost certainly been passed with the Internet. A second threshold makes the network good almost indispensable to certain circles of people. In Germany, for example, almost no-one can imagine living without a telephone nowadays. This second threshold has almost certainly not been reached for the whole of the German population as far as the Internet is concerned. But, in some circles, it is becoming more and more difficult to imagine not being able to be reached electronically. A good example is found in the sciences, where e-mail is almost obligatory for anyone wishing to maintain international contacts.

The speed with which the Internet will reach large circles of the German population will probably depend on two inter-related factors: price trends and making signals pass the last mile. At this juncture, the development of the completely decentralized Internet therefore ultimately also rests on the development of the local networks that were up till now completely centralized. Or, to formulate it more figuratively: national telecommunications policy is also a central factor in the development of the Internet. In Germany, it is not yet settled whether real competition can develop on the last mile among several network operators, or whether just highly regulated service competition on the networks of Deutsche Telekom will prove feasible⁵⁵.

2. Qualitative Network Development

Three paths in network development have particular importance for user behaviour and thereby also a social and political effect. The most important question is how bandwidth will develop. As long as considerable advances fail to be made in this regard, moving pictures and multimedia applications will remain at the periphery⁵⁶. The real bottleneck here, both currently and in the foreseeable future, is again the last mile⁵⁷. At the moment, long-range connection capacity is also in short supply, but both technical and economic solutions to this problem are certain to be found soon⁵⁸.

⁵³ Werle in Engel/Keller (footnote 12) *** [footnotes 12 and 14].

⁵⁴ See point 2 above.

⁵⁵ Further details, see *Christoph Engel/Günter Knieps: Die Vorschriften des Telekommunikationsgesetzes über den Zugang zu wesentlichen Leistungen. Eine juristisch-ökonomische Untersuchung* (Law and Economics of International Telecommunications 37) Baden-Baden 1998.

⁵⁶ Technically, however, the possibility exists of using up to 1 Mb/sec already today. Moving pictures can be transferred in real time without impairing quality. Since the architecture of the net was not originally intended for this, this however disturbs many other users; more on this from *Michael Hutter: The Commercialization of the Internet. A Progress Report*, in: *Christoph Engel-Kenneth Keller* (Ed.) *Understanding the Impact of Global Networks on Local Social, Political and Cultural Values* *** [4].

⁵⁷ In most countries, it consists of an analogue telephone wire/cable. It simultaneously combines two disadvantages. The original digital signals must then be converted into analogue signals with a modem and reconverted into digital signals by the receiver with a second modem. In addition, a telephone wire only has a capacity of 60 Kb. Germany belongs to the few

The next indeterminate factor also principally results from the uncertain future of the last mile. A private Internet user typically logs in just for the period in which he uses it and then immediately leaves the net. While there is, meanwhile, a whole range of Internet providers who charge fairly reasonable prices for 24 hour use of the net, most telecommunications suppliers levy prohibitively expensive charges for a quasi-permanent connection to the local network. Where connections to the local network are offered by competitors of Deutsche Telekom, a few, fairly cheap, flat-rate arrangements are however already in existence. If such tariffs achieve a breakthrough, the behaviour of users will change. Only then will one be able to speak of 'living on the web' in Germany.

Finally, uncertainty remains concerning the development of net and service architecture over the coming years. To date, Internet traffic has primarily been conducted via the classic telecommunications networks. If completely identical or similar contents are to be sent simultaneously to many people, the switches of this net will be burdened heavily. Technically and economically, it therefore makes sense to create nets with a hybrid architecture appropriate for hybrid services lying midway between personal and mass communication, alongside the traditional net for point to point traffic. Mailing lists or customized, filtered, news services could then be distributed much more effectively⁵⁹. It is equally unclear how the system's facade of computers, the so-called portals, will develop. The operating system traditionally served as the technical bridge for connecting varying hardware and software configurations. Since more and more computers are networked, the browser is increasingly taking over this function⁶⁰. If this trend gains momentum, the design of the browser will become the decisive factor for the impact of news on public debate⁶¹.

3. Commercialization

There is hardly a question being discussed in such a lively manner as the one surrounding the commercialization of the Internet⁶². This is, of course, initially an economic question. Net (a) and services (b) are scarce goods, for whose production someone must bear the costs. However, commercialization of the Internet would simultaneously also diametrically alter its culture. Even developments that make economic sense could fail to materialize because they are not desired by a large number of users (c).

a) Network

Traditional paths are being followed to finance the last mile of the net. That is precisely why telecommunications policy has so much influence on the Internet's technical range⁶³. The backbone, i.e. the long-range connections are, from a practical point of view, primarily an American problem, since the Internet originated in that country. Its architecture leads to the fact that, even today, most of the world's traffic passes through the USA. This also applies to the communication between users from other countries. Historically, the majority of the Internet's backbone has been financed from the

countries with a relatively large number of ISDN connections. They are digital and have double the bandwidth. Larger capacity cables to consumer's homes are found in California and Massachusetts; more detail from: Realizing the Information Future. The Internet and Beyond. Renaissance Committee. Computer Science and Telecommunications Board. Commission on Physical Sciences, Mathematics and Applications. National Research Council. 1994, 179. Seriously being considered are also asymmetric solutions with a narrow control channel from the end user to remote servers and a relatively wide back channel.

⁵⁸ The most probable technical solution consists of a transition to complete optical transmission, since a single optical fibre possesses a capacity of 40GB. Several hundred optical fibres can be bundled together to form a cable. This solution becomes possible because purely optical switches are now available; see *David J. Faber*: Predicting the Unpredictable - Technology and Society, in: *Christoph Engel/Kenneth Keller (Ed.): Understanding the Impact of Global Networks on Local Social, Political and Cultural Values* *** [1 et seq.].

⁵⁹ I owe this reference to *Martina Zitterbart*.

⁶⁰ *Dertouzos* (footnote 9) 109/336.

⁶¹ The fight for the distribution and design of the so-called portals is being fought correspondingly intensively. I again owe this reference to *Robert Spinrad*.

⁶² Comprehensively *Hutter* in *Engel/Keller* (footnote 53); see also *Baecker* in *Engel/Keller* (footnote 49).

⁶³ See 1 above.

U.S. federal budget⁶⁴. Avowedly, however, the U.S. government is increasingly withdrawing its financial support⁶⁵. Up till now Internet providers have been making flat payments to those operating the long-distance connections in its stead⁶⁶.

A multitude of suggestions has been put forward to change this situation and to implement usage-based tariffs⁶⁷. Technically, this is possible using so-called ATM technology, which allows information about its priority level to be added to each individual data packet. Priority traffic would then be transported particularly quickly or via a particularly large bandwidth⁶⁸. From an economic viewpoint, such solutions make sense, for the backbone has a big peak load problem, whereas its basic load only represents about 5% of its capacity⁶⁹. In addition, the various services on offer burden the net to quite different degrees. An unformatted word, such as is often used in e-mails, only uses an average of around 44 bits. A non-compressed video, on the other hand, uses 100 mb/s, representing a ratio of 1 : 2 million⁷⁰. However, critics counter that the Internet's frequent blockages are not the result of current pricing policies but of unpredictable growth⁷¹. Economically speaking, this would then be a dynamic problem, rather than one of allocation.

If usage-based tariffs became effective, some uses would then perhaps cease to be low-price decisions⁷². This would simplify the state's influence on user behaviour. The state could then not only obtain information about access to the net by controlling the payments, but also set behavioural changes in motion by means of pecuniary incentives.

b) Services

Although Internet providers pay for use of the backbone, they do not pay for their customers' access to web sites. Until now, such access was mostly free-of-charge, which was also due to technical reasons. From a practical point of view, only credit cards could be used for payment. As long as effective cryptography is not generally available⁷³, a fairly large risk exists that third persons will learn the credit card number and commit fraud with it⁷⁴. Principally, however, transaction costs for credit card payments are much too high. Only the advent of e-cash would permit micro payments to be made⁷⁵, such as they are needed for individual access to the offers of a news agency.

Consumer habits must be added to the technical reasons. The Internet began its victory march among universities, where the costs of producing and distributing its contents were already paid for out of university budgets. Academics themselves have an interest in publicizing their ideas. Many commercial providers therefore found it advisable to finance their services indirectly, for example, via banner advertising or pop-up windows through which the user must first navigate in order to reach his desired contents. Other providers offer the general public their main service free-of-charge and make their profits by offering profitable complementary products. Standard examples are Netscape or the Acrobat Reader, both of which earn money by selling software to the content providers which uses the possibilities of the browser or reader in an optimal fashion. The question crops up again here, of whether the old, low-cost situation will disappear through commercialization.

c) Internet Culture

⁶⁴ Details in: Realizing the Information Future (footnote 57) 175 and in *Jeffrey K. MacKie-Mason/Hal R. Varian: Some FAQs about Usage-Based Pricing*, <ftp://alfred.sims.berkeley.edu/pub/Papers/useFAQs.html> (13.02.1999).
⁶⁵ The history of the backbone's financing is portrayed in *Grewlich's Cyberspace* (footnote 8), Chapter Two. 3. 7..
⁶⁶ *MacKie-Mason/Varian* (footnote 64) 2.
⁶⁷ Just above and passim; further suggested solutions described by *Hutter* in *Engel/Keller* (footnote 12) *** [5].
⁶⁸ I owe this information to *Martina Zitterbart*.
⁶⁹ *MacKie-Mason/Varian* (footnote 64).
⁷⁰ *MacKie-Mason/Varian* (footnote 64) 3. A further figure is equally explicit: multimedia applications only account for around 0.01% of Internet usage, but use around 20% of the bandwidth, *Grewlich Cyberspace* (footnote 8), Chapter Two. 4..
⁷¹ So, particularly *David Faber* in *Faber's* discussion in *Engel/Keller* (footnote 58).
⁷² See above, I 4.
⁷³ See above, I 10.
⁷⁴ See however below VIII 6d) on collective solutions to this problem.
⁷⁵ Further on this under V 3.

The differentiation between high-cost and low-cost situations does not, however, exhaust the problem. Moreover, the university history of the net has left its mark much, much deeper. A clear indication of this is the fact that the Internet community reacts as strongly to the sending of unsolicited advertising, as to pornography or propaganda⁷⁶. A large group of persons is willing to work voluntarily in committees who keep the net functioning and who continue its development⁷⁷. The traditional Internet community therefore reminds one particularly of phenomena which *Elinor Ostrom* examined in relation to fisheries, mineral deposits and environmental problems. A relatively homogeneous social group prefers to organize itself in a collective manner, instead of coordinating its behaviour decentrally via prices⁷⁸. Will this culture succeed in spreading to the many new Internet users? Will it, at least in its own partial area of the net, be able to continue in existence? Will it therefore be possible to succeed in organizing a co-existence between a commercialized Internet for the occasional user and a traditional Internet community with completely different motivations⁷⁹?

⁷⁶ See further below VII 3, VIII 5b) and 6; compare also *Dertouzos* (footnote 9) 28: 'Info-feudalism by a few princes is intolerable to the serfs of a computer community'.

⁷⁷ More from *Werle* in *Engel/Keller* (footnote 12) *** [3].

⁷⁸ *Elinor Ostrom: Governing the Commons. The Evolution of Institutions for Collective Action (The Political Economy of Institutions and Decisions)* Cambridge 1990.

⁷⁹ The question has much to do with the basic problem of constructivism. Ideas by *Michael Thompson: Global Networks and Local Cultures. What are the Mismatches and what can be Done About them?*, in: *Christoph Engel/Kenneth Keller* (Ed.): *Understanding the Impact of Global Networks on Local Social, Political and Cultural Values* ***.

4. Breakdown into Language and Culture Zones

One further, cultural question is far from being answered. Internet observers from the social sciences are worried that the American Way of Life will, via this vehicle, finally become dominant all over the world⁸⁰. However, in actual fact, communication researchers have observed that the Internet has diversified rapidly into language and culture zones⁸¹. This apparently applies particularly to the Japanese, but equally so to the French and Germans. If this development continues to gain ground, the net would perhaps technically have a global range but, as a communications area, would once again primarily correspond to the societies that have been generated by history. The truth probably lies somewhere in between. The elite class all speak English anyway, and anyone living in an authoritarian country who seeks to reach a world public, will use this language. Those who are denied access to popular web sites by domestic laws or by their social surroundings will have an incentive to learn the necessary English vocabulary.

5. Attention Management

Even before the existence of the Internet, academia was drowning in too many publications. A glance into a book store at a train station demonstrates how necessary it is for a reader to be selective in his choice. Even so, the Internet represents a quantum leap. One only needs to feed a search engine with a relatively well-known term in order to understand why one is lost without information management.

This problem is particularly urgent in the Internet, but the chance of overcoming it is also greater. If the user takes care of the search himself, he will refine his search technique. We have already become acquainted with the terms filter, frequency distribution and intelligent search engines⁸². In the age of an information abundance, political effect and commercial success are decided by the provider's ability to attract the public's attention. We can be certain that technical and journalistic creativity will be pointed to precisely this question. But, up till now, the most important solutions have only been apparent on the horizon. We have already spoken about portals⁸³. The pop-up window is another push technology that the user must first click away from before he arrives at the site he is actually seeking. Anyone who knows which mechanisms search engines use in order to rank the sites found, can also attempt to manipulate this order⁸⁴. Will users permanently allow this to happen? Or will they then, in turn, develop protective mechanisms in order to retain control of their own attention? This is not only a technical question, but also a cultural one. By consciously discarding certain pieces of information, the users namely also decide themselves in which type of society they wish to live⁸⁵.

⁸⁰ Insistent reference on this topic *Kenneth Kenniston: Cultural Diversity or Global Monoculture. The Impacts of the Information Age*, in: *Christoph Engel/Kenneth Keller (Ed.): Understanding the Impact of Global Networks on Local Social, Political and Cultural Values****.

⁸¹ I owe this reference to *Günter Müller*.

⁸² See above I 5.

⁸³ See above I.

⁸⁴ Technically, this occurs with the aid of so-called meta-tags in the source code. The user does not see this information and therefore does not notice the manipulation. *Florian Rötzer: Aufmerksamkeit - Rohstoffe der Informationsgesellschaft*, in: *Andreas Brill/Michael de Vries (eds.): Virtuelle Wirtschaft. Virtuelle Unternehmen, virtuelle Produkte, virtuelles Geld und virtuelle Kommunikation*. Opladen 1998, 174 - 191 (195).

⁸⁵ *Thompson in Engel/Keller (footnote 79) *** [11]*.

III. Effects

Our interest is directed at the effects of the Internet on the nation state. More generally speaking, it concerns the relationship between technology and political institutions. Of course, this relationship is not a deterministic one⁸⁶. On the other hand, technological development is not irrelevant for the way that institutions work.

One can best describe this connection using the categories of system theory. The new technology is not part of the subsystem 'politics', but belongs instead to its environment. In the short term, politics can completely ignore technological change. Speaking in terms of system theory, they then treat it like irrelevant environmental noise. However, technological development alters the restrictions within which politics are made. Hence, this element of the environment can increasingly disturb the self-reference of the political system. It is therefore worthwhile for a social subsystem to invest in mechanisms that can estimate the potential for disruption and attempt to integrate the new element into its own system in a timely fashion⁸⁷.

The Internet's potential for disruption is occasionally based on the fact that completely new possibilities are created for exerting political influence. We will take a closer look at the best example: e-cash as private money⁸⁸. But qualitative effects are by far outweighed by quantitative ones. The Internet allows, namely, previously marginal phenomena to become ubiquitous. Of course, even in the past, one was able to purchase foreign newspapers in Germany. But the use of other foreign mass media was already more difficult. For instance, although most British TV programmes are transmitted via the same Astra satellite as the one used by German channels, British channels do not sell the codes to Germany for encrypted British programmes due to copyright reasons. On the contrary, every piece of content that is put on the Internet anywhere abroad is immediately available on every networked German computer. Other regulatory problems are not ubiquitous in the Internet, but they are so important that they can no longer be ignored. Neonazis, for example, had of course linked up with each other before the advent of the Internet. But they are now able to organize themselves much more effectively with encoded e-mails and web pages than was previously the case. Finally, some regulatory problems have only succeeded in attracting public attention thanks to the Internet. This appears to be the case with child pornography. Fortunately, new pictures rarely appear to be the subject of e-mail exchanges. But via organizations such as Cyberangels, the public at large has become aware just how many people wish to see these perverse pictures from the 1960s and '70s.

Many effects of the Internet are not monocausal. In particular, states, as regulatory bodies, are not only being exposed to more lively international competition via the Internet. It is more a case of the Internet representing only one factor and also being an indicator of the more general phenomenon of globalisation⁸⁹. Ultimately, the relationship between technology and political institutions is not one-sided. National and international actors are not only exposed to globalisation; they often use it for their own strategic interests⁹⁰. This may be an attractive strategy, because technology alters the restrictions on political action. Sometimes, technological development also allows for a battle of the forum. It is mainly the Internet's digital technology that has provided such an opportunity. All forms of mass and private communication are namely now available using the very same technical infrastructure⁹¹. In Germany, the relationship between the federal government and the states has brought this question to a head. The result is a fragile compromise laid down in two largely harmonized documents, the Treaty on Media Services concluded by the German Länder, and the Federal Statute on Information and Communication Services⁹².

⁸⁶ Werle emphasizes this point in *Engel/Keller* (footnote 12)*** [2], as does Thompson in *Engel/Keller* (footnote 79)*** [10].

⁸⁷ Compare Baecker in *Engel/Keller* (footnote 49) ***[1-3].

⁸⁸ See below V 3.

⁸⁹ More detail under IV 2, V-VI.

⁹⁰ More from Saskia Sassen: *Losing Control? Sovereignty in an Age of Globalization*. New York 1996; see also Dertouzos (footnote 9) 291: technology can be the pretext in older conflicts of interest.

⁹¹ As long as the bandwidth problem is unresolved, this does not however apply to television, see above II 2.

⁹² Martin Bullinger/Ernst-Joachim Mestmäcker think through this problem from the federal government's point of view: *Multimedien Dienste. Struktur und staatliche Aufgaben nach deutschem und europäischem Recht* (Law and Economics of International Telecommunications 30) Baden-Baden 1997.

Moreover, technology is not alone as far as change is concerned; state, society and political institutions are also changing. It may well be that personality and society are no longer the same, when the Internet belongs to the everyday life of a larger proportion of the population⁹³. Political institutions may succeed in developing completely new control instruments to tackle the new regulatory problems, which might make the state even more powerful⁹⁴. And, finally, our analytical zest should not make us lose modesty.. It has, for example, taken hundreds of years to recognize the real social importance of the printed book⁹⁵, and automobiles were initially welcomed in the United States as eliminating the problem of horse manure from the streets⁹⁶.

IV. Consequences for Domestic Rule

The Internet's consequences for domestic rule in a nation state become apparent in a distinction made by *Albert O. Hirschman*. A state is an organization of which its citizens are its members. From this perspective, the government, administration and the courts represent its management. Just like in a holding company, members of the management exert influence either via voice (1) or via exit (2). In the first case, they do not question membership, but use their legal and political possibilities of influence. In the second case, however, they threaten to rescind their membership if the management refuses to change its behaviour⁹⁷. The Internet increases both the possibility of voice and also of exit. But sometimes it can simply lead to destabilization (3). States see themselves forced to employ more demanding governance tools than previously (4). The result is a change in the character of statehood (5).

1. Voice

The Internet expands citizens' possibilities of influencing the decisions of state institutions⁹⁸. In this regard, that which we in general saw about its effects, applies: some really new avenues for voice appear. But, above all, voice now becomes much more simple and its probability therefore increases. Some people and groups would previously have been incapable of mounting an effective opposition. The opportunity costs of voice fall for everyone⁹⁹. Taking a letter as an example: for most people, the decisive factor is not that a stamp is more expensive than a telephone unit for sending an e-mail, but that they are more likely to use the latter because it costs less time and effort¹⁰⁰. Often, voice will now even become a low-cost decision, so that an individual's cost calculations no longer play any role at all¹⁰¹. Ultimately, voice carries particular weight if the person voicing the opposition can also threaten to rescind his membership. That is why the simultaneous expansion of both possibilities through the Internet is so important.

The Internet initially expands opportunities to control government (a). It also becomes much easier to exert ad hoc political influence (b). Intermediaries become vulgarized (c). Diffuse interests can organize themselves (d) and opportunities for political power are redistributed (e).

a) Control

Anyone seeking to exercise control must know the activities of those being monitored. This is traditionally not an easy feat in Germany. Both the government's and the administration's style are

⁹³ I owe this thought to *Winfried Hassemer*.

⁹⁴ See also VIII 1 below on this point.

⁹⁵ *Baecker* in *Engel/Keller* (footnote 80) *** [12].

⁹⁶ *Kenniston* in *Engel/Keller* (footnote 80) *** [12].

⁹⁷ More detail in *Albert O. Hirschman: Abwanderung und Widerspruch. Reaktionen auf Leistungsabfall bei Unternehmungen, Organisationen und Staaten* (Schriften für Kooperationsforschung A 8) Tübingen 1974.

⁹⁸ See *Schäfer* in *Berg* (footnote 2) 11.

⁹⁹ The term 'opportunity costs' fits here better than the general one of 'costs'.

¹⁰⁰ See above I 5.

¹⁰¹ On this concept see previous ref. I 4.

characterized by secrecy. Even those formally participating in administrative proceedings must follow strict rules in order to view administrative files. General freedom of information for the public at large does not exist. But, admittedly, the statutes on the law of the press of the Länder do allow for a right to information by the press. And now, under pressure from the European Union, the Environmental Information Act has led to a change in this partial area. Of course, even in the age of the Internet, the government can still manage to protect true state secrets; we have already spoken of the possibilities of cryptography¹⁰². But, with the Internet, information that has at some time or other been made public once has the potential of becoming available to everyone. New information intermediaries can specialize in compiling registers of sinners in the administration. They do not even have to wait until someone paints an incriminating case. An electronic sniffer programme can do their work. In the USA, consumer complaints stations already monitor the behaviour of doctors in the same manner¹⁰³.

Also, as we know, the Internet is timeless¹⁰⁴. Governments therefore lose the possibility of collective amnesia. They can never be sure when a search engine will once again reveal a bad deed committed at the beginning of a legislative period. In the Internet, citizens also receive unpredictable and, because of the economic competition, unmonitored information about parallel solutions to social problems in other countries. It therefore becomes easier for them to break free of political thought blockages, expose bogus arguments and make alternative solutions ready for acceptance.

b) Ad-hoc Influence

In a representative democracy, the influence of citizens is channelled through elections and votes. Of course, even in the past, politics was never completely isolated from other forms of influence. But, in the past, those who had previously organized themselves were able to exert influence much easier, with the media and organized interest groups being the most important instruments thereof. Citizens' initiatives and demonstrations remained for other parts of the population. The Internet now expands the possibilities of exerting political influence ad hoc. In the USA, this has been coined 'civil society'¹⁰⁵. In the Internet it is sufficient for a single person to obtain knowledge of a problematic issue. This is how Greenpeace's electronic warning system functions¹⁰⁶. Using a mailing list, a political protest or a consumer boycott can be organized within hours¹⁰⁷. In this way, people have even occasionally succeeded in overturning a political decision at the last minute. Such was the case with a draft amendment to American copyright law, which would have particularly favoured the database of the company West Law¹⁰⁸.

Even in the age of the Internet, not a single person among 80 million Germans succeeds in overturning political decisions by himself, but permanent ties to organized parties or associations are no longer necessary. Much less structured, ad hoc interest groups, even if they have been specifically formed for the purpose, can also suffice. To use an old term:¹⁰⁹ instead of an organization, a simple social movement suffices¹¹⁰. This makes it more probable that many of the "speechless millions of this earth" will be heard¹¹¹.

¹⁰² See above I 10.

¹⁰³ More detail from *Dertouzos* (footnote 9) 166 f.

¹⁰⁴ See above I 3.

¹⁰⁵ *Lawrence K. Grossman*: The Electronic Republic. Reshaping Democracy in the Information Age. New York 1995; *Graham Browning*: Electronic Democracy. Using the Internet to Influence American Politics. Wiltou, Conn. 1996; *Henry Perritt*: Cyberspace Self-Government. Town Hall Democracy or Rediscovered Royalism? In: Berkeley Technology Law Journal 11 (1997) 413-482.

¹⁰⁶ *Thompson* in *Engel/Keller* (footnote 79) *** [21].

¹⁰⁷ *Ulrich Beck*: Das Demokratie-Dilemma im Zeitalter der Globalisierung, in: *aus politik und zeitgeschichte* 38/98, 3-11 (7).

¹⁰⁸ I owe this example to *Herbert Burkert*. Er formulates the following four conditions for the success of such a strategy: a) speed is useful because for example politicians only expose the most decisive element just shortly before a vote takes place; b) there is already a place on the Internet at which similarly-minded people gather information; c) the situation is politically unstable; d) the group receives support via traditional media for the decisive move.

¹⁰⁹ - but one which has however been misused by the National Socialist (Nazi) movement -

¹¹⁰ *Werle* in *Engel/Keller* (footnote 12) *** [12] speaks of "social-movement-type-organizations".

¹¹¹ *Yehudi Menuhin* formulated the hope: "When are all these technologies finally going to let us hear from the voiceless millions of this earth?", cited to *Dertouzos* (footnote 9) 284.

c) Vulgarization of the Intermediaries

In order for people to organize ad hoc opposition to a political decision, they must already be severely affected by it. In addition, ad hoc movements are poorly suited to the formulation of political orientations. It is therefore no accident that they come together much sooner, in order to oppose a solution that has been formulated by someone else. This is why, even in the age of the Internet, political intermediaries will not become superfluous. But the Internet will force them to change their character¹¹². It will be much easier to create new ones. These new intermediaries will act differently to their predecessors, thus causing the traditional intermediaries to come under pressure.

New intermediaries are sometimes referred to as Samisdat media¹¹³. Since the Internet is globally standardized, setting up new media is technically so simple. This is why anyone can effortlessly become his own publisher¹¹⁴. Economically speaking, barriers to market entry are plainly low. A homepage is usually sufficient, for which one needs nothing more than a computer and access to the Internet¹¹⁵. But the Internet's biggest advantage is more of a journalistic nature. As a research medium, the Internet permits simple, rapid access to information, which is the raw material of every intermediary. In the Internet, even informal polls can be organized with little effort. It will hardly disturb the new intermediaries that they will not normally be able to match professional statistical standards, since percentages obtained in this manner will still have suggestive power¹¹⁶.

Distribution is also very simple. While addressees still have to locate a website, search engines and, even more so, hyperlinks facilitate this task, resulting in a type of network comprising of information offers. Anyone seeking a better overview can also use the relevant link lists. Push technologies are not limited to large companies. A classic instrument in this regard is that of crossposting in mailing lists. If a widely accessed mailing list exists covering a related field, one can post a cross-reference therein to one's own list or web site. In one important respect, such new intermediaries can even beat their classic competitors: they possess far better possibilities of reducing scatter losses, since they can generate as small series as they wish. If that seems more attractive to the intermediaries, they set up a bulletin board, to which the addressees actively go when they seek pertinent information. A hybrid form is the despatch of link lists via e-mail. In the USA, the term 'narrowcasting' has established itself for these new intermediaries, which differentiates them from classic broadcasting¹¹⁷.

The typical result is an intermediary who is only concerned with a very specific topic¹¹⁸. The border between private and public communication becomes permeable. What appears to one user to be a new intermediary, is a regular electronic meeting place to another. Only the e-mail address needs to be altered, in order to swap from private to public communication. This is what often happens in mailing lists. Information important enough for everyone is sent to all the addressees on a list and, from this, a private e-mail exchange may result. Or, conversely, private communication with another addressee on the list may at some point become important enough to be made public.

Through the Internet, the previous intermediaries come under pressure as well, primarily for two reasons. Until now, the services of many intermediaries were coupled with other products and distributed at single price. For example, information and editing, as the editorial services of a newspaper office, were previously paid for jointly, not separately. In the Internet, access to individual news items is no longer a scarce good. It therefore remains to be seen whether there is sufficient willingness to pay for the editorial services alone¹¹⁹. Additionally, since it will be easier to establish new intermediaries, the traditional ones will be subjected to competitive pressure, thus forcing many of them to attend to the wishes of their members more precisely. Thus, even within the intermediaries, we encounter the logic of exit and voice¹²⁰. This does not necessarily strengthen the intermediaries. The logic of influence often stands in contrast to the logic of membership¹²¹.

¹¹² *Perritt* (footnote 105) JILS 1997, 163.

¹¹³ *Dertouzos* (footnote 9) 161.

¹¹⁴ *Grewlich* Cyberspace (footnote 8), Chapter Two. 3. 7..

¹¹⁵ See I 4 above for details on the figures.

¹¹⁶ Compare *Dertouzos* (footnote 9) 161/216.

¹¹⁷ *Thompson* in *Engel/Keller* (footnote 79) *** [9].

¹¹⁸ *Perritt* (footnote 105) JILS 1997, 160 speaks of "unbundling" media into single pieces of information.

¹¹⁹ I owe this reference to *Miles Kahler*.

¹²⁰ See above IV 1-2.

¹²¹ This pair of terms comes from *Philippe C. Schmitter/Wolfgang Streeck*: The Organisation of Business Interests. Studying the Associative Action of Business in Advanced Industrial Societies (Max-Planck-Institut für Gesellschaftsforschung Discussion Paper 1/99); *Werle* makes the connection to the Internet in *Engel/Keller* (footnote 12) 11-14.

d) Organization of Diffuse Minorities

The new possibilities of voice have the greatest practical meaning for those interests which were scarcely capable of being organized in the past. This reduces the importance of *Mancur Olson's* classical insight considerably. He had noted that, almost exclusively, organized interests, as opposed to diffuse ones, have a chance of exerting influence on political decisions. Key political decisions were therefore traditionally systematically skewed against diffuse interests¹²². The Internet, however, now offers the possibility of being virtual neighbours¹²³, a type of community without propinquity¹²⁴. Of course, it is much simpler if the persons concerned have seen each other at least once¹²⁵ or if a previously weak interest group is now strengthened¹²⁶. But, if worse comes to worse, the group can even find together without. In the USA, for example, adult sufferers of childhood polio have got together and convinced the conventional school of medicine that, although supposedly fully healed, their illness has often led to long-term effects in need of treatment¹²⁷. The Internet is even more important in countries with a badly developed infrastructure. There, politics is no longer confined to densely populated areas.

Anyone with economic training will, however, object that, up till now, the discussion has only centered on the technical possibilities for organizing diffuse interests. So far, we have said nothing on incentives to use these new possibilities. By itself, the Internet will not alter the fact that individuals act almost irrationally, if they stand up for the common interest of their group. A dynamic problem, of which we are already aware, also appears. Even interest groups become more valuable to their members as more and more people join them. A critical mass problem therefore also exists here. Even interest organizations are network goods¹²⁸. But even from a strictly economic angle, the more severely the interests of a minority group have been previously ignored, the less weight these arguments will carry. Activism is even easier to predict, if we remember how cheap communication via the Internet is. In this low-cost situation, a willingness to become active for a common cause becomes quite plausible¹²⁹.

e) Redistributing the Opportunities for Political Power

While political decisions are tied to the wishes and preferences of its citizens, they do not simply arise from the aggregation of individual preferences with the aid of formal decision-making rules. Political power is the most important ingredient for the assertion of one's own interests in the political process. Many attempts have been made to draw up a concept for the phenomenon of power but, at this point, the one by *Jack Knight* must suffice. Knight understands political decisions as being the result of negotiations between organized interests. It is hard to deny the plausibility of the concept for German politics. Negotiating with one another are the parties of a coalition, the various ressorts of the government, the government officials with associations and the government with the opposition in the Bundesrat. According to Knight's ideas, the result of these negotiations depends on a combination of five factors: Those who are able to live well with the status quo have a stronger threat point¹³⁰. Those who invest more resources in the political struggle also have more opportunities¹³¹. Patience often pays dividends during the negotiating process¹³². Persons who can employ political risk to productive purposes will also have more success¹³³. One has to recognize when one can afford to raise an

¹²² *Mancur Olson*: Die Logik des kollektiven Handelns. Kollektivgüter und die Theorie der Gruppen (Die Einheit der Gesellschaftswissenschaften 10) Tübingen³ 1992.

¹²³ The term comes from *Dertouzos* (footnote 9) 157-160.

¹²⁴ This term comes from *Thompson* in *Engel/Keller* (footnote 79) *** [9].

¹²⁵ *Dertouzos* (footnote 9) 9.

¹²⁶ Just above 201.

¹²⁷ Details in *Dertouzos* (footnote 9) 137.

¹²⁸ I owe this reference to *Günter Knieps*.

¹²⁹ See above I 4.

¹³⁰ *Knight* makes this more precise and talks about the collapse value ("Zerschlagungswert"): *Jack Knight*: Institutionen und gesellschaftlicher Konflikt (Die Einheit der Gesellschaftswissenschaften 9) Tübingen 1997, 141.

¹³¹ Just above 144.

¹³² *Knight* speaks more precisely about time preferences (footnote 130) 142.

¹³³ *Knight* speaks of risk attitude (footnote 130) 146.

objection, but then also actually do so when the situation warrants it. After all, a credible threat of retaliation can alter the outcome of the negotiations¹³⁴.

The Internet exerts influence on mainly one of these elements: it changes the resources that promise success in political disputes, thus redistributing the opportunities for political power¹³⁵. Traditionally, it was a question of organizing interests in a professional manner¹³⁶, but also one of the funds needed to employ experts. Nowadays, however, thanks to information technology, professionalism has become widely available. This process is already well advanced in the case of word processing. Via the Internet, it now also covers the actual organization of interests.

However, the Internet is primarily of use in an asymmetric way to persons who previously had little or even no power. The successful use of these new possibilities demands three characteristics: technical competence, good knowledge of the English language and above all, the ability to skip back and forth with agility between different roles. It has always been common for the political elite to speak and write English. It is the other two factors though that have the potential of redistributing power. Many of those who hold the keys to political power today, did not grow up with the computer or the Internet. Some are simply shy of these new technical media. They are in any case usually much less comfortable using them than the present generation. Up to the present time, widely strewn networks of personal relationships formed the most important resource in the political game. While these have not lost their importance, the Internet is accelerating the differentiation of society into more and more subsystems, and also more specialized ones. The most decisive social ability will therefore be the masterful handling of a multitude of roles. A multitude of virtual neighbourhoods will exist alongside the physical one¹³⁷. Anyone seeking success must simultaneously lead a life among several cultures¹³⁸. The central picture is of the "urban villager", who is virtually connected with persons from all over the world, but at the same time only seldom needs to leave his local surroundings¹³⁹. In other words, the world is again taking a leap forward to a new form of modernity¹⁴⁰. People succeed more easily in this regard the earlier they have gained the relevant experience, again favouring the younger generation over the older one that previously held power.

2. Exit

a) Introduction

The Internet increases the possibilities of both voice to political decisions and exit from the political system¹⁴¹. Normally, the opportunity of exit means the possibility of arbitrating between different systems of rules¹⁴². As is mentioned in the introduction, the Internet then increases the competition between the systems¹⁴³. As a provider of rules, the state sees itself come under pressure from competition¹⁴⁴. The state transforms itself from a monopolist into a club. The Constitution becomes the club's Articles of Association and the state becomes the provider of a bundle of public goods¹⁴⁵.

¹³⁴ Immediately above 149.

¹³⁵ Compare *Grewlich* Cyberspace (footnote 8), Chapter One. 2. 1.: The Internet brings about a "redistribution of professional opportunities, wealth and social status".

¹³⁶ Just above d).

¹³⁷ *Dertouzos* (footnote 9) 159.

¹³⁸ *Kenniston* in *Engel/Keller* (footnote 80) *** [6] speaks of a second culture of 'Americanization' as a connector to the world.

¹³⁹ *Dertouzos* (footnote 9) 280f.

¹⁴⁰ That is the central theme of *Wolfgang Kersting: Global Networks and Local Values. Some Philosophical Remarks from an Individualist Point of View*, in: *Christoph Engel/Kenneth Keller: Understanding the Impact of Global Networks on Local Social, Political and Cultural Values* ***.

¹⁴¹ Compare *Schäfer* in *Berg* (footnote 2) 11.

¹⁴² *A. Michael Fromkin: The Internet as a Source of Regulatory Arbitrage*, in: *Brian Kahin/Charles Nesson: Borders in Cyberspace, Information Policy and the Global Information Infrastructure*, Cambridge, Mass. 1997, 129-163.

¹⁴³ See already above I.

¹⁴⁴ *Wolfgang Kerber: Erfordern Globalisierung und Standortwettbewerb einen Paradigmenwechsel in der Theorie der Wirtschaftspolitik?*, in: *Ordo* 49 (1998) 253-268 (254f).

¹⁴⁵ Just above 256f.

System competition and exit are, however, not identical, since the idea of competition between systems assumes that the previous one is being replaced by a new form of social order. Exit, on the other hand, can also have an anarchistic element, leading not to a new order, but simply destabilization. This question is especially important for the Internet¹⁴⁶.

One can also explain the political importance of exit with a concept that Gerhard Wegner developed in his habilitation paper. He has pointed to the fact that the state's governing impulses hit addressees who are able to react creatively. A regulator therefore never knows beforehand whether the addressees will simply adapt their behaviour lineally to the new restrictions. In the most desirable case, the impulses instigate technical or institutional innovation, which then strengthens the state's span of control. Conversely, via innovation, the addressees can succeed in making the impulse to govern ineffective¹⁴⁷. Exit is one such adverse creative reaction. The Internet's new possibilities of exit are particularly dangerous to politics, since they interfere subsequently with a regulatory structure that is already in place. The political powers were therefore not able to reflect about minimizing the risk of exit as a precautionary measure.

The business of governing will become more difficult in the future, since the new possibilities of exit not only devalue the monitoring potential of command and control regulation, they also affect governance tools that the state has only just acquired. This applies in particular to negotiations in the shadow of hierarchy, that have since become fashionable¹⁴⁸. In principle, such negotiations are a very effective instrument. The state threatens with rules that impose unilateral burdens and thus causes an industry branch to exercise self-regulation. This not only improves implementation to a very far-reaching extent; at the same time the state also overcomes the knowledge barriers that were put up against its unilateral intervention¹⁴⁹. But all this only functions if an industry association is really capable of guiding the behaviour of its members. If the members are able to exit from the power of the association by rescinding their membership, then the association is no longer an attractive negotiating partner for the state.

The extent of competition between systems does not solely rest with the Internet. It is more a case that the Internet's importance can only be understood in the inter-relationship with other driving forces of globalization. It dramatically reduces the costs of overcoming space and time¹⁵⁰. That is of such importance because, simultaneously, transport costs have sunk, the legal boundaries between different economies have diminished thanks to the GATT and WTO, and institutional innovation is capable of overcoming much more complex situations than was previously the case¹⁵¹.

Competition between systems is no different to competition between products: a supplier is not only disciplined by current competitors, but also by potential ones. This observation allows us to conceptionally link exit and voice¹⁵². The credible threat of exit emphasizes voice. In addition, national actors can build up international negotiating power which they can then exert at national level. Environmental associations, in particular, understand this well¹⁵³. Occasionally, national interest groups even build a coalition with a foreign sovereign. American data protectionists, for example, only gained influence in American politics when the European Union threatened with the extra-territorial application of its data protection laws¹⁵⁴.

Just how intense the competition between systems is, depends on the extent to which the regulatory addressees are mobile¹⁵⁵. But we should not artificially restrict our view to one of physical exit (b). The Internet is more important for partial (c) or even merely virtual exit (d). In addition, it also facilitates tax evasion (e), thereby removing the state's ability to manoeuvre.

¹⁴⁶ See closer under 3.

¹⁴⁷ *Gerhard Wegner: Wirtschaftspolitik zwischen Selbst- und Fremdsteuerung - ein neuer Ansatz* (Contribuciones Jenenses 3) Baden-Baden 1996; on this topic see also *my* book review in: *RabelsZ* (1999) 191-196.

¹⁴⁸ The evocative term comes from *Fritz W. Scharpf: Games Real Actors Play. Actor-Centered Institutionalism in Policy Research* (Theoretical Lenses on Public Policy) Boulder 1997, 205 f.

¹⁴⁹ More detail in *Christoph Engel: Selbstregulierung im Bereich der Produktverantwortung. Instrumente und deren Ausgestaltung* (Preprints from the Max-Planck Project Group on the Law of Common Goods 1998/7 ***).

¹⁵⁰ See above I 1 and 3.

¹⁵¹ See *Ulrich Steger (ed.): Wirkmuster der Globalisierung* (Ladenburger Kolleg Globalisierung verstehen und gestalten) Ladenburg 1998.

¹⁵² Compare under IV 1-2.

¹⁵³ *Grewlich Cyberspace* (footnote 8), Chapter One. 3. 1..

¹⁵⁴ I owe this reference to *Henry Perritt*; more on data protection under VII 3 and VIII 3b).

¹⁵⁵ *Kerber* (footnote 144) *Ordo* 1998, 253.

b) Physical Exit

The virtual reality of the Internet cannot protect anyone from physical capture by the constables of the state. But the Internet can facilitate the decision to physically migrate. It is, namely, much easier nowadays to maintain contact to one's old habitat via e-mail, discussion groups and Internet newspapers. If he so chooses, a person can carry his entire medical history on a smart card¹⁵⁶. Anyone who leads a mobile life can also search immediately for a cultural home among an international elite that maintains contact over the Internet in between occasional meetings.

c) Partial Exit

The Internet has a by far greater bearing on what one might call partial exit. This mainly comes to the fore when companies cut the value chain into small units to an extent not seen before¹⁵⁷. This is because the Internet reduces the transaction costs for international business¹⁵⁸. Firms can now organize the purchase of inputs on a worldwide basis¹⁵⁹ and have the primary products delivered just-in-time. This applies equally to both goods and services. A Moroccan firm takes care of the computerized layout of 20% of all books published in France¹⁶⁰. An American firm contracts out thousands of doctors' bills to a firm in a small Irish village¹⁶¹. Lufthansa has transferred its accounting center for used flight tickets to India¹⁶².

But the Internet not only makes trade much easier; it also facilitates the business of organizing firms at arm's length, thereby providing additional impulses to the search for hybrid solutions between contract and organization¹⁶³. The term 'virtual companies' is on the march¹⁶⁴. Firms exist, for example, in California that accept orders for tailor-made goods and then have them made up by subcontractors in Asia at low wage rates¹⁶⁵. Other firms put together ad hoc teams for each new entrepreneurial activity, comprising both in-house employees and persons not employed by the firm¹⁶⁶.

Finally, foreign direct investment will be much simpler via Internet. An investor wishing to avoid the state's grasp therefore no longer needs to restrict himself to portfolio investments. He can instead place a direct investment. As the owner, he has a much greater influence on the business risk. He therefore no longer needs to spread his foreign risks as widely. He receives the risk premium himself instead of it being received by the company in which he has invested his capital.

Partial exit allows the uncoupling of state services. Economically speaking, the state has traditionally produced a highly-aggregated bundle of services, which encompasses everything from national defense and domestic security, to children's education, as well as antitrust and private law. Inhabitants were unable to unfasten this bundle. Hence, anyone not wishing to avail themselves of all

¹⁵⁶ More from *Dertouzos* (footnote 9) 169.

¹⁵⁷ *Friedrich L. Sell*: Anforderungen an immobile Produktionsfaktoren vor dem Hintergrund der Globalisierung, in: *Hartmut Berg* (ed.): Globalisierung der Wirtschaft: Ursachen - Formen - Konsequenzen (Schriften des Vereins für Socialpolitik NF 263) 69-101 (80).

¹⁵⁸ *Christian Kirchner*: Kommentar [zu Hannelore Weck-Hannemann: Globalisierung: Herausforderung oder Anwendungsfall der neuen politischen Ökonomie?, in: *Jahrbuch für neue politische Ökonomie* 17 (1998) 84-107], in: *Jahrbuch für Neue Politische Ökonomie* 17 (1998) 108-112 (108f).

¹⁵⁹ *Henning Klodt*: Globalisierung: Phänomen und empirische Relevanz, in: *Jahrbuch für Neue Politische Ökonomie* 17 (1998) 7-34 (9).

¹⁶⁰ *Jörg Becker/Daniel Salamanca*: Globalisierung, elektronische Netze und der Export von Arbeit, in: *aus politik und zeitgeschichte* 42/97, 31-38 (31).

¹⁶¹ Just above.

¹⁶² Just above 32f.

¹⁶³ Such hybrid forms are the central research theme of *Oliver E. Williamson*: Die ökonomischen Institutionen des Kapitalismus. Unternehmen, Märkte, Kooperationen (Die Einheit der Gesellschaftswissenschaften 64), Tübingen 1990, 187-237.

¹⁶⁴ *Sell in Berg* (footnote 157) 80.

¹⁶⁵ Just above 80.

¹⁶⁶ *Michael de Vries*: Das virtuelle Unternehmen. Formentheoretische Überlegungen zu Grenzen eines grenzenlosen Konzepts, in: *Andreas Brill/id. (ed.): Virtuelle Wirtschaft. Virtuelle Unternehmen, virtuelle Produkte, virtuelles Geld und virtuelle Kommunikation*. Opladen 1998, 54-86 (59).

these services thought very carefully about the question of emigrating abroad, since in a new country they would also only be able to receive a different but similarly aggregated bundle of state services. Partial exit provides precisely the means of splitting up this bundle. Those who are clever can treat the state like a cafeteria, only sampling palatable dishes.

The possibilities of unbundling public services go even further. With the aid of the Internet, well-organized social actors can also take on tasks of which only the state was traditionally capable, since the Internet drastically sinks the transaction costs of many activities. An extreme example is private money. Up till now, only the state was able to provide a uniform yardstick of value, an instrument for transferring values and postponing consumption into the future.. To do this, the state used its central bank. Recently, however, serious plans to introduce private money have been announced. It would primarily be used to effect micro payments¹⁶⁷. In the past, the organization of markets was also only generally possible with the assistance of the state. Classic examples are stock exchanges. Organized markets were needed to allow some goods to become tradeable items in the first place. Others could, without access to an organised market, only be traded among a small number of persons, such as is the case with stocks and shares¹⁶⁸. In the age of the Internet, many companies no longer need this assistance. Classic examples are computer exchanges.

Finally, the Internet makes it much simpler to protect oneself from the interfering influence of third parties. The possibilities of self-help will occupy us more closely¹⁶⁹. At this point, it suffices to say that government is then also no longer needed as a protective state.

d) Virtual Exit

The last exit option, that of virtual exit, is based on a feature of most legal orders. In this case, the regulatory object proper is left completely untouched, but the regulatory addressee manages to give his behaviour an appearance such that the unwelcome legal rule no longer has an effect.

Occasionally, this already succeeds on the level of material law. This is where, for example, the old legal argument of antitrust law belongs concerning the correct determination of the relevant territorial boundaries of a market. Companies regularly attempt to convince the antitrust authorities and courts that they should take into consideration the global market rather than the German one. This is particularly relevant for those provisions of antitrust law that are based on market domination, since those who appear to be dominant players in the German market may not be anywhere near so in the much larger global market. The Internet supplies new arguments for this, since the transaction costs for global trade are sinking. It will, however, only come to virtual exit if the company succeeds in convincing the cartel authorities that the foreign competition is greater than in reality, since otherwise, the company really would be controlled by the global market. German cartel law would then indeed have no reason to intervene.

More important from a practical point of view is virtual exit where a company creatively plays with the rules of conflict of laws. The rules of private international law decide on which national law is applied to cases with foreign contact. They rest on the basic idea of harmony in international decisions. States are thus prepared, in principle, to allow their own law to take a step down. This willingness is primarily restricted to private law¹⁷⁰. Which law finds application is decided by conflict law with the aid of connecting factors. In accordance with article 15 I, combined with article 14 I 1 EGBGB, for example, the validity of an agreement on property and income is governed by the laws of the state to which both spouses belong¹⁷¹. For reasons of legal security and practicality, conflict of laws uses very simple connecting factors, which in this case is the joint nationality of the spouses. The further the connecting factor is away from the regulated phenomenon, the more easily an area for virtual exit is

¹⁶⁷ An overview of projects and possibilities is provided by *Froomkin* (footnote 31) UPittsbJLC 1996. 450-471; see further under V 3.

¹⁶⁸ Stimulating in regard to organized markets *Rudolf Richter/Eirik Furubotn*: Neue Institutionenökonomik. Eine Einführung und kritische Würdigung (Neue Ökonomische Grundrisse [1]) Tübingen 1996, 309-351.

¹⁶⁹ See below VIII 6.

¹⁷⁰ See more below under VIII 3c).

¹⁷¹ In reality, of course, things are much more complicated. See for instance the many further regulations in art. 14 and 15 EGBGB, the rules of art. 4 (1) EGBGB on *renvoi* and the rules of art. 6 EGBGB in regard to the *ordre public*.

created. The regulatory addressee can, namely, simply restrict himself to changing the connecting factor, without removing the regulated activity from this country¹⁷².

e) Tax Evasion

The opportunities opened up by the Internet for physical, partial or virtual exit lessen not only the state's direct regulatory possibilities; every single one of them also has an effect on the tax laws. Capital, which is already more mobile than labour, becomes even more so via the Internet, thereby removing it more and more from the access of the treasury. Partial exit often precisely serves the purpose of moving those portions of the value creation chain abroad that are burdened by high taxes. Finally, the highly complex German tax laws open up a possibility every now and then for virtual exit. These are then popularly known as tax evasion holes.

The erosion of the tax base is not only of significance for the tax laws. Financial means are taken away from the state that it could otherwise employ to guide the behaviour of its citizens. New subsidies are, for example, only possible if the state reduces other services. The comparatively expensive implementation of command and control regulation can thereby become prohibitively expensive. The state can already see itself pressured for fiscal reasons into grasping at other governance tools such as the voluntary restraint agreements which have already been mentioned¹⁷³.

3. Destabilization

The terms exit and voice have positive connotations. They describe how the members of an organization will manage to succeed in ensuring that the management, by and large, really does subjugate itself to the wishes of its members. The positive connotation implicitly assumes that the traditional and the newly-created governance tools are functionally equivalent. This supposition does not always hold true. If it does not, the Internet can then lead to destabilization. More carefully and probably more accurately formulated: suitable governance tools have yet to be found for the new possibilities of action that individuals now possess.

The Internet can have destabilizing economic, political and social effects. In an economic sense, it can increase the inherent stabilization problems present in every market economy. They are most apparent in the cyclical risks in financial markets¹⁷⁴. Many economists fear that these risks will be increased through private electronic cash¹⁷⁵. International trade in foreign exchange is mainly handled electronically. In 1995 already, a fifth of annual global trade in goods and services was turned over on the foreign exchange markets in a single trading day¹⁷⁶.

The worry about political destabilization can be traced back to the anarchic potential of the Internet. Suppliers of outlawed contents might manage to remove themselves from all forms of state control. German national socialists, for example, are already tightly organized through the Internet¹⁷⁷. In addition, key political decisions for a population of 80 million can only be made if the room for manoeuvre has been previously restricted to just a few possibilities¹⁷⁸. This agenda setting become less likely, the more the traditional media lose ground in favour of single issue intermediaries.

¹⁷² German conflict law is increasingly influenced by a trend coming from the USA. It brings the connecting factors closer to the regulated problem. This can be clearly seen from art. 29 EGBGB in regard to consumer contracts and from art. 30 EGBGB regarding labour relations. As a result, the room for virtual exit shrinks. I owe this reference to *Wolf Osthaus*.

¹⁷³ See above footnote 149.

¹⁷⁴ See also *Martin Hellwig*: Systemische Risiken im Finanzsektor, in: *Dieter Duwendag (ed.): Finanzmärkte im Spannungsfeld von Globalisierung, Regulierung und Geldpolitik* (Schriften des Vereins für Socialpolitik NF 261) Berlin 1998, 123-151.

¹⁷⁵ More detail under V 3.

¹⁷⁶ *Edzard Reuter*: Recht und Ökonomie im Zeitalter der Globalisierung. Gedanken zu einem schwierigen Wechselverhältnis (Juristische Studiengesellschaft Karlsruhe 220) Heidelberg 1997, 2: Daily foreign exchange trade amounted to \$1.35 trillion, annual global trade in goods and services around \$6 trillion. The gross domestic product of German industry in 1994 amounted to \$3.3 trillion.

¹⁷⁷ See also below VII 3.

¹⁷⁸ In the economic thought experiment, there may either be just two possibilities or no more than two actors. More detail on the so-called *Condorcet paradoxon* *Peter Bernholz/Friedrich Breyer*: Grundlagen der Politischen Ökonomie. II

On the border between political and social effects the fear exists that the Internet could lead to a disintegration of society¹⁷⁹. In addition, in the age of globalisation, the flexibility for redistribution ordered by the state becomes smaller. This directly results from the difficulties in taxing mobile factors¹⁸⁰. One of the most important instruments for reducing social tension thereby loses its efficacy. Finally, the Internet leads to the creation of a new class in society. The privileged ones are those who possess the technical, language and psychological ability to use the advantages of the Internet¹⁸¹. The greater the number of people unable to do so, the more attractive the flight into simplicity becomes. This could give religious sects new impetus. Such doctrines of salvation could finally gain influence on state decisions. Some even fear a new 'Holy War' against all that is modern¹⁸².

4. Transformation of Statehood

Ultimately, the Internet forces a deep-seated transformation of statehood, partly by itself and partly in joint cooperation with other globalisation elements. The new possibilities of voice¹⁸³ shatter the rigid German idea of a representative democracy. In the long run, the constitution will have to react to increased political influence between elections by liberalizing referenda and votes. The vulgarization of the intermediaries will, in the long term, undermine the privileged constitutional position of the parties and mass media. The desire will grow to meet the increased factual possibilities for information with formal freedom of information. While the state can attempt to influence self-regulation and self-assistance as the most effective instruments of governance, even if it succeeds, democracy and the rule of law will considerably lose ground.¹⁸⁴

V. Consequences for External Sovereignty

The Internet is capable of restricting the sovereignty of the state in many ways. It does not stop at national boundaries (1). It impedes the sovereignty of nation states in regard to information (2), currency (3) and values (4). This is why it has the potential of disintegrating the nation states (5). Autonomy becomes prohibitively expensive for a nation state (6). The traditional forms of statehood will be affected (7). New international conflicts arise (8).

1. Territorial Sovereignty

State boundaries play neither a technical nor an economic role in the Internet¹⁸⁵. This weakens sovereignty in a two-fold manner. If the state considers a technical or economic aspect, or a question of content, to be in need of regulation, the regulatory object lies outside its jurisdiction to a large extent. Even its sovereignty over persons and institutions scarcely helps it further. From a political science viewpoint, the state therefore sees itself confronted with a problem of multi-level governance, much as is the case with protecting the climate or the atmosphere¹⁸⁶.

Ökonomische Theorie der Politik. Tübingen³ 1994 54-69. The unordered political reality manages to be ready even with a somewhat more complicated situation. But it also cannot manage to fit many objects or interest groups together.

¹⁷⁹ More details on this under V 5.

¹⁸⁰ See just 2e).

¹⁸¹ See above 1e).

¹⁸² Kenniston in Engel/Keller (footnote 80) *** [7-8] reports the fear of Benjamin Barber of a "jihad" or an exclusively cultural nationalism.

¹⁸³ See above 1.

¹⁸⁴ See Engel Selbstregulierung (footnote 149) [40-50] ***.

¹⁸⁵ See above I 1.

¹⁸⁶ Compare Steger Globalisierung (footnote 151) 61: "Das Auseinanderfallen des staatlichen Handlungsraumes und der Reichweite der Probleme stellt die Funktion des Nationalstaats auf den Prüfstand".

However, the Internet is no natural phenomenon. It is both made and used by people. These people do not necessarily have the world's general well-being or the well-being of a particular nation state in mind. On the contrary, they will often seek their own advantage. The Internet expands the possibilities of exerting strategic influence on national regulations. This applies firstly to regulation of the Internet itself. The USA would, for example, like to regulate electronic gambling, but have problems with this approach, because the gambling operators have, as a precaution, established their businesses in the Caribbean. And we already know that the Internet presents new possibilities for exit in many other areas of life¹⁸⁷. They also simultaneously weaken the sovereignty of the state.

2. Sovereignty of Information

Even in the past, states never had complete sovereignty of information. Flyers jettisoned from aircraft, the spill-over of terrestrial frequencies and direct-transmission satellites allowed the penetration of foreign content¹⁸⁸. People travelled and communicated by telephone, thus allowing information to spread abroad. But both the former have become so much easier with the Internet that the idea of a state's sovereignty on information no longer makes much sense¹⁸⁹. This is because the Internet is not only very cheap and very simple, it is also very safe and, if desired, secret and anonymous¹⁹⁰. Of lesser concern is propaganda of a foreign state. Yet the people do receive an insight into foreign ways of life, get to know know other political institutions and are capable of comparing their own country much more precisely with other countries. This is not only useful to foreign states, but also to non-governmental organizations. With the aid of the Internet, environmental organizations succeeded in making certain topics the subject of international negotiations¹⁹¹. Anyone wishing to gather information can access foreign data bases¹⁹². National security mongering often falls apart in a networked world because of foreign openness. Anyone wishing to read secret German government documents can often obtain them with the aid of the American Freedom of Information Act, because the German government has seen itself forced to consult its American partner on a particular issue and has sent them a copy of the pertinent documentation for the purpose.

In contrast, it is becoming more and more difficult for nation states to hide events in their territory from the eyes of the world public. Students of an American law school, for example, ensure that information from Bosnia and Kosovo is constantly available on the Internet¹⁹³. In this way, foreign states and non-governmental organizations can exercise much better control as to whether a state upholds its obligations to its people under public international law.

3. Currency Sovereignty

We have already spoken several times about the possibility of private electronic money¹⁹⁴. Technically, this is possible¹⁹⁵. Economically, electronic money is so attractive because this is the only way that micropayments can be made¹⁹⁶. Anonymous electronic money is also the securest method of preventing personality profiles being deduced from electronic payments¹⁹⁷. Since electronic money represents a substitute for credit cards, it remains to be seen, however, whether the

¹⁸⁷ See above IV 2.

¹⁸⁸ On the older discussion in public international law see *Christoph Engel: Das Völkerrecht des Telekommunikationsvorgangs*, in: *RabelsZ* 1985, 90-120.

¹⁸⁹ Compare *Brock* (footnote 7) apuz 33-34/97, 17: "Die Verbreitung von Wissen [ist] wesentlich schwerer einzudämmen oder zu kanalisieren [...] als der Export von Gütern".

¹⁹⁰ More details above I 4 and 5 as well as 9-11.

¹⁹¹ More from *Perritt* (footnote 105) *JILS* 1997, 155.

¹⁹² Immediately above.

¹⁹³ Both initiatives are originate from the Chicago-Kent College of Law, <http://pbosnia.kentlaw.edu> (2.3.1999); <http://www.kentlaw.edu/kosovo> (2.3.1999); further examples in *Froomkin* (footnote 31) *UPittsbJLC* 1996, 506.

¹⁹⁴ See above II 3b) and IV 2c).

¹⁹⁵ Overviews are provided, inter alia, by *Achim Bühl: Cybermoney oder die Verflüchtigung des Geldes*, in: *Andreas Brill/Michael de Vries (ed.) Virtuelle Wirtschaft. Virtuelle Unternehmen, virtuelle Produkte, virtuelles Geld und virtuelle Kommunikation*, Opladen 1998, 224-240; and *Aleksander Berentsen: Digitales Geld, Geldmenge und Geldpolitik*, id. 251-264.

¹⁹⁶ See already above II 3b) and *Froomkin* (footnote 31) *UPittsbJLC* 1996, 454.

¹⁹⁷ Id.

credit card companies can prevent the creation of this new market. Visa has in any case just purchased the technically most ambitious project, Mondex¹⁹⁸.

Electronic money could allow *Friedrich-August von Hayek's* vision of private money¹⁹⁹ and *Knut Wicksell's* of an economy based totally on credit²⁰⁰ to become reality. Central banks would lose their ability to control the quantity of money in circulation. Anonymous electronic money is even more anonymous than cash²⁰¹. One thing both have in common is that the payment record cannot be traced. But on top of that, with anonymous electronic money, the buyer and the purchaser can even avoid meeting personally²⁰². This will facilitate money laundering and, to a very great extent, withdraw monetary assets from the control of the state.

4. Sovereignty of Values

Values fulfill individual and social functions. They facilitate an individual's orientation and decisions. Both ultimately fuse together, since without preconceptions, an individual cannot comprehend his environment. However, this preconception is inevitably based on value judgements²⁰³. The social function of values can best be explained in terms of system theory. In order for individuals to be able to live together, values create the code that allows communication in the first place²⁰⁴. Values are conveyed about education, socialization and enculturation. Admittedly, cultures were never completely identical, confined to the borders of a single state, and culture was always more of a social phenomenon than one of the state. But cultural ties were normally more territorial and local than personal. If they were personal, they were primarily linked to nationality. That is why the state and society were able to form a joint culture.

This has become more difficult in the Internet. Space and time play no role here²⁰⁵. People come into contact with foreign cultures much more frequently and intensively than before²⁰⁶. Missionary type cultures can actively attempt to expand their sphere of influence. The less the Internet differentiates into language and culture zones²⁰⁷, the more it could lead to a global monoculture of English and the American Way of Life²⁰⁸. Alternatively, the various cultures could differentiate themselves more and more according to specific strata of society, career origins or ideological orientations. The elites might become culturally homeless²⁰⁹. Many people will be able to live in several cultures simultaneously. An optimistic version connects a local bond in the stricter sense with other professional or ideological links that are not tied to a particular place. Precisely this modern solution to the problem could generate another problem of its own. People not able to cope with the virtuoso game of playing several roles could grasp the flight into simplicity and search for their identity within firmer ideologies²¹⁰.

It is hard to predict which one of these trends will ultimately succeed, but all agree that a loosening of the congruence between cultural zone and the nation state will occur²¹¹. At the same time, people's

¹⁹⁸ I owe this reference to *Saskia Sassen*.
¹⁹⁹ *Friedrich August von Hayek*: Denationalisation of Money: the Argument Refined. An Analysis of the Theory and Practice of Concurrent Currencies (Hobart Paper Special 70) London 1990.
²⁰⁰ *Knut Wicksell*: Geldzins und Güterpreise. Eine Studie über die den Tauschwert des Geldes bestimmenden Ursachen, Jena 1898 (Aalen² 1984).
²⁰¹ This holds at least true for the Internet payments offered by the e-cash system of the company DigiCash. Compare *Aleksander Berentsen*: Monetary Policy Implications of Digital Money, in: *Kyklos* 51 (1998) 89-117 (92); *Jörg Bibow/Thorsten Wichmann*: Elektronisches Geld. Funktionsweise und wirtschaftspolitische Konsequenzen, in: *RWI-Mitteilungen* 47 (1997) 115-139 (124).
²⁰² Compare *Richard W. Rahn*: The New Monetary Universe and its Impact on Taxation, in: *James A. Dorn (ed.): The Future of Money in the Information Age*, 81-89 (82).
²⁰³ For details see *Hans Albert*: Traktat über rationale Praxis (Die Einheit der Gesellschaftswissenschaften 22) Tübingen 1978.
²⁰⁴ For details see *Baecker* in *Engel/Keller* (footnote 49); on both functions and their inner connection *Kersting* in *Engel/Keller* (footnote 140)***.
²⁰⁵ See above I 1 and 3.
²⁰⁶ *David* in *Engel/Keller* (footnote 11) *** [21].
²⁰⁷ See above on this II 4.
²⁰⁸ Details in *Kenniston* in *Engel/Keller* (footnote 80) *** [2-5 und passim].
²⁰⁹ *Henning Klodt*: Globalisierung: Phänomen und empirische Relevanz, in: *Jahrbuch für neue politische Ökonomie* 17 (1998) 7-34 (9f.); see also *Brock* (footnote 7) apud 33-34/97, 18: national cultures are replaced by globalized cultures of experts.
²¹⁰ See already above IV 1 e).
²¹¹ I owe this thought to *Fritz W. Scharpf*.

access to information will differentiate itself more and more. News filters will lead to customized media²¹². People will no longer necessarily take notice of the news all at the same time. It remains to be seen how successful push technologies will become²¹³. A process thus gathers impetus that already began with the differentiation of the print media and the privatization of electronic media. We no longer see only a few intermediaries who, so to speak, set the people's political agenda themselves. Finally, political institutions also lose terrain as governance instruments. Many questions are more effectively able to be overcome via self-regulation or self-help. That is why it would be irrational if individuals turned their attention mainly to the activities of political institutions²¹⁴.

5. Disintegration

Political institutions do not serve a purpose in themselves. When historic cultures come to an end, initially only nostalgic regret is sparked off. It is different, however, if people's whole behaviour is altogether less embedded in values rather than simply one value being replaced by another, or one culture by another. The "cognitive card" of these individuals, will then, namely, become much more uncertain²¹⁵. Social cohabitation becomes more difficult. Much which was previously taken for granted, now needs to be secured via rules of law²¹⁶. People need to exert much more effort in order to create a reliable intersubjective information system²¹⁷. This impacts on the functioning of a market economy, since only in the case of a spot contract for a standardized good do the contractual parties go their own separate ways immediately following the agreement's conclusion. If a delivery is made on credit, or if the purchaser cannot immediately evaluate the quality of the wares, the parties are necessarily bound to each other for a longer period. This is particularly the case when, within a company, exchange is replaced by the principle of organization, or if one of the endless hybrid forms between agreement and organization is employed²¹⁸. All these forms yield gains from cooperation only if and when the parties can bring with them a minimum willingness to bear a risk. If they want to cover themselves against every possible risk, the agreement will, at best, be a zero-sum game²¹⁹. Without a minimum of trust, particularly towards persons whom one has not known previously, a market economy cannot increase the general prosperity. Until now, this trust has had its roots in the common culture of the parties to the transaction²²⁰.

The Internet could have the potential of eroding the embeddedness of behaviour in values, for which there is a psychological as well as a sociological indicator. Psychologists point to the fact that intrinsic motivation is easy to destroy but difficult to build²²¹. In the Internet, people are confronted frequently and intensively with other cultures. No-one initially notices if their attitude leans away more and more from that of their own cultural heritage. The originating culture therefore has little opportunity to strengthen a shaken orientation of values. Those who wish, can almost completely avoid other people in the Internet. They can at any rate remain anonymous²²². Even those giving their name do not come face-to-face with a conversation partner in the Internet. If one omits the virtual communities, people in the Internet often meet each other in a decontextualized environment²²³. All this has considerable psychological significance. For it is precisely by face to face contact and by context that value orientations are strengthened²²⁴.

²¹² Dertouzos (footnote 9) 121.

²¹³ See above II 5.

²¹⁴ Compare a formulation that I owe to Saskia Sassen: "The political space is being reconfigured".

²¹⁵ Knight (footnote 130) 88f.

²¹⁶ Knight (footnote 130) 194f.

²¹⁷ David in Engel/Keller (footnote 11) *** [7].

²¹⁸ Compare the reference already mentioned in footnote 163.

²¹⁹ Scharpf Games Real Actors Play (footnote 148) 97.

²²⁰ Economics is now beginning to take on these questions. One analysis which is not convincing in each and every aspect is offered by Tanja Ripperger: *Ökonomik des Vertrauens. Analyse eines Organisationsprinzips* (Die Einheit der Gesellschaftswissenschaft 101) Tübingen 1998.

²²¹ More details from Bruno S. Frey/Iris Bohnet: Die Ökonomie zwischen extrinsischer und intrinsischer Motivation, in: *Homo Oeconomicus* 11 (1994) 1-20.

²²² Compare Froomkin (footnote 31) UPittsbJLC 1996, 405: "digital anonymity exacerbates the trends that are producing a society of strangers"; Thompson in Engel/Keller (footnote 79) *** [9] then talks of "propinquity without community".

²²³ I owe this reference to Robert Adams.

²²⁴ More details from Iris Bohnet: *Kooperationen und Kommunikation. Eine ökonomische Analyse individueller Entscheidungen* (Die Einheit der Gesellschaftswissenschaften 98) Tübingen 1997, especially 30-34.

From a sociological perspective, the problem is not one of changing values. Society's stock of values was never stable. That taboos are broken is also not a problem. On the contrary, the cohesion of a society becomes manifest in the common defence of a taboo. But social cohesion becomes more difficult when the Internet demands changing values in rapid succession from a society, or when many values are simultaneously affected. For not only the building up of intrinsic motivation needs time - the grouping of a society or a social subsystem around a new code also does²²⁵.

6. Prohibitive Costs of Autonomy

Even the Internet cannot change territorial jurisdiction. In most states it corresponds now as then with the factual power over activities in its own territory. But even if it so desired, a state would find it hard to prevent every connection to the Internet within its borders, since digital signals can also be transmitted via satellite²²⁶. Additionally, wired transmissions use existing telecommunications lines²²⁷. The state thus cannot simply forbid every physical connection to the Internet, if it does not wish to simultaneously cut itself off from worldwide telephone traffic. At the very most, it can attempt to filter all signals that have been transmitted as packets²²⁸.

But it is primarily the costs of such an autarkic strategy that are prohibitive – a course upon which only North Korea and Myanmar have embarked²²⁹. This is because the Internet does not only transport problematic signals that are capable of endangering the inner stability or cultural homogeneity within a country. Its main function is as a tool for international exchange in the sciences and economics. China and Singapore are, nonetheless, still attempting to attach strict conditions to Internet access in their countries²³⁰. Yet Singapore has already had to accept a number of setbacks in this regard. Initially, it had only issued a licence for a single Internet access provider. In 1995, out of fear of pornographic pictures, the government forced this provider to scan 80,000 files with the suffix .gif, an action which did actually also succeed in unearthing five pornographic pictures. The government has not repeated this one-off experiment, because foreign companies with a subsidiary in Singapore feared that, in this manner, their confidential e-mails would be exposed²³¹. In the meantime, Singapore has relaxed its policy even further. Only households are still obliged to use this access provider, whereas companies can now obtain direct access to the Internet. They only have to commit themselves to ensuring that their employees consume only permissible content²³².

At best, all other countries around the world intercept Internet use on a random basis. This has repercussions on their freedom to choose an economic constitution and an orientation towards a particular set of values. The Internet namely destabilizes authoritarian regimes and stabilizes liberal and flexible ones²³³. The Internet therefore brings about an acceleration in the modernisation of state and society²³⁴. In the end, this could also alter the political culture in Germany. While Germany is a democratic country, it is more corporatist than liberal. The corporatist interplay between many inwardly relatively closed groups can profit much less from the new technical, journalistic and economic possibilities of the Internet than the individualistic American society. In the attempt not to fall behind either economically or politically, the political culture in Germany could simultaneously undergo change²³⁵.

7. Transforming Statehood

²²⁵ I owe this thought to *Dirk Baecker*.

²²⁶ See above I 8.

²²⁷ More details above I 2.

²²⁸ More details just above.

²²⁹ *Froomkin* (footnote 31) UPittsbJLC 1996, 445 and references.

²³⁰ More from *Goldsmith* (footnote 32) UCLR 1998, 1228.

²³¹ *Froomkin* (footnote 31) UPittsbJLC 1996, 446f..

²³² I owe this reference to *Herbert Burkert*.

²³³ *Henry Perritt*, reported by *David G. Post*: The "Unsettled Paradox": The Internet, the State and the Consent of the Government, <http://www.cli.org/sov.html> (12.02.1999) 2.

²³⁴ *Kersting* in *Engel/Keller* (footnote 140).

²³⁵ *Werle* in *Engel/Keller* (footnote 12) *** [2, 12] und passim.

Statehood will be transformed not only on account of the new possibilities of exit and voice, but also on account of the new shake-ups in sovereignty. For one, the state will become less important as a protective entity. It has neither power on its own nor with the cooperation of other states to control the activities taking place in the Internet. It is therefore unable to provide this protective service to its citizens²³⁶. In this respect, the Internet is part of the globalisation process. It forces states to define themselves for the most part by way of issues with a genuine link to territory: inner and outer security, use of land and the resolution of local environmental problems. Participation in national politics therefore becomes less attractive to citizens²³⁷. The power of regulation migrates to the international community and to self-steering mechanisms. We will see that democratic, legitimate national parliaments can exert influence²³⁸, but they no longer carry sole responsibility for regulatory activity and also do not exercise complete power over same.

In addition, the possibilities of exit²³⁹ force the nation states to strike at weaker substitutes with their regulations. A glance into the rules of attribution contained in the Media Services Treaty of the German Länder and the Federal Information and Communications Services Act is very informative in this regard²⁴⁰. Of course, German justice would prefer to prosecute the originator of illegal contents. But this is often a hopeless undertaking in the Internet, because the originator chooses either a state with liberal rules or one that has no effective enforcement powers. In order to overcome this, German law then strikes out at the user. In accordance with 184 StGB (criminal code) it is thus not only the person who fabricates pornographic material about children who commits a criminal offence, but also anyone distributing, purchasing or even viewing it. For the criminal investigation authorities this rule represents a Danaer gift. For instead of controlling a few manufacturers, they must now attempt to control the whole consumer scene.

The Media Services Treaty and the Information and Communications Services Act also allow, in principle, for the prosecution of an organized online service provider who offers problematic content, instead of against its originator. At first glance, this improves the regulator's situation, since it covers providers such as T-Online, AOL or CompuServe. But, in the medium term, this is not very helpful. The problematic contents move to less well-organized services or services that are completely unorganized. It is no coincidence that the majority of problematic contents are simultaneously especially attractive commercially. This is particularly true of sex and crime. If organized providers do not wish to be pushed out of business they will also organize themselves in the long run in such a way that regulation can no longer tangent them. In the end, all that remains is the plain Internet provider. German law is provident enough not to attribute the Internet's contents to it. Even if a legal system sought to proceed differently, it would scarcely be of use, since we already know that one needs practically no capital in order to become an Internet provider. Backyard providers would therefore still keep mushrooming. If there is sufficient willingness to pay, the users can in any case deviate to low earth orbit satellite systems. In the case of Teledesic, virtually all its intelligence is located on the satellite. So not even the provider's technical headquarters remain as a hostage on Earth²⁴¹.

In other regards, too, the Internet forces national regulators to revert to weaker substitutes. Thanks to packet transmission, states can mostly only just determine that someone has accessed a problematic site, but they are unable to prevent the use of its contents²⁴². The only course that remains is to subsequently proceed against the user by means of criminal law or command and control regulation. If this user has been tipped off, he will encrypt the signal²⁴³. In this case, it is then only possible to determine that he has received or sent an encoded signal. If he also uses a remailer²⁴⁴, it can only be determined that he made an anonymous communications transaction.

²³⁶ Saskia Sassen: Sovereignty and the Internet, in: *Christoph Engel/Kenneth Keller* (Ed.): *Understanding the Impact of Global Networks on Local Social, Political and Cultural Values* *** [3].

²³⁷ Compare Steger (footnote 151) 41.

²³⁸ See below VIII 4.

²³⁹ See above IV 2.

²⁴⁰ Media Services Treaty of 01.08.1997, GVBl. Hessen 1997 I 135; Informations- und Kommunikationsdienste-Gesetz of 22.07.1997, BGBl. 1997 I 1870. The rules of attribution are laid out in paragraph 5 of both documents.

²⁴¹ See above I 8.

²⁴² See above I 9.

²⁴³ See above I 10.

²⁴⁴ See above I 11.

8. Potential for International Conflicts

The potential for international conflicts increases on account of the Internet, as every state is now a potential neighbour. Most conflicts therefore gain a multilateral character. Conflicts of jurisdiction increase²⁴⁵. It becomes more difficult to organize the co-existence of different ideologies, state constitutions and economic orders. Many of these are existential conflicts, not merely conflicts of interest²⁴⁶. From the point of view of an individual state and its government, the more vibrant competition between systems is felt as an international conflict²⁴⁷.

At the same time, nation states are forced more and more to coordinate with other nations, because only thus can they achieve their political objectives²⁴⁸. But this makes tolerance towards other ideologies even more painful.

Finally, the destabilization of national societies and states is a source of new, international conflict. States defend themselves when foreign groups seek to gain influence on their political way of life, or even join up together with domestic groups. Taking the Kurds as an example, it has just become quite apparent how effective minorities can meanwhile organize themselves across borders. Defensive reactions of local cultures prepared to use force can even lead to civil war and, in turn, endanger international peace²⁴⁹.

Additionally, the Internet brings changes in the comparative economic and political advantages of states²⁵⁰. This can lead to further impoverishment of the poorer nations²⁵¹. Alternatively, previously successful nations fall behind on account of competition. This could happen precisely to Germany, if it turns out to be correct that a corporatist society cannot use the new opportunities well.

Finally, the technology itself creates new conflicts. Many developing countries refuse to accept that the satellite systems close to the Earth, Iridium and Teledesic, necessarily cover every place around the globe, since these developing countries have no influence, of course, on the commercial and journalistic decisions of the operators²⁵².

VI. Efficacy Losses of the International Community's Traditional Solutions

Tried and tested solutions of the international community lose their effectiveness through the Internet. This primarily concerns sovereignty (1), possibilities for the legal management of co-existence (2) and opportunities for overcoming international conflicts via a treaty (3).

²⁴⁵ See more details under VIII 3b) on the extra territorial application of national law.

²⁴⁶ *Kersting* in *Engel/Keller* (footnote 140) [***].

²⁴⁷ See above before I and IV 2.

²⁴⁸ *Beck* (footnote 107) apuz 38-98, 6f.

²⁴⁹ Again see *Kenniston's* reference in *Engel/Keller* (footnote 53) *** [8], to *Benjamin Barber* and the worry of a Jihad.

²⁵⁰ *Grewlich* *Cyberspace* (footnote 8), Chapter One. 2. 2., Chapter Six. 2. 2. and passim.

²⁵¹ *Dertouzos* (footnote 9) 240-243 describes the disadvantages of black Africa.

²⁵² *Dertouzos* (footnote 9) 324f.

1. Sovereignty

The cornerstone of international law is the sovereignty of states. It effectively organizes communities. If Germany and France have a problem, it is not necessary for 130 million people to negotiate with each other. Two governments negotiate on their behalf instead. The Internet and globalisation do not abrogate sovereignty, but certainly weaken it. There are two reasons for this, which we have already noted. States are no longer monopolists: they are subjected to substitution competition from other states²⁵³. In other words: they are no longer complete masters in their own houses. In addition, many of the Internet's regulatory problems can only be resolved through international cooperation or self-regulation mechanisms²⁵⁴. Economically, both can be understood as the attenuation of political property rights²⁵⁵.

2. Co-existence

Traditionally, international law has considered the organization of co-existence between states to be its most noble task. It was precisely **not** concerned with pushing through a uniform concept of good politics or ethics for the entire world. On the contrary, each country was to the maximum extent possible supposed to be able to proceed in its own manner. The primary instruments for achieving this objective are the exclusive granting of sovereignty and the prohibition of intervention. Only one central area of conflict remained: the overlapping area of sovereignty over territories and nationals, which has led to the rules of public international law on the treatment of foreign nationals. Although after the Second World War, human rights and some material principles of the international community were added, they are still understood as rules of negative coordination. Their concern is that a state might intervene too much into the protected sphere of individuals. This orientation of general international law was sufficient and appropriate as long as power was mainly executed by means of command and control. As has already been suggested several times, this type of regulation is however only in exceptional cases suitable for regulating the Internet²⁵⁶. Even national legal systems find it hard to exert control over self-regulation or over self-help²⁵⁷. Much less well developed are the instruments of international law in regard to context governance.

It is hard for the international community to organize its co-existence in the Internet because the Internet has no headquarters. This is why the solutions found for the closely-related area of telecommunications policy provide no assistance here. In telecommunications policy, the International Telecommunication Union ITU has meanwhile successfully managed to organize the co-existence of diametrically-opposed telecommunications orders²⁵⁸. This was comparatively easy since, traditionally, there were just the national monopolies. In any case, telecommunications signals are transmitted continuously and from one point of the Earth's surface to another²⁵⁹, and the networks have a clearly-defined, mainly hierarchical structure. Conversely, in the Internet, signals are transmitted in packets, using unforeseeable transmission paths.

3. Agreement

Finally, the possibility of concluding treaties will also be shattered, since states will in many cases no longer be in a position to make credible commitments. Exit and voice mean that governments are no

²⁵³ See above in front of I.

²⁵⁴ See already above IV 4 and more under VIII 4-5.

²⁵⁵ I owe this analogy to *Giandomenico Najone*; for a comprehensive overview of the economic concept of property rights see *Thrainn Eggertsson: Economic Behaviour and Institutions*. Cambridge 1990.

²⁵⁶ See more details under VIII 2-3.

²⁵⁷ See *Engel* again, *Selbstregulierung* (footnote 149).

²⁵⁸ More from *Christoph Engel: Wege zur Bewältigung der Konflikte in der globalen Informationsgesellschaft*, in: *Ernst-Joachim Mestmäcker (Ed.): Kommunikation ohne Monopole II. Ein Symposium über Ordnungsprinzipien im Wirtschaftsrecht der Telekommunikation und der elektronischen Medien (Law and Economics of International Telecommunications 23)* Baden-Baden 1995, 179-210.

²⁵⁹ This will not alter until non-geostationary satellites are positioned, see above I. 8. Up till now, however, they were unable to permanently shake national telecommunications orders.

longer complete masters in their own households. We can also draw on another pair of terms: the alien state can no longer be sure that the logic of influence will always retain the upper hand over the logic of membership²⁶⁰. Additionally, outwardly, states can no longer promise with certainty that a third country will not be able to interfere in their domestic sphere, thereby frustrating the agreement. If the potential contracting party is able to do this himself, then the conclusion of a treaty will be less attractive to him. He can obtain the object of his desires by himself, without having to make contractual concessions. Economic contract theory can precisely explain why an international treaty then loses its effectiveness. This is exactly the consequence of attenuated political property rights²⁶¹. The subject of international treaties is, namely, the exchange of such rights. If these property rights are no longer well-defined, the mechanism of exchanging promises is weakened.

VII. New Demand for Supranational Rules

If we only had classic international law, an almost tragic situation would arise, in that this instrument would lose its effectiveness just at the moment when the need for it increases. Internet trade needs protection against the abuse of national sovereignty rights (1). The more international daily reality becomes, the less satisfying are institutions of a private law society that are grounded in national legal orders (2). The correction of market failure caused or increased by the net often only makes sense at international level (3). The following examples illustrate the demand for regulation.

1. The Removal of Obstacles to Internet Trade

The Internet is plagued by one of the oldest co-existence problems of the international community. Especially Germany, with its divided territorial history, has gained particularly intensive experience with this. If the next barrier at which customs duty is levied comes every few kilometers, international trade cannot flourish. It is equally bothersome if every transit state levies and collects its own tax. This problem is particularly serious in the Internet because precisely at the outset it is not clear which path the data packets will take²⁶². Not surprisingly, it is mainly the United States that is working on making Internet trade free of customs taxes, or at least a zone in which harmonized tax rates will apply²⁶³. Since 1998, it has made such trade tax-free for three years as far as its own laws are concerned²⁶⁴. In the World Trade Organization (WTO), it was only able to push through a standstill arrangement²⁶⁵.

2. International Institutions of a Private Law Society

Traditionally, international law has simply assumed the existence of private law orders on a national basis. At best, international agreements have unified the rules for coordinating these private law orders, by means of treaties harmonizing private international law. However, adjacent to this, uniform substantive rules have always existed, i.e. institutions of a private law society have been directly embedded in international agreements²⁶⁶. Typical examples are the conventions pertaining to laws on bills of exchange and also cheque laws. Through the Internet, the need for uniform rules has suddenly increased²⁶⁷. Copyright law²⁶⁸, digital signatures²⁶⁹, the electronic conclusion of contracts²⁷⁰, as well

²⁶⁰ See above footnote 121.

²⁶¹ See just above 1.

²⁶² See above I 1 and 9.

²⁶³ <http://www.whitehouse.gov/WH/new/commerce/index-plain.html> (11.12.1998).

²⁶⁴ *Werle* in *Engel/Keller* (footnote 12) *** [5].

²⁶⁵ More in *Grewlich Cyberspace* (footnote 8), Chapter Four. 2. 2..

²⁶⁶ Comprehensively *Jan Kropholler*: Internationales Einheitsrecht (Beiträge zum ausländischen und internationalen Privatrecht 39) Tübingen 1975.

²⁶⁷ See again the White Paper from the White House on Internet Trade (footnote 28) Principle No. 3, Recommendations No. 1-9.

²⁶⁸ Comprehensively on this point *Grewlich Cyberspace* (footnote 8), Chapter Eight.

²⁶⁹ More id. *** [194 et seq.] with references.

as electronic payments²⁷¹ are classic legal institutions. However, uniform rules concerning technical standards²⁷², the unique addressing of computers via IP-addresses²⁷³ and their transformation into domain names²⁷⁴ are also needed. Ultimately, national antitrust authorities have a hard time preventing market dominance over Internet activities, a danger of whose existence the public at large became aware through the Microsoft case. The work being carried out in the context of the WTO on an international antitrust law is therefore also important for the Internet²⁷⁵.

3. International Correction of Market Failure

There are certain goods with which markets cannot come to terms. With others, the question of whether alternative institutional arrangements can come to terms better than the market is not at all a trivial one. As is well known, economics speaks in both cases of market failure. There are sufficient examples of both in the Internet. It lies outside the power of a single nation state to overcome these problems.

Sometimes the Internet community has so far been unable to define or enforce property rights. Electronic violence can ensue, for example, by entering viruses into the system²⁷⁶. In a dispute, someone blocks the mail server of another person by sending enormously large programmes as attachments, or he sends messages in the name of a third party which damage that person's reputation²⁷⁷. Data security also belongs at this juncture²⁷⁸. Documents are falsified. The same is also done quite easily with pictures once they have been digitally scanned²⁷⁹.

Particularly vulnerable groups or interests demand protection. This is where data protection²⁸⁰, consumer protection from fraud in the net²⁸¹ or from unsolicited advertising belong²⁸². Even more pressing is the fact that the Internet lacks selection mechanisms and also institutions enabling it to forget²⁸³, rules on the management of information waste, so to speak²⁸⁴. Last, but not least, there are contents that many, if not all states, detest: child pornography, hate speech and instructions for building atomic bombs being only the most distasteful²⁸⁵.

VIII. Solutions

1. Introduction

²⁷⁰ More id. *** [62].

²⁷¹ See above V 3.

²⁷² More from *Dertouzos* (footnote 9) 83.

²⁷³ See above I 2.

²⁷⁴ Comprehensively on this point *Dertouzos* (footnote 9) 83.

²⁷⁵ Compare *Ernst-Ulrich Petersmann*: Proposals For Negotiating International Competition Rules in the GATT-WTO World Trade and Legal System, in: *Außenwirtschaft* 49 (1994) 231-277 and the contributions to *Wolfgang Fikentscher/Ulrich Immenga* (ed.): Draft International Antitrust Code, Baden-Baden 1995.

²⁷⁶ Details in *Dertouzos* (footnote 9) 287.

²⁷⁷ *Dertouzos* (footnote 9) 287 reports of antisemitic remarks, which a Canadian sent in the name of an American Internet provider.

²⁷⁸ The American government considers the lack of data security to be one of the biggest obstacles to the development of Internet trade, White Paper (footnote 267), Recommendation No. 6.

²⁷⁹ *Dertouzos* (footnote 9) 148-150 therefore reckons that electronic pictures will in future count as having as little authenticity as a typed text.

²⁸⁰ See also on this just White Paper (footnote 267) Recommendation No. 5.

²⁸¹ *Grewlich* Cyberspace (footnote 8), Chapter One. 2. 1..

²⁸² The Internet community then speaks of spamming. According to its code of ethics, it is one of the most serious crimes. More from *David R. Johnson*: Self-ordering for the Internet, <http://www.cli.org/selford/problems.htm> (12.02.1999).

²⁸³ I owe this plastic term to *Nicole te Heesen*.

²⁸⁴ Compare *Dertouzos* (footnote 9) 238, who speaks of "info-junk".

²⁸⁵ More in *Christoph Engel*: Inhaltskontrolle im Internet, in: AfP 1996, 220-227.

"Where there's danger, there's also a saviour," or so wrote Friedrich Hölderlin. Even in the Age of the Internet, the world will not sink into anarchy. States will not fall apart like clay giants. The Earth's system of political power has always demonstrated its ability to meet new challenges. Viewed absolutely, not a single legal system around the globe can protect the legal goods defined by it. It suffices therefore when problematic developments again become marginalized. It sometimes also suffices if public attention is turned to other matters²⁸⁶. Pragmatic willingness, not a Cassandra call, is needed to find reasonable solutions via trial and error. Historically, the development of statehood has always followed along the same lines as the possibilities of being able to exert power.

Moreover, it would be wrong to take a one-sided view at the loss of traditional instruments of power. For a long time in the USA, the discussion about the political effects of the Internet has even been formulated as the opposite of Athen to Orwell²⁸⁷. The state therefore also gains new instruments of power in the Internet of a technical, journalistic and economic nature. Once people transmit the majority of their communications via the Internet, many new monitoring possibilities open themselves up to secret services and investigation authorities²⁸⁸, as a person's whole communication behaviour is reflected in the log files²⁸⁹; electronic watermarks prove the falsification of documents²⁹⁰; a sniffer finds documents wherever they are located on the net; or a buddy alarms the monitoring authorities, as soon as someone logs into the net. If the state issues wireless identification cards, it can even depict a person's mobility behaviour²⁹¹.

The new journalistic possibilities of the Internet are not only used by minorities. They can be equally applied by the state for a clever public relations campaign or a propagandistic shaping of the political preferences of its citizens. Finally, it is not a settled state of affairs that the state always sees itself cast back to weaker substitutes²⁹². On the contrary, some believe that new targets will materialize to which the state will be able to apply regulation better than was previously the case²⁹³. The very fact that the Internet is itself a net, speaks for this thesis. Most of the Internet's uses also have network character. We already know that network goods represent a dynamic problem, in that a critical mass must first be reached. If a provider succeeds in this aim, subsequent competitors with more or less identical goods have an extremely difficult time. This insight has double importance for the regulator. The number of providers is endogenously kept small. And government can try to influence the attempt to gain critical mass²⁹⁴.

The possibilities of governing the Internet can be divided into five categories: a community of states can conclude a treaty (2); a single state can employ its legal system (3); non-state actors can create legal rules and enforce them (4), but they can also employ non-legal governance tools (5); and finally, people can completely manage without central control and resort to self-help (6).

2. Solutions by the International Community of States

In public, the impression is often gladly created of the community of states being powerless and therefore inactive in regards to the Internet. That is not correct. The international law system had already attended to some problems before the Internet was created. As far back as 1910, a treaty existed to combat the distribution of illicit publications²⁹⁵. The treaty concerned "illicit papers, drawings, pictures or objects that have an international character"²⁹⁶. This also fits electronic transmission. The treaty obliges the contractual states to proceed against such publications and to

²⁸⁶ See already above III.

²⁸⁷ Details from *Thompson* in *Engel/Keller* (footnote 79) *** [10], who, however, rightly considers it to be an impermissible abbreviation.

²⁸⁸ A horror scenario is found in *Dertouzos* (footnote 9) 293, who, however, believes it to be overemphasized.

²⁸⁹ See above I 11, but also at this reference the possibilities of anonymization.

²⁹⁰ Sometimes, however, the watermark can be removed via compression and subsequent decompression of the document.

²⁹¹ More detail by *Faber* in *Engel/Keller* (footnote 58) *** [5 f.].

²⁹² See above IV 4.

²⁹³ See the thesis of *Paul David* and *Klaus W. Grewlich*.

²⁹⁴ This should not, however, be viewed as a cure-all remedy. The state interferes with the incentives for creatively changing the system the more it has previously regulated the system. At the same time it provides an impulse for greater decentralisation. Hence regulation possibly prevents network externalities being taken profit from. Finally, the regulated firms will attempt to dissect the value creation chain so that they are no longer tangented by the regulation.

²⁹⁵ Treaty of 04.05.1910, RGBl. 1911, 209, as well as protocol of 04.05.1949, UNTS 30, 3 consolidated edition UNTS 47, 159. The Federal Republic has however not yet signed the changed treaty.

²⁹⁶ Article 1 I Nr. 1 of the Treaty.

support one another in their pursuit²⁹⁷. The Convention on the Prevention and Punishment of Genocide, dating from 1948²⁹⁸, obliges the parties to that agreement, inter alia, to criminalize the "direct and public incitement to commit genocide"²⁹⁹. That is also the case where such a demand is made in the Internet. The fact that the user first has to download it is just a means of dissemination. The International Convention on the Avoidance of All Forms of Racial Discrimination dating back to the year 1966³⁰⁰ forbids not only racially discriminating acts, but also racially discriminating words³⁰¹. The United Nations' Human Rights Pact from the same year³⁰² protects not only human rights; it also forbids war propaganda³⁰³ and "every encouragement of nationalistic, racial or religious hatred, which incites discrimination, animosity or violence"³⁰⁴. In addition, there is a UN convention on the right of correction from the year 1953³⁰⁵, to which the Federal Republic has not yet acceded.

There are also recent international agreements, the most important of which being the Treaty of the World Intellectual Property Rights Organization WIPO on the Protection of Copyright in the Internet³⁰⁶. The G-8 states have scheduled negotiations regarding international agreements on a whole series of questions relating to the Internet: child pornography, sexual abuse, drug dealing, money laundering, electronic fraud, computer piracy, as well as industrial and state espionage³⁰⁷.

Customary law also has its merits for the Internet. It is created decentrally, often fashionably described nowadays as "bottom up", which is why it can react to a decentralized phenomenon like the Internet better than a central regulator.

However, international agreements and especially international customary law have a decisive disadvantage in that their development needs time. The delay may be endurable in some cases. Child pornography, for example, remains child pornography no matter what technical dissemination method is used. But many regulatory intentions are concerned with a particular technology or a particular use of the Internet. The danger then arises that an international rule is already out-of-date before it comes into existence³⁰⁸. But the international community can also react to that such as in the ITU, for example. In its international founding agreement, only a few material principles are laid down; it mostly contains principles concerning organizational and procedural matters for the formation of rules. That is why this international organization can not only keep pace with technological developments, it can also influence them to a considerable extent via its standardization committees³⁰⁹.

But this also only functions if the international community is in agreement about material standards or, more precisely: they must be prepared to at least tolerate deviating concepts³¹⁰. This prerequisite is often not found in the Internet, since states not only argue about concrete regulation projects; more often they clash over entirely different orientations regarding a desirable economic and social order.

3. Solutions Without the International Community

Even an individual state is not powerless against the Internet. Sometimes it even succeeds in dampening the competitive pressure on national regulation that is generated by the Internet (a). The

²⁹⁷ In a strict sense, the treaty does not however effect any legal harmonization, because in Article 1 I 1 only refers to such acts that prove to be at variance with municipal law. If one looks more closely, however, it must be determined to which provisions of municipal law the treaty refers. This demands an autonomous term of "illicit writings".

²⁹⁸ Convention of 09.12.1948, BGBl. 1954 II. 729.

²⁹⁹ Article III c of the convention.

³⁰⁰ Convention of 07.04.1966, BGBl. 1969 II 961, compare also BTDRs. 13/1883.

³⁰¹ Article IV of the Convention

³⁰² International Pact on Civil and Political Rights of 09.12.1966, BGBl. 1973 II 1533.

³⁰³ Article 20 I of the Pact.

³⁰⁴ Article 20 II of the Pact; compare also Article 26, whereby everyone has a right to protection against discrimination.

³⁰⁵ Convention on the International Right of Correction from 31.03.1953, UNTS 435, 192.

³⁰⁶ Agreement of 20.02.1996, WIPO Document CRNR/DC/94, published in: International Journal of Industrial Property and Copyright Law 1997, 208-213 or <http://www.wipo.org> (15.03.1999).

³⁰⁷ They have primarily referred to the work of the so-called Carnegie Groupe, http://www.iid.de/iukdg/carnegie_e.html (15.02.1999); more on the G8-discussions from *Goldsmith* (footnote 32) UCLR 1998, 1230-1232.

³⁰⁸ Compare *Grewlich* Cyberspace (footnote 8), Chapter One. 3. 1.: The Internet alters communication in a revolutionary way, whereas international law moves, at its best, in an evolutionary manner.

³⁰⁹ Comprehensively *Andreas Tegge*: Die Internationale Telekommunikations-Union. Organisation und Funktion einer Weltorganisation im Wandel (Law and Economics of International Telecommunications 21) Baden-Baden 1994.

³¹⁰ More detail from *Engel in Mestmäcker*: Kommunikation ohne Monopole II (footnote 258) 191-205.

greater its political power and its cleverness, the sooner a state can give its own regulatory ideas an extraterritorial effect (b). A promising venture is primarily the silent coordination of different national policies with the aid of private international law (c).

a) Strategic Dampening of the Competition between Systems

System competition, like competition in the product markets, is not an external power beyond the reach of those affected by it. On the contrary, in order to stay in the picture, they can endeavour to tone down the pressure from competition through their own market behaviour. At this point, we are only interested in unilateral market behaviour³¹¹. The state even has it particularly easy in this regard since, not only can it change its range of services, it can also employ those of its sovereign powers that remain unaffected by system competition.

As we already know, however, technical solutions have a very high price - eventually leading to autarky³¹². More promising are strategies that make exit so expensive that it no longer represents an attractive proposition. There are models for this from other areas. Canada and the USA struck at cross-border territorial radio as far back as the 1970s with a legal tax instrument. Canadian firms advertising on American radio stations were not able to set off the costs as company expenses from their taxes³¹³. The USA reacted with the same rule for American advertising on Canadian programmes³¹⁴. The lack of employee cross-border mobility also has to do with benefits that are coupled to remaining in the country. For example, it is often difficult to transfer social insurance rights³¹⁵. There is also a direct application example pertaining to the Internet: the American government is attempting to circulate the encryption standard it favours by obliging its use for all data exchange between the government and U.S. firms. So, if a firm does not wish to work with several different standards, it is obvious that it will then continue to use this standard in its communication with private parties as well³¹⁶.

b) Extraterritoriality

The classic reply of national regulators to crossborder phenomena is the extraterritorial application of their own laws. In principle, this option presents itself for regulating the Internet as well. An individual state can therefore also influence processes that take place outside its territory³¹⁷. Precisely Germany has come out in favour of this option. Bavarian prosecutors have forced CompuServe to deny access to newsgroups with pornographic content³¹⁸. Since the managers responsible for Germany at CompuServe had omitted to take the advice of German authorities about other pornographic sites sufficiently seriously, a criminal case was brought by the Bavarian magistrate's court (Amtsgericht) and the chief executive officer of the German branch was sentenced³¹⁹. Data protection provides another example: the European Data Protection Ordinance permits the transmission of personal data to a third country only if one of three criteria are fulfilled: either the Commission has determined that a suitable level of protection exists in that state³²⁰; sufficient ad hoc protective measures have been taken (which is the normal situation, whereby transmitter and user conclude protection agreements)³²¹; or, finally, one of the very strictly interpreted exceptions occurs, allowing a

³¹¹ But the parallels to a cartel do of course exist. That is precisely the conclusion of an international agreement that sets standards.

³¹² See above V. 6.

³¹³ *Nicolas Matesco Matte/Ram S. Jakhu*: Law of International Telecommunications in Canada (Law and Economics of International Telecommunications 3) Baden-Baden 1987, 82 et.seq.

³¹⁴ *Stefan R. Barnett*: Regulation of Mass Media, in: ders./Michael Botein/Eli Noam: Law of International Telecommunications in the United States (Law and Economics of International Telecommunications 4) Baden-Baden 1988, 189f.

³¹⁵ More from *Sell in Berg* (footnote 157) 73 f.

³¹⁶ More from *A. Michael Fromkin*: It Came From Planet Clipper. The Battle over Cryptographic Key "Escrow" in: University of Chicago Legal Forum 1996, 15-75 (50-60, compare also 32).

³¹⁷ Convincing *Goldsmith* (footnote 32) UCLR 1998, 1202-1205 and passim.

³¹⁸ Reported by *Axel Kossel/Frank Möcke*: Pornowächter versus Internet, in: c't 1996/2, 14-17 (14).

³¹⁹ More details from *Gunnar Bender*: Bavaria vs. Felix Somm. The Pornography Conviction of the Former CompuServe Manager, in: International Journal of Communications Law and Policy 1998/1, 1-4 http://www.digital-law.net/ILCLP/1_1998/ijclp_webdoc14_1_1998.html (18.02.1998).

³²⁰ Article 25 II Data Protection Directive (Directive 95/46/EC of 24 October 1995), OJ 1995 L 281/31.

³²¹ Article 26 II of the Ordinance.

transmission that is justified by the overriding interests of the person concerned or an important public interest³²².

However, the above example also simultaneously illustrates how precarious the extraterritorial application of national law actually is. Since how does one state ensure that the law of the destination state does not specifically prevent the application of these standards³²³? Contractualized data protection will only work if similar data transmissions take place repeatedly³²⁴. And a regulator will only be able to rely on contractual assurances if the reputation of internationally-active firms acting as a kind of hostage is available to him³²⁵. In addition, the extraterritorial application of national law leads to diplomatic conflicts. In the 1980s, antitrust law gained much experience in this regard³²⁶. It also raises questions of public international law. For the extraterritorial application of national law is regarded as an unlawful intervention in foreign sovereignty, if the acting state cannot rely on a genuine link to the regulated activity³²⁷. Since location no longer plays a role in the Internet³²⁸, it appears to be particularly doubtful whether the effects doctrine applies. That would, namely, be tantamount to foregoing any specific point of attachment, since all Internet contents can be downloaded from within every state around the globe³²⁹.

c) Conflict of Laws Provisions

States fight against the extraterritorial application of foreign economics law, because they consider it to be intervention by a foreign sovereign into their domestic affairs. This defensive behaviour is foreign to international private law. It is based on the basic idea of international decision unity. Instead of material justice, territorial justice seems to take its place. Those who have to adjust their lives to living with different legal systems should not get trapped between the wheels of the mill³³⁰. In private law, therefore, the state voluntarily allows itself to be the henchman of foreign legal systems. In this manner, it comes to coordinated enforcement of national laws. Speaking in terms of political economy, it is a form of coordinated behaviour between several sovereigns. This technical term from competition theory has been chosen with care. It expresses the idea that the coordinated behaviour is specifically not based on a binding agreement. Rather, the basis in every individual case is the revocable conviction that it is best for all states to proceed in such a manner³³¹.

It is precisely the very number of states who are necessarily affected by every attempt at regulating the Internet that makes the mutual coordination of private law instruments an attractive option. The Internet could therefore become the initiator for a return to private law³³². A prerequisite, however, is the willingness of states to first bring the principles of conflict laws in this area more closely into line

³²² More explicitly GD XV D 5025/98, 3f. and passim; see and also comprehensively *Grewlich Cyberspace* (footnote 8), Chapter Four. 2. 3. 3. as well as Chapter Nine. 1. 4. 3..

³²³ GD XV D 5025/98, 22.

³²⁴ Id. 23.

³²⁵ Id. 23f.

³²⁶ Illustrative the contributions to the symposium of the Max-Planck-Institute in Hamburg published in: *RabelsZ* 52 (1988) 1-302.

³²⁷ Comprehensively *Werner Meng: Extraterritoriale Jurisdiktion im Öffentlichen Wirtschaftsrecht* 1994; see also *Christoph Engel: Die Bedeutung des Völkerrechts für die Anwendung in- und ausländischen Wirtschaftsrechts*, in: *RabelsZ* 52 (1988) 271-302 and from the perspective of private international law *Anton K. Schnyder: Wirtschaftskollisionsrecht. Sonderanknüpfung und extraterritoriale Anwendung wirtschaftsrechtlicher Normen unter besonderer Berücksichtigung von Marktrecht*. Zürich 1990; *Stefan Habermeier: Neue Wege zum Wirtschaftskollisionsrecht. Eine Bestandsaufnahme prävalenter wirtschaftskollisionsrechtlicher Methodologie unter dem Blickwinkel des kritischen Rationalismus* (Saarbrücker Studien zum Internationalen Recht 6) Baden-Baden 1997.

³²⁸ See above I 1.

³²⁹ On this discussion, see *Grewlich Cyberspace* (footnote 8), Chapter Ten. 1. 3.; *Stephan Wilske/Teresa Schiller: International Jurisdiction in Cyberspace. Which States May Regulate the Internet?* In: *Federal Communications Law Journal* 50 (1997) 117-179; *Christine E. Mayeski: The Presence of a Website as a Constitutionally Permissible Basis for Personal Jurisdiction*, <http://www.law.indiana.edu/ilj/v73/no1/mayeski.html> (13.2.1999).

³³⁰ More details from *Jan Kropholler: Internationales Privatrecht*, Tübingen³ 1997, pp. 24-40.

³³¹ More from *Scharpf Games Real Actors Play* (footnote 148) pp. 107-112.

³³² I owe this thought to *Wolf Osthaus*; see also *Scharpf Games Real Actors Play* (footnote 148) p. 110: "It would be interesting to speculate, nevertheless, whether the simultaneous evolution of world-wide systems of communication and world-wide economic exchange might also increase the speed of mutual adjustment at such a rate that even in the presence of continuous external change, social interactions might now benefit from temporary equilibria that previously were too short-lived to be realized".

with each other than was previously the case³³³. In particular, it will scarcely be possible to retain, in international tort law, the principle that the law of the place applies where the protected good has been violated. For, in an Internet tort, this might be an unforeseeable multitude of legal orders, each demanding application to one and the same activity.

4. Solutions Without the State

The Internet acts as a stimulant to both conflict of laws and private legal ordering. One can interpret this as a form of self-regulation³³⁴. Encouraged by the American government, this is how the International Uniform Commercial Code for Electronic Trade³³⁵ was able to be developed by industry associations and not by governments. It contains provisions for the settlement of online disputes via arbitration clauses³³⁶. Indeed, a suggestion has even been made to set up virtual arbitration tribunals for the resolution of net disputes³³⁷.

While private legal rules are not decreed by the state and arbitration decisions do not come before its courts, this does not mean that the legal system has no influence on private law or private jurisdiction. There is therefore no need for it to simply tolerate these processes; it can also prompt, prevent or change them. Ultimately, of course, this could occur via state decrees or prohibitions, but other mechanisms exist that are more elegant. Selective incorporation manipulates the interface between private rules and state law. Legally, there are three possibilities. In the first case, private rules or decisions directly become part of the legal order via incorporation, which is especially problematic from a constitutional point of view³³⁸. This is the reason why mere presumptions are more common in the German legal order. In product liability law, for example, it is presumed that a product is free-of-defects if it corresponds to DIN standards. While this presumption can be rebutted, only someone greatly disturbed by the DIN standard will take the trouble to bring forth counter evidence. Finally, private rules and decisions can also merely represent facts relevant for the application of general clauses of state law³³⁹.

The incentive effects of an incorporation of private rules or decisions into the legal system are however ambivalent. The incorporation gives the regulation or decision additional authority. If the mechanism for creating the rules is under competitive pressure, incorporation can also strengthen its competitive position. But the very same effect can turn itself into a competitive disadvantage. Due to the incorporation, the private rules and decisions namely simultaneously serve two purposes: the original private one and the new state one. Since the legal consequences of state law depend on the contents of these regulations or decisions, the mechanisms for the design and application of the rules will come under additional pressure. The private rule-making body then loses flexibility: at the utmost extreme, even any ability to carry out its original function. The problem has become apparent in broadcasting. Since the latest reform was undertaken, the law on media concentration control has been geared to viewer market shares. The regulator takes his figures from the GfK (*Gesellschaft für Kommunikationsforschung*). Previously, this company generated these figures in the exclusive interest of the advertising industry, which wanted to know how effective an advertising spot was. Given this new and additional task, the firm fears that it might in future not be able to react as quickly and flexibly to the changed desires of the advertising industry³⁴⁰.

A more careful form of control by the state does not immediately start off with the content of private rules and decisions, but centres instead on the organization and the process of creating rules and applying them. This is where the decades old discussion about the usefulness of a Standardization Act belongs. Conceptionally, it is a form of context control. It is based on the idea, inspired by system theory, that there is a sufficiently direct connection between organization and process on the one

³³³ Compare White House (footnote 267), Principle No. 5: "The legal framework supporting commercial transactions should be consistent and predictable regardless of the jurisdiction in which a particular buyer and seller reside".

³³⁴ A type of law merchant is created, *Goldsmith* (footnote 32) UCLR 1998, 1206 et seq.

³³⁵ White House (footnote 267), Recommendation No. 3.

³³⁶ Suggestion thus made by *Goldsmith* (footnote 32) UCLR 1998, pp. 1244-1250.

³³⁷ More from *Hutter* in *Engel/Keller* (footnote 56) *** [13].

³³⁸ Leading case BVerfG 01.03.1978, BVerfGE 47, 285, 287/311 - notary fees.

³³⁹ This technique is primarily discussed in international economics law for foreign intervention standards, see for example *Peter O. Mühlert*: *Ausländische Eingriffsnormen als Datum*, in: IPRax 6 (1986) pp.140-142.

³⁴⁰ More details from *Christoph Engel*: *Die Messung der Fernsehnutzung als Voraussetzung eines Marktanteilsmodells zur Kontrolle der Medienkonzentration*, in: ZUM 1995, pp. 653-666.

hand, and the content of the rules on the other hand³⁴¹. The legal system steps back yet another step further when it limits itself to maintaining a lively level of competition between different institutions in the creation and application of private rules. For the regulator, control of the content, context control and a competitive system for the competition between institutions therefore act as substitutes³⁴².

Finally, with all three of these mechanisms, the state leaves the material decision on the content of these rules to a private instance, but this need not be so. Rather, it can, so to speak, proceed in two stages and negotiate with a private association about the contents of rules promulgated by the association. This state-controlled self-regulation arises in the shadow of hierarchy³⁴³. In order for private actors to agree on traded rules, the state needs something with which it can either encourage or threaten. In practice, on the domestic front, it primarily uses the threat of issuing rules that will impose a burden³⁴⁴. That is problematic for the Internet because the addressees of the state's threat can often avoid such a burden³⁴⁵. But states could be successful in cases where the coexistence of legal systems needs to be organized, in order for Internet trade to blossom. We saw that this affects customs duties and taxes³⁴⁶. Even more promising is the fact that Internet trade depends to a remarkable extent on international institutions of private law³⁴⁷. States could attach their agreement to pertinent international treaties on condition that self-control solves the most important market failure problems of the Internet³⁴⁸.

5. Solutions without Law

Self-regulation often takes place outside the legal system. Private actors tend to draw up either technical (a) or social norms (b). Self-control is even more effective if addressees accept it as part of their own set of values instead of as a restriction (c).

a) Technical Norms

Technical norms can, of course, be drawn up as legal regulations. This is seldom the case, however. In addition to this formal difference, there is primarily also a material difference. Technical norms are formulated much more precisely than legal regulations. Therefore the application of technical norms really does correspond more or less with the picture of syllogism. There is often only a rare chance of flexibility through interpretation. The norm really determines behaviour. We encounter not only "false" but also often "right". The enforcement of technical regulations is then exclusively a problem of control rather than one of interpretation. Ultimately, technical regulations are mostly self-executing: anyone not adhering to them is excluded from communication.

Technical standards in the Internet are found in the compatibility standards that make communication possible³⁴⁹. The rules on the issue of IP addressees and on their transformation into domain names are also based on technical standards³⁵⁰. Since the Internet was originally conceived by technicians, there is however a tendency to look for the solution of more complex social problems in technical standards. Some would even like to prescribe the application of defined filter software to the providers of online services.

³⁴¹ More from *Christoph Engel*: *Regulierung durch Organisation und Verfahren*, in: FS Ernst-Joachim Mestmäcker. Baden-Baden 1996, pp. 119-138.

³⁴² More from *Christoph Engel*: *Rezension von Jack Knight: Institutionen und gesellschaftlicher Konflikt*. Tübingen 1997, in: *RabelsZ* ***.

³⁴³ More from *Scharpf* *Games Real Actors Play* (footnote 148) pp. 197-205.

³⁴⁴ *Engel* *Selbstregulierung* (footnote 149).

³⁴⁵ See above, IV 2.

³⁴⁶ See above, VII 1.

³⁴⁷ See above, VII 2.

³⁴⁸ See above, VII 3.

³⁴⁹ See above, I 2.

³⁵⁰ See above, I 2.

b) Social Norms

Social norms differ from legal rules by the grounds on which their validity is based. These lie in the social relationships of a group rather than in the legal system. Sanctions are taken from the social network. The strictest sanction is that of being expelled from the group. The creation of social norms does not normally follow a formalized process. Often, they are not even written down.

Although the so-called 'netiquette' has achieved fame³⁵¹, its effectiveness is often overestimated. It is mainly a collection of harmless rules: for example, that a line of e-mail should be no longer than 65 strokes in length. Other social norms drawn up by the Internet community have more bite. The community reacts almost angrily, for example, to the unsolicited receipt of electronic advertising, so-called 'spamming'. Some social norms have their own enforcement mechanism. The CyberAngels, for example, constantly search for dirt and sleaze in the net and electronically pillory the originator³⁵². The Internet community has specific sanctions. In spring 1994, for example, an American law firm sent 1.2 million e-mails to Internet users in which it offered its services to participants in the annual Green-Card lottery. As a reaction, users clogged its e-mail connection with 600,000 replies, thus making it unusable for any other purpose³⁵³.

c) Intrinsic Motivation

Social norms are a form of central control. They are enforced by means of social sanctions, thus setting new restrictions on the behaviour of a group's members. For a considerable part of the social reality of the net, this concept is misleading. The idea that the traditional Internet community treats the net like a common pool resource is much more apt. Although they are scattered around the globe, these people view themselves as members of a group, held together by the common willingness to make the Internet function for everyone and to improve it³⁵⁴. These technicians and academics, empirically speaking, bear the hallmarks that *Elinor Ostrom* has often found in regimes for the exploitation of limited natural resources³⁵⁵. Control is then activated in the heads of those involved, rather than by an outside source. The willingness to stand up for commonly-used goods thus comes from intrinsic motivation. Connected with this appears to be the willingness to intervene against misuse³⁵⁶. We have, however, already seen that commercialization of the Internet is proceeding at a rapid pace³⁵⁷. No-one can predict today whether the original Internet culture will manage to survive, or even possess the power to reach new users.

6. Solutions Without External Assistance

Even self-regulation is a form of regulation, i.e. of central control. This is not the only possibility of overcoming the social problems of the Internet; in reality, much more decentralized forms of self-help also exist³⁵⁸. This solution implies an unusual distribution of property rights (a). Technical solutions become possible (b). An individual can also employ the assistance of protective intermediaries (c), or insure himself against the risk of inappropriate behaviour by third parties (d). Self-help is an effective instrument, but it can also lead to regulatory problems itself, if the objective is overshot (e).

a) Property Right of the Disrupter

³⁵¹ Its contents are repeated by *Sally Hambridge*: Netiquette Guidelines, http://www.cybernothing.org/cno/docs/rfc_1855.html (15.2.1999).

³⁵² Spiegel 11/1996, p. 78.

³⁵³ *Stephan Detjen*: Rechtsprobleme internationaler Datennetze, in: AfP 1996, pp. 44-46 (45)

³⁵⁴ *Thompson* in *Engel/Keller* (footnote 79) (p. 4).

³⁵⁵ *Ostrom*: Governing the Commons (footnote 78).

³⁵⁶ Economically speaking: the second order prisoner's dilemma is overcome through intrinsic motivation.

³⁵⁷ See above II 3, in particular c).

³⁵⁸ The plastic term comes from *Kenneth W. Dam*: Self-Help in the Digital Jungle (Chicago John M. Olin Law & Economics Working Paper 59) Chicago 1998.

The legal profession has been educated to find fair and just solutions to social conflicts. Economically speaking, they therefore always keep an eye on the distributional effects of a solution. This explains why, implicitly, they generally assign property rights to the person whom they consider has been disturbed. Blanket clauses of the type set out in paragraph 823 I BGB (civil code) provide the dogmatic justification for this, since almost every new social conflict affects one of the protected goods, namely, life, health, freedom and property. Economists start off on a different tack. Their basic problem is the scarcity of goods. They look for incentive mechanisms that cause the scarce resources to move to their most productive location. This demands the definition of property rights. Only when they have been exhaustively determined and assigned to a single person, can the market unfold its full effect. The right to interfere in the protected sphere of another person can also represent a trading commodity. Someone purchases, for example, a pipeline right. Alternatively, the object of trade can also be the right to forbid a third person to interfere in one's sphere.

As far back as the 1960s, *Ronald Coase* had shown that it is irrelevant for the allocative question whether the property right, legally speaking, lies with the disrupter or the person being disturbed. If the economic plans of both people can be realized better by an exchange of property rights, this exchange will then take place. But this proposition only holds true in a fictitious world without transaction costs. In reality, it takes effort in order to define, defend and transmit a property right. From an allocative point of view, a comparison of the transaction costs must therefore decide on whether it is better for the property right to originally lie with the disrupter or with the one being disturbed³⁵⁹.

It should be noted, however, that this is not simultaneously a recommendation for distribution policy. The science of economics only recommends the separation of allocation and distribution. If it is better, in terms of incentives, to give the property right to the person being disturbed, the distribution problem must be overcome in another manner. Economists would normally recommend using the general tax-transfer mechanism, whose advantage lies in the fact that a distributive measure causes a minimum of disruption to the mechanism of allocation.

b) Technical Solutions

These theoretical considerations have great significance for the solution of the Internet's social problems. If one gives the property right to the person being disturbed, he must, namely, be capable of successfully defending it against interference. No legal system can desire to see him countering violence with violence, so only central control mechanisms remain. But we have just seen that legal protection in the Internet is a matter requiring that a great deal of preconditions first be met. Even central control by society is often unable to assist.

If, on the other hand, one allocates the property right to the disrupter right from the outset, the person being disturbed will seek protective measures by himself. There are numerous examples of well-functioning technical safeguards in the Internet. Anyone wishing to protect himself or his children from problematic contents can employ electronic filters. Since the property right lies with the disrupter, competition to improve these filters gets under way all by itself. Competition acts, as it always does, as a process of discovery and constantly brings with it the emergence of improved safeguard systems. A limit is set only by the users' willingness to pay. No court in the world could create such effective safeguards, since innovation does not occur by way of commands.

Anyone worried that third parties will take away the gains from his work, can encrypt its contents. During encryption, he can individually define under what conditions customers can access it and pass it on to other persons³⁶⁰. Encryption also ensures protection from fraud. The use of a defined code ensures, namely, that the contents really are the authentic work of the author and have not been modified in the meantime³⁶¹. Anyone fearing that hackers will penetrate his computer and expose his secrets or will cause damage, can protect himself via a firewall. Anyone worried that third parties can draw up a personality profile can make his electronic communications anonymous³⁶². On the other hand, those wanting nothing to do with anonymous electronic mail can demand its encryption. In

³⁵⁹ *Ronald H. Coase*: The Problem of Social Cost, in: *Journal of Law and Economics* 3 (1960) pp. 1-44.

³⁶⁰ *Dam* (footnote 358) p. 6 and 8 et seq.

³⁶¹ *Grewlich Cyberspace* (footnote 8), Chapter Six. 1..

³⁶² *Froomkin UPittsbJLC* 1996 (footnote 31) pp. 399 and 498.

order to decode it, the sender must then make known his public key. This allows conclusions to be drawn about the sender³⁶³.

c) Protection Intermediaries

The potentially disturbed person must not necessarily take on the task of self-help himself. He can instead employ the assistance of protection intermediaries. Organized online providers are a classic example³⁶⁴. In the proprietary area of their services, they can set up rules of admittance and behaviour. If users do not stick to the rules, they can employ sanctions. The threat of sanctions is a credible one, because the providers can simply take unpopular services out of their programme³⁶⁵. Insofar as they allow their users access to the non-proprietary part of the Internet, these providers also work with filters. One example has occupied the American courts: the company Cyberpromotions is specialized in direct advertising via e-mail, which most Internet users consider to be spamming and would prefer not to receive. AOL has therefore constructed its gateway to the Internet in such a way as to prevent mails being received that have a return address from Cyberpromotions³⁶⁶. Intermediaries also exist that have exclusively specialized in self-protection for the Internet community. Economically speaking, they offer self-protection as an item itself, i.e. uncoupled from other services. One example is the organization a.c.e.n.a, which initially reacts to spamming with organized e-mail protests to the originator. If that does not help, it sets a killer software going that picks up and deletes such messages everywhere in the net³⁶⁷. As is otherwise the case with intermediaries, users must weigh up the advantages and disadvantages. An intermediary will never be able to target the preferences of an individual user 100%. Thanks to economies of scale and scope, an intermediary is, however, much cheaper and better in his work than an individual ever could be. Competition between different intermediaries leads to a diversification of solutions.

d) Insurance

Electronic filters and protective intermediaries are a causal therapy. They get rid of the malady at its roots, which is possible because the malady itself has an electronic character. If these protective mechanisms fail, it is in any case subsequently difficult to carry out any treatment. Both these factors are different when it comes to trade in physical goods via the Internet. This is the reason for a different solution being found as far as consumer protection is concerned. Credit card companies do not demand payment from their customers if the business on hand has not been conducted in a proper manner³⁶⁸. Economically speaking, this is an insurance solution. The customer has neither a need to get involved in the consumer protection legislation of totally different nations, nor does he need to place his faith in court decisions being accepted at the seat of the seller that have been made by his home country in the application of its national law. The customer only has to deal with a single global player, who applies published, uniform rules and regulations to all his international transactions³⁶⁹.

Credit card companies of course do this in their own interests. Only thus can they increase customers' faith in this payment method and expand their business³⁷⁰. Like all insurers, credit card companies try to limit their insured risks. They estimate the creditworthiness of the companies which they accept as contractual partners. They supervise their behaviour³⁷¹ and agree to invert the burden of proof between customer and delivery merchant in the case of disputes about the delivery or quality of goods³⁷². Parallel to this, credit card companies have established safeguards that, for example, are

³⁶³ Dertouzos (footnote 9) p. 148.

³⁶⁴ As T-Online, AOL or CompuServe.

³⁶⁵ Johnson <http://www.cli.org/selford/Spam.htm> (12.02.199).

³⁶⁶ *Cyberpromotions, Inc. V. American Online, C.A.* nos. 96-2846, 96-5213 (C.D Ba. Nov. 26, 1996, cited by *Post* (footnote 6) *Wayne LR* 1997 [at footnote 30].

³⁶⁷ *Perritt* (footnote 105) *Berkeley TLJ* 1997, pp. 438-440.

³⁶⁸ I owe my reference to this phenomenon from *Henri Tjong*. Details are found in an OECD document: Consumer Redress in the Global Market Place. Chargebacks, OECD/GD (96) 142, Paris 1996.

³⁶⁹ OECD/GD (96) 142, 30 (compare also 25).

³⁷⁰ Just above, 8.

³⁷¹ See above, 14.

³⁷² See above, 30.

intended to minimize the fraudulent use of credit cards³⁷³. Ultimately, which risks credit card companies are prepared to bear rests on the possibility of being able to control such risk. They are particularly hesitant in the case of disputes regarding the quality of the goods or pretended violations of the terms of trade, once goods have been ordered, paid and delivered³⁷⁴.

³⁷³ See above, 7.

³⁷⁴ See above 7/15/30; see also just above 49 et seq. for a list of risks, for which chargebacks are normally acceptable.

e) Protection from Self-Protection?

Some forms of self-protection are purely defensive in nature. A customer insures himself against the risks of electronic trade, or protects himself from undesirable content via a filter. Third parties will hardly be able to object to this. Criticism is more justified, however, if the insurer, for his part, carries out checks on people's behaviour, or if standardised filters no longer give certain providers a chance. And third parties will certainly defend themselves when they become the victim of aggressive protection techniques. We have already become familiar with the example of killer software. Besides, the use of many protection techniques is ambivalent. While anonymity protects from personality profiles being made, it also reduces the risk of being exposed while conducting illegal or socially unacceptable behaviour³⁷⁵. The opportunity arises of destroying the relationship between freedom and responsibility³⁷⁶. Ultimately, instruments that were developed for self-protection purposes, can also be employed for purely aggressive intent. In the meantime, for instance, a whole range of services have sprung up that are specialized in obtaining unlisted telephone numbers, bank account numbers, telephone data recordings, criminal records registers, medical data or data on financial assets³⁷⁷. Censorware is not only employed for the protection of adolescents; it is also employed to supervise employees³⁷⁸. And e-mail bombs are also employed by environmental organizations in order to force companies to come to the negotiating table³⁷⁹.

Within limits, competition between various self-protection mechanisms may provide assistance against such abuse, but this demands that a sufficiently large number of self-protection inquirers does not wish to be brought into contact with such abuses. Besides, all the central control mechanisms that we have put together can be deployed in order to prevent the abuse of protective techniques³⁸⁰. Above all, the third parties concerned will strive to develop their own protective measures against the abuse of other protective measures. Self-protection is therefore the most effective solution to protect against self-protection.

IX. Elements of a New International Order of Governance and Values

1. The Normative Objective

The interim balance of our considerations is not a bad one: while the new regulatory needs thrust up by the Internet have not yet been exhausted, there are grounds for optimism. Regulatory problems are being understood better and better, and more and more effective instruments to provide solutions to them are being found. But to date we have, so to speak, only come to terms with the small problems of the Internet. In conclusion, we must return to the bigger problems. In their most general form, they can be described as system retention and system development. With system retention, we are concerned with the key words power, justice and peace, whereby anarchistic elements must not be allowed to gain the upper hand. The majority of the people must accept control as being legitimate and should have no reason to believe in fatalism or a flight into simplicity. The chances for domestic peace and also peace between nations are then at their greatest.

Besides, we must retain the humus in which individuals and social cohabitation have so far evolved. An analogy to biology is enlightening³⁸¹. As is well known, international law has taken on the task of

³⁷⁵ *Froomkin* (footnote 31) UPittsbJLC 1996, 402 et seq.

³⁷⁶ For this reason, Justice *Scalia* in the USA is vehemently opposed to the constitutionally guaranteed protection of anonymity, *McIntyre v. Ohio Elections Commission* 115 S.Ct 1511(1537) (*Scalia J.*, dissenting), cited to *Froomkin* (footnote 31) UPittsbJLC 1996, p. 405/410.

³⁷⁷ Evidence in *Rötzer in Brill/de Vries* (footnote 84) p. 185.

³⁷⁸ Just above, 185-188.

³⁷⁹ Reports found in *Thompson in Engel/Keller* (footnote 79) *** [22].

³⁸⁰ See above, 2-5.

³⁸¹ *David in Engel/Keller* (footnote 11) ***.

protecting biodiversity³⁸², in order to maintain the current gene pool as far as possible, since it increases the adaptation and development possibilities of natural organisms. For many years, cultural anthropology has produced an analogy between natural and social organisms. What genes are to a natural organism, are memes to societies³⁸³. This suggests that the diversity of societies and their cultures should not be disturbed unnecessarily.

2. Elements of a Solution

This diversity of normative objectives reminds us to take care in the search for solutions. International law can certainly adapt. It can remind itself that it has never separated spheres of influence from each other exclusively on a territorial basis. Historically, the territorial state is in any case a young occurrence. Even in recent history, political units have existed alongside it that have been primarily, or even completely, defined in terms of people. The Maltese Order is minor example. Personality, however, was of great significance for the Jewish state of the 19th century³⁸⁴. For the purposes of the Internet, the rules of attribution in public international law could differentiate even further along functional lines. A type of 'nationality' for data packets could be the end result of this development³⁸⁵. Above all, international law will have to apply its mechanisms for solving conflicts of sovereignty and adapt it to the characteristics of the Internet.

Since states cannot control the Internet by themselves, international law will have to adjust to a more complex network of power relations. Politically speaking: multi-level governance will become the norm³⁸⁶. It is more of a pragmatic question, as to whether international law will attempt to absorb these forms of power. It then ought to allow the non-governmental organizations more room than it has done up till now. Even individual private companies would have to receive their proper places as actors, and not merely be subjects of national legal systems. But it may possibly be smarter for international law to remain with the previous, narrower definition of its jurisdiction. From this perspective, self-regulation and self-assistance are mere facts to which international law reacts.

Multi-level governance is a hybrid form of exercising power. The discussion in private law about hybrid forms between contract and organization has shown that such control instruments can be just as effective and suitable³⁸⁷. Such systems allow a balance between stability and innovation to be achieved more easily. There are, therefore, even grounds for optimism in regard to the bigger problems. So far, only two inter-related problems still need to be overcome. People will profit to varying degrees from the new possibilities of a flexible system of power. A problem of distribution will thus remain. This is of such significance because globalisation also diminishes the nation states' room for manoeuvre in regard to distribution. States can no longer levy high taxes on mobile production factors, since this would only result in their exit. In contrast, the production factor labour is, in the long term, immobile. But, up to now, the distribution policies of the state were primarily intended to assist employees. It is not evident to date that a supranational distribution policy could take its place.

³⁸² Convention on Biological Diversity of 1992, 31 I.L.M. 818 (1992) = BGBl. 1993 II 1742.

³⁸³ Stimulating *Robert Boyd/Peter J. Richerson*: The Evolution of Norms. An Anthropological View, in: *Journal of Institutional and Theoretical Economics* 150 (1994) pp. 72-87.

³⁸⁴ I owe this reference to *Raimund Bleischwitz*.

³⁸⁵ Compare *David R. Johnson/David G. Post*: The New "Civic Virtue" of the Internet, <http://www.cli.org/paper4.htm> (12.02.1999), p. 2: Online-Jurisdictions are supposed to exist; compare also 10 et seq.

³⁸⁶ *Gary Marks/Lisbet Hooghe/Kermit Blank*: European Integration from the 1980s: State-Centric v. Multi-Level governance, 1996.

³⁸⁷ This is a summary of the results of the discussion about *Williamson's* thesis (footnote 163).

In addition, the increased complexity is making individuals insecure to varying degrees. The ability to live with this condition, or even profit from it, is no anthropological constant. This brings forth the need for the formulation of an educational programme. But for this, no solutions have yet been found. This is an urgent matter, in order to avoid a destructive flight into simplicity that endangers both domestic and external peace.