

# Facing another modernity: individualization and post-traditional ligatures

---

ANIL K. JAIN, HEINER KEUPP, RENATE HÖFER  
and WOLFGANG KRAUS

Institut für Psychologie, Sozialpsychologie der Universität München, Projekt  
B2, SFB 536, Leopoldstrasse 13, 80802 München, Germany. E-mail:  
jain@lrz.uni-muenchen.de

Social change is taking place today with enormous acceleration. The globalization of politics, economy, and culture, changes in information technology and the revolution in genetic engineering are the major transforming powers. They create a complex of change and have an effect on the individual as well as the community. Known structures are coming apart and this evokes feelings of fear. However, spaces of opportunity will be opened, too. They can be used if (what we call) post-traditional ligatures constitute a new basis of social embedding. Examples of such bondings, which are more flexible and (to a large extent) self-created, are mentioned at the end of this article.

## **1. The fears that drive us: change or anomie?**

There has always been social change. One can even assert that change is a typical, indeed a necessary, characteristic of social relations, and that a defective capacity for change rather produces problems, and is perhaps even to be interpreted as a sign of an impending decline. Yet, change that does not take place gradually and beneath the surface, but is readily apparent, distinctly generates feelings of anxiety. Known structures, which promised security and stability, are coming apart, and this dissolution seems menacing. Is it surprising therefore, in the face of the enormous acceleration with which social change is taking place today, that it is not only with hope and optimism that we are looking into the future? Is it surprising that the intoxicating velocity of modernization, which we are currently

experiencing,<sup>1</sup> and the risks of modernization, of which we are becoming so much more acutely aware, are making us afraid?<sup>2</sup>

Fear, of course, is not a new phenomenon. It has accompanied mankind throughout history, and the origin of the modern world stands directly in a substantive relation with fear. To escape fear and to establish reason in its place was a central motivating force of the Enlightenment.<sup>3</sup> However, the rationalistic suppression of fear in the wake of the process of enlightenment affected its latent development rather than its conquest. Enlightenment is, as Horkheimer and Adorno<sup>4</sup> revealed, ‘mythic fear turned radical’. The analysis of fear is, therefore, a crucial key to the understanding of current social, political and historical developments.<sup>5</sup> Yet, modern enlightenment thought can acknowledge this fear only with difficulty. The fixation on reason, the flight into the rationalistic ‘iron cage’ (Weber) was the course entered upon by the modern movement. It created a new *Cosmopolis*,<sup>6</sup> which replaced the old order, that was threatened by collapse, with new constructions of order.

In this way, one must understand the history of the Enlightenment also as a fear-driven war against ambivalence. For everything indistinct and ambiguous endangers modern order, which is founded on unequivocalness, and causes fear and must be assailed. The modern movement cannot, however, escape fear and the ambivalence that gives rise to it. Every definition and every attempt at demarcation and order evokes new possibilities for ambivalence and new disorders.<sup>7</sup> Moreover, it is impossible for reason to define rationally its own fundamental principles (and, consequently, it is simultaneously always pointing beyond itself). Inevitably it recognizes its own contingency, and so time and again compulsion and power are perforce substituted for rational discourses in order to enforce the principles of rationality. Dialectically opposed to the liberating powers of reflection stand immense powers of subjection, repression and ideological as well as praxological deflection.<sup>8</sup>

Enlightenment is therefore simultaneously its own antagonist. It extricates itself by directing radicalized reason against its own fundamental principles, and instead of the liberation of man ‘from his self-imposed immaturity’,<sup>9</sup> it demands his subjection to the constraints of the order of reason. In this connection, Agnes Heller speaks of a latent death wish of modern order and remarks: ‘Products of Western culture turn against their own traditions and develop suicidal inclinations’<sup>10,40</sup>. On the other hand, Heller also points out how this desire for death can be reshaped into a new will to live, especially if the consciousness of contingency, evidently demanded by reason, is acknowledged as destiny. And: ‘[...] it is only modern society that can transform its contingency into its destiny, because it is only now that we have arrived at the consciousness of contingency.’<sup>10,41</sup> It is a matter, then, of recognizing contingency and ambivalence instead of combating them, simply in order to disclose the existing space of

opportunity and, so, to understand society and its transformations as a self-creative process<sup>11,12</sup>.

From this perspective the current situation appears less as a process of dissolution but rather as a process of restructuring that opens new ways of shaping society. It is, strictly speaking, the old question of sociology, which today is posed anew: change or chaos? For when one looks at the work of sociological classicists such as Durkheim<sup>13</sup> or Tönnies<sup>14</sup>, then one will discover that it is exactly this question that stood at the core of their studies of society. With different emphases, they both reached the conclusion that modern society, exactly like the traditional order, is dependent on forms of solidarity and cohesion, and that indeed this solidarity can no longer be presupposed automatically, without question, but must be actively established by means of newly created social institutions. Yet, in the interim the world has, without doubt, changed considerably (again), and the persistence of many modern institutions (such as the welfare state and the bourgeois nuclear family) is threatened or at least placed in question. So we must ask ourselves: what is it, what could it be that today gives society, as a conjoined 'community', its *raison d'être* and cohesion? In order, however, for us to approach this question intelligibly, let us take a closer look at those crucial processes of transformation that shape the world of today.

## 2. The current transformation of society

After the end of the East–West conflict in the not too distant past, which symbolically culminated in the fall of the Berlin Wall, there were significant voices, which, somewhat prematurely proclaimed *The End of History*.<sup>15</sup> Today, these voices have to a great extent become silent. We have evidently, after a short time-out, returned into history. One can even assert that the processes of (historical and social) change, fostered especially by the events of that time, have accelerated enormously. Some observers speak, therefore, of another rupture of epochs, of a discontinuity in the modern world that can be experienced.<sup>16</sup> Whatever the case may be, in our opinion there are three crucial moments of change: the globalization of politics, economy and culture, the changes in information technology, and the revolution in genetics.

### 2.1. *The globalization of politics, economy, and culture*

Globalization is a term that has only recently become widespread, whereas the phenomenon that it designates can be traced back far into the past. It was therefore rightly emphasized by George Modelski that (political) processes of globalization had already begun in the Middle Ages.<sup>17</sup> Thus, there came about, in the course of time, a globally networked system of states. Today there exists, alongside of,

and parallel with the state-centred system of international politics, which is represented by institutions such as the United Nations, an even more powerful globally networked multi-centric system of non-governmental actors,<sup>18,19</sup> so that the term *World Society*<sup>20</sup> possesses absolutely a certain justification.<sup>21</sup> However, the politics of the institutional (nation-) state lag behind, in particular, this latest development<sup>22,179</sup> and they therefore contribute to their own critical scrutiny and decline. Even if this is not the ‘End of Nation State’<sup>23</sup> and even in view of efforts towards regionalization, as in the European Union, the nation state has not, by a long way, been replaced as the defining structural moment of world politics.<sup>24,25</sup>

Naturally, when speaking of globalization, whether euphorically or in a critical vein, we most often refer to processes of economic globalization rather than the sphere of politics. Here, too, ‘real’ history does not begin in the present but can be traced far back into the past. For already in antiquity, but especially since early modern times, there existed intensive commercial relations, which reached as far as the known world at that time.<sup>26</sup> Particularly in the era of imperialism, in the 19th century, worldwide commerce was brisk, for the gold standard provided for security and the disproportionate exchange (Emmanuel) between the colonies and the imperialist nations guaranteed enormous profits.<sup>26</sup> It is not surprising therefore, that Marx and Engels in *The Communist Manifesto* could already, in 1848, delineate a picture of a highly globalized economy. The development of international trade, to be sure, suffered considerable setbacks on account of the First World War, which resulted in the total breakdown of the gold standard, and again in the 1970s, evoked by the oil crisis. This relative level of internationalization and/or globalization attained in the commercial sector at the beginning of the 20th century would only be reached again in the middle of the 1980s.<sup>27</sup>

On the strength of such data, the argument for globalization has come under fire from many sides.<sup>28</sup> If one, however, considers more recent data and developments, there can be no doubt that international trade relations have reached hitherto unknown levels. In particular, the globalization of financial markets is making significant forward strides. ‘Virtual’ capital business transactions, electronically sustained, are made with a delirious speed around the globe and in an immense volume.<sup>29</sup> A highly accelerated flexible capitalism is in the making. Even the sphere of production has got a hold on flexibility and also (virtual) services, and the culture industry, the global economy of signs,<sup>30</sup> is becoming increasingly important.

In the wake of economic globalization, the logic of capital penetrates more and more social spheres, particularly the cultural sphere,<sup>31</sup> and this can also be construed as a thoroughly one-sided development in the sense of an Americanization.<sup>32</sup>

On the other hand, there are arguments that the global flows of capital and signs, of work (force) and ideas etc, are increasingly uncoupled from one another, and

local counter movements arise.<sup>33</sup> Globalisation can, then, be considered not only as a political or economic process, but rather, cultural globalization is a moment of equal rights and effects, especially in the dialectic of globalization and localization, a new global consciousness.<sup>34,35</sup> This global consciousness is an indispensable necessity for current thought in social theory, too.<sup>36</sup> According to Martin Albrow, we already find ourselves in a new *The Global Age*.<sup>37</sup>

## 2.2. Information technology changes

The above-mentioned processes of globalization are undoubtedly considerably animated and sustained by the (further) development of new information and communication technologies. In spite of this, the information technology changes, being historically the ‘Third Wave of technological innovation’,<sup>38</sup> constitute rather an autonomous moment. Computerization, digital networking, and new, interactive media change the face of our society on a local as well as on a global plane, and this transformative potential has been observed quite early on in the social sciences and humanities.

Perhaps when Alain Touraine<sup>39</sup> or Daniel Bell<sup>40</sup> at the end of the 1960s and the beginning of the 1970s spoke of a ‘post-industrial society’, they wished to express not only that the service sector had overtaken significantly industrial production, but above all to point out that knowledge and information play an increasingly crucial role in all social domains. Jean-Francois Lyotard established only a few years later, in the face of the increasingly wider circulation of computers and information technology, the concept of a *computerized society*: all inventories of knowledge become translated into the binary digital code and, in this way, they become economically easily utilizable, too, which is why knowledge has become a sought-after and hotly contested commodity. This commodification and computerization of knowledge is the ‘condition postmoderne’,<sup>41</sup> full of conflicts and crises.

If we agree with Jean Baudrillard, the latent instability of post-modern conditions has now (re)stabilized itself by means of information technological virtualization and media-supported simulation. In the age of the ‘simulacrum’, proclaimed by Baudrillard, in which the real and the imaginary, supposedly, are fused into a common operational totality, there accrue extensive *possibilities of manipulation*.<sup>42</sup> This change in information technology is, therefore, also a *Control Revolution*<sup>43</sup> which was especially necessary in order to get a hold on the effects of the industrial revolution; that is, the risk-laden ecological, economic and social side-effects of industrialization.<sup>44</sup> The ‘High-Tech Society’,<sup>45</sup> originating in the wake of the information technological control revolution, at whose core stand technologies and developments such as microelectronics, robot-sustained production, electronic commerce, telecommunication, artificial intelligence and

new media such as the World Wide Web or Video on Demand etc (see an overview<sup>46</sup>) is, however, not an exclusive (although very much an excluding) phenomenon in the western industrial nations, but its patterns are spreading globally, pervading and infiltrating even into regions of the globe thought of as peripheral (critical discussion<sup>47</sup>). In this way, a worldwide network of information technology arises and the global networks of information capture local spaces. While doing so, they colonize all spheres of the social. Contours of a network society emerge, and real space, the 'space of places', becomes increasingly transformed by the global flows of capital, information and images into the 'space of flows'. The virtual thus turns out to be the defining reality.<sup>48,49</sup> In this CyberSociety<sup>50</sup> through the convergence of the most various technologies,<sup>51</sup> a virtual social sphere is created, which possesses, to be sure, still a spatial character. However, it blasts apart the usual patterns of mapping and orientation.<sup>52,53</sup>

### 2.3. *The revolution in genetic engineering*

The development in the life sciences is also proceeding forward with giant strides, and reports such as that of the decoding of the human genome draw much media attention. This revolution, however, is not reflected as concretely and ubiquitously within sociological discourse as are globalization and the changes in information technology. This is all the more surprising since some classic figures in sociology such as, say, Herbert Spencer and his evolutionism<sup>54</sup> connect explicitly to biological models, and metaphors of the body pervade sociological and political discourse.<sup>55</sup> Biology itself, is absolutely sensitive to the social and ethical questions of genetic engineering and enters into the interdisciplinary discourse.<sup>56,57</sup> However, of course, the biotechnology debate has not passed by the social sciences and humanities without a trace, and particularly now one can observe a boom of this subject. The potential for change inherent in these technologies is certainly featured prominently. Rifkin, for example, speaks of the 'Biotech Century',<sup>58</sup> and Sylvester and Klotz have even already evoked the Gene Age.<sup>59</sup> These exaggerations correspond completely with the public perception. Many hold the gene as an icon of a brave(?) new world,<sup>60</sup> and biological scientists are coming to be celebrated by many – falsely – as prophets of a new doctrine of liberation.<sup>61</sup>

How do such contradictory assessments come about? Since DNA was 'discovered' in 1953 by Crick and Watson as the carrier of the code of life, forward strides have been made possible by techniques such as the enzymatic slicing of DNA or its amplification by means of PCR (Polymerase Chain Reaction) to ever more complex organisms and manipulations. The focus of genetic engineering has been enlarged from micro-organisms to plants to animals and human beings. Initially it was more like a curious game, but today one can precisely switch genes

on and off or transfer genes from one species to another. Specifically, this capacity turns genetics into a key technology and a driving force of change in post-industrial society, whereby social acceptance of interference with the human genome is to be assessed as essentially lower than the acceptance of the use of bacteria to produce genetically engineered vaccines.<sup>62–64</sup>

Genetic engineering can, therefore, be interpreted in different ways, depending on which domain one applies it to or which point of view one takes. Gene therapy could be the key to the battle against many diseases; genetic screening and prenatal diagnostics could, on the contrary, open the door to a new eugenics. Genetic modifications possibly provide the groundwork for new, more resistant and higher-yield kinds of plants but, at the same time, exceeding the boundaries of species represents an uncontrollable risk. Biotechnology, then, raises completely new ethical and legal issues and gives us extensive technological means to influence the environment, which is why it is justified to speak here of an actual revolution (see also Refs 65 and 66). The possible effects of (not only) this revolution on the individual and the community will be considered closer in what follows.

### **3. Complexes of transformation: impact on the individual and on the community**

Already the sketchy account of the current processes of transformation makes clear that the changes are indeed radical. But what concrete impact do they have on the individual and, more importantly, on society as a cohesive unit? Light will be cast on these issues in what follows – first with respect to the specific processes and then concentrating on their complex combined effects.

#### *3.1. The globalization of inequality and the undermining of the national welfare state*

The impact of globalization on the subject and on the community is as diverse and multi-dimensional as this process itself. Here, we focus on two points we consider essential, its impact on the texture of social inequality and the undermining of the (national) welfare state, both of which can lead to fission and disembedding processes. This is because globalization has hardly led to a fairer distribution of capital. On the contrary, it links one-sidedly the metropolises, is located above all in the global cities – New York, London, Tokyo etc – as nodal points of the global nets<sup>67</sup> and serves principally the interests of multinational corporations.<sup>68,69</sup> We still find the separation between periphery and centre, outlined by Wallerstein, although it is perhaps less visible. Inequality on the national level, immense already, has increased tendentiously in the developing

countries<sup>70</sup> and also in the industrial nations of the West.<sup>71</sup> Thus, global capitalism, which acts according to the principle *Profit over People*,<sup>72</sup> is increasingly coming under fire.

In global capitalism, the centre is no longer made up of a relatively homogeneous and self-contained region but, rather, takes the shape of a networked global structure which, however, is not horizontal and egalitarian, but centres on a few (globally dispersed) actual places. The periphery simultaneously and diffusely invades the central regions and spreads, but remains as ‘decentred space’ – the holes, the empty spaces of the net! – even more isolated. It is home to a global underclass. It might happen that in the wake of globalization not only a global consciousness springs into being, but also a new rift spreads through social space. On the one hand there is highly mobile *Transnational Capitalist Class*,<sup>73</sup> on the other we find a proletariat fixated on local space. The latter may at times be uprooted from the local ghetto or even lead a nomadic existence; in doing so, it does, however, not follow its own impulse, like the individuals of the transnational new tribe,<sup>74</sup> but rather is forced to chase after a new, poorly paid job. Here, again and again, one is confronted with the same hard borders in space, be it just in the form of the ‘no-go-areas’ of exclusive shopping malls, health clubs and residential towers, which constitute the (more or less) visible borders. Space, and the capability to move in it, actually or virtually, becomes thus a defining dimension of social inequality.<sup>75–78</sup>

Consequently we are confronted with a paradox. While in the wake of globalization the national boundaries of space, especially for capital, increasingly disintegrate, there arise new, possibly even more limiting boundaries in social space. Strictly speaking, it is the liquefaction of capital itself that sets off and reinforces this process of social fission, for it is on account of the unbridled streams of capital flows that the containers of the national welfare state begin to leak.<sup>79</sup> The state can no longer take the same stabilizing measures of re-distribution as before, which results in a mounting of inequality and an increase of social tensions.<sup>80,81</sup>

This situation originates above all from the competition of nation states for the attraction of global capital. By competing with each other, the states weaken themselves and deprive themselves of spaces for configuration as well as economic resources, for by subordination to the logic of competition they lose their already limited political autonomy. By underbidding to attract capital, the transfer that takes place from capital to society diminishes.<sup>82</sup> This is, as Altvater notes, a ‘race without a winner’.<sup>83</sup> In this way the homogeneity of *The Three Worlds of Welfare Capitalism*<sup>84</sup> is imminent – in the form of a downward adjustment, that is, to the ‘liberal’ Anglo-American model.

It is not only for this reason that Lester Thurow takes a rather sceptical view of *The Future of Capitalism* and speaks of a ‘period of punctuated equilibrium’.<sup>85</sup>



The runaway *Disorganized Capitalism*<sup>86</sup> of the post-Fordist era of globalization acts as a 'global disembedding mechanism', which separates to an increasing degree economy from its social context, and consequently leads to the transformation and commodification of the entire society and culture.<sup>87</sup> The ties of solidarity that bound and bind together the western welfare states are about to tear. Individuals lose their embedment in social space but, at the same time, are confronted with ever new (spatial) boundaries. Even the flight into the virtual worlds of cyberspace does not appear to be a viable solution.

### *3.2. The fragmentation of public life and the fractalization of the individual in the new information and media society*

With the changes in information technology, as shown, a virtual transformation of real places arises, at least a virtual 'parallel world', the laws and organizational forms of which have hitherto been investigated only marginally.<sup>88</sup> This parallel world may provide new freedoms, perhaps when the (confining) cover of identity is modified or slipped off in 'cyberspace'. It can, however, have problematic effects leading to a fragmentation of the individual as well as of the public sphere. In particular, the latter may at first sound absurd for it is the information technologies that contribute substantially to the global network. One could therefore conjecture that electronic information networks are more likely to give rise to unifying processes and that an actual global consciousness may come into being. This is, nonetheless, only one possible aspect of their effect, opposite effects are also likely. For, as critically as one may consider the division into actors and audience and the 'electronically reinforced silence' in the age of mass media.<sup>89</sup> These generated, through simultaneity, nonetheless something like a 'global village'.<sup>90</sup> There is, however, a tendency for IT networks to destroy the unifying global simultaneity of the mass media – their interactive capacity facilitates individualization and dissolves the temporal boundaries of media use.

This is the effect of yet another paradox. In the society of knowledge and communication marked by the exponential increase of information one might expect an even stronger (knowledge) hierarchization within the audience than was the case, according to prevalent opinion, in industrial mass society.<sup>91</sup> Brian Loader, for example, speaks of the 'information poor',<sup>92</sup> who, according to him, form a kind of new underclass of computerized society, in which issues of access become crucial (see also Ref. 93). On the other hand, several empirical studies verify that differences in knowledge have remained rather constant.<sup>94</sup> In compliance with a thesis of Ulrich Beck<sup>44</sup> one can, therefore, perhaps speak of a 'lifting-effect', in that we all (perforce) are absorbing ever more information. At the same time, the old relations of inequality remain (or are even more strongly) sustained. They are, however, transformed to an ever higher overall level. This

has a significant effect on account of the generally higher level of information and the new technical possibilities for realizing individual preferences, and there comes about an *individualisation of information patterns and modes of media consumption*, which in their turn effect a *diffusion and fragmentation of the public sphere*. This is because even a disproportionately higher general willingness to receive information does not suffice to manage the increased information density and latitude, so we must be highly selective as regards the information on offer. Subsequently, in spite of channelling information flows through the great net portals, the increasing normality of an ‘audience of one’ is impending.<sup>95</sup> This leads to a collapse of the mass media public, and we thus find ourselves *Beyond the Global Village*.<sup>96</sup>

The public is – through virtualization, but as a political sphere of action, too – dissolved. It loses its reference to concrete (living) space so that the end of the political as a domain of ‘practice’ appears a distinct possibility.<sup>97</sup> On the other hand, some observers trace in the new media/technologies a considerable democratic potential and point to an electronic inclusion, that is, a growing consideration even of minorities, as well as chances for the creation of a (semi-)direct democracy by means of online referenda etc.<sup>98,99</sup> Already, today some less formalized active forms of politics are to be found in virtual space, where, for example, ‘cyberpunks’ and ‘hackers’ are trying to realize their notions of absolute freedom of information (quite compatible with neo-liberalism) even by illegal means.<sup>100</sup> One thing, to be sure, holds with certainty, information technology is highly political.<sup>101,219</sup> Because this is so, more and more government organs strive for the comprehensive control of content and direction of information flows.<sup>102</sup> Virtual worlds may very well be elusive, but it might easily happen that the unsuspecting User, when clicking into the net, is being watched by Big Brother!

This awakens memories of dark ‘phantasies’. Already Jacques Ellul had feared that a technology, turned autonomous, has subjugated man. On account of the mechanisation pervading all spheres of life, the state, which avails itself of technology to gain control over society and absorb completely the life of its citizens, subsequently becomes totalitarian. Incidentally, even Ellul has envisioned something like ‘cyborgs’, human machines at the end of these processes. The existence of these is governed by technology, socially fragmented and without a spiritual core.<sup>103</sup> Currently, Jean Baudrillard affirms in a very similar vein the ‘fractalization’ of the individual by means of simulating doubles and asks ‘Am I a Man or am I a machine? There is no more answer nowadays to this question: in reality and subjectively I am a Man, but virtually and in fact I am a machine’.<sup>104</sup> Thus, in the virtual phantasm of cyberspace all material limits become blurred and there arises a decentred multiple self,<sup>105</sup> a vacuous realization of the theoretical method of deconstruction, as it seems.<sup>106</sup> This, on an ideological plane, is shown

only too clearly in texts like Donna Haraway's *Cyborg-Manifesto*. She observes: 'We are all chimeras, theorized and fabricated hybrids of machine and organism; in short, we are cyborgs.'<sup>107,150</sup> This hybridization is welcomed euphorically by Haraway (in contrast to Ellul and Baudrillard), with regard to the radically new opportunities opening up for self-design: 'The cyborg is resolutely committed to partiality, irony, intimacy, and perversity. It is oppositional, utopian, and completely without innocence'.<sup>107,151</sup>

### 3.3. Genetically engineered 'doubles' and their mirrors

The cyborg is a biological-technological hybrid, its corporeal, mechanical, and electronic elements fuse and dissolve it as a mere 'interface' in virtual space. 'Biborgs' represent a new level of hybridization, they are transgenic chimeras, extemporaneously assembled from the available gene pool. Biborgs are, to a certain extent, reality: gene transfer is a central technique of the new genetics, be it in the production of medicines, where foreign genes are smuggled into micro-organisms in order to produce enzymes and vaccines, or even only as informative play, when, say, rabbit cells, through gene manipulation (i.e. the transfer of the green fluorescent protein), begin suddenly to fluoresce under the microscope like certain deep sea medusas. The boundaries of the species begin to become blurred – that is, if one ever could draw them sharply. Perhaps it will some day be held as 'cool' to light up magically like that, perhaps it will be a genetic marker for deviance.

Such technologies could, in any case, have drastic effects for individuals, their free space, and community as a whole. Analogous to Donna Haraway, one could celebrate the future as a new age of transgenic chimeras and emphasize how their 'impurity' strengthens their consciousness for difference; or demonstrate how easily the new technologies provide creative possibilities for self-design and the overcoming of corporeal limitations. Thus, genetic engineering may compensate for the 'antiquity of Man',<sup>108</sup> his character as a biological 'defective' being.<sup>109</sup> Protean dreams, also the foundation of a new politics of difference, which takes place not against but rather together with genetic engineering, and which, however, fades out real problems of finding and maintaining identity in a world of dissolving fixed points.<sup>110</sup>

Genetic engineering gains an especially explosive nature through the foreseeable fusion with information technology. The simplest kind of its combination is computer-aided gene-sequencing as well as the electronic capture of genetic information with all the questionable consequences of such a storage of biological data<sup>58</sup> (and below). However, much further-reaching results could be achieved by a conversion from binary digital data encoding to the four-value code of the DNA bases (adenine, thymine, guanine, cytosine). Such a biological

programming or gene-information-technology would open up the space of multidimensional information, for DNA is not simply a flat structure, but three-dimensional with multiple coils. The use of DNA would, moreover, be a very safe method of data storage; because the bases are coupled in pairs, the information on the DNA is always available (at least) twice. This is why genetic data are so easily duplicated, reproduced and multiplied. And DNA – the code of life – is capable of self-reproduction: knowledge embodies itself and the body becomes simultaneously the central metaphor of the (new) science.<sup>111</sup>

Yet, genetic engineering also makes possible extraneous-reproduction through cloning. With the clone, the multiple personality becomes real; not, as in the phantasms of virtual space, principally integrated into a physical unit, but rather externalized and split, spread out over (fractal) bodies. Some would surely be terrified by such a futuristic look at their doubled (but certainly different) clone-self. This is, however, only one of the ‘monstrous’ dimensions of the new genetics.

Genetic engineering opens new, comprehensive possibilities of (biological) control. Human attributes, insofar as they are biologically determined, are captured and even become manipulable. Some propose to use these means more actively, and to intervene instead of making them available only to unlimited scientific playfulness.<sup>112</sup> Yet, with this development (individual) genetic attributes may lead to a new form of discrimination and eugenics, not to mention banal insurance issues, reports of which we already hear today, arising when modern diagnostics detect certain genetic defects. The current techniques of biotechnological control are called genetic screening, genetic fingerprinting etc. Once perfected, they will make possible the control and surveillance of even the (genetic) core of personality.<sup>113</sup>

Still, at present, this form of control is likely to be no more than fiction. The Human Genome Project is a case in point, it has been a supposedly successful attempt to map out the human genome – a Cartesian illusion, for the object of the survey, the human being, may prove to be more complex than a superficial sequence of bases.<sup>114</sup> However, the mapping of the genome bears some very real risks. This cartographic feat was not first achieved solely under the auspices of the university scientists of the Human Genome Project, but equally by the scientists of the biotechnology entrepreneur Craig Venter. His company, Celera, already holds patents on a large number of genes that could prove to be of economic interest. Consequently, a privatization of the human genome is impending! Analogously, the entire global gene pool is in danger as more and more of enterprises and individual persons obtain patents for animal and plant genes.<sup>64</sup> Thus, the concentration on potentially lucrative genes could bring about an impoverishment, a loss of variety, although projects such as the Human Genome Diversity Project seek to counter this.<sup>115</sup>

Other dangers inherent in genetic engineering are more difficult to rein in. There are risks such as the uncontrolled transfer of genes implanted in agricultural crops to other species, or the genetically engineered creation and (unintentional) release of ‘monsters’ – even of such inconspicuous creatures as heat-resistant bacteria. Pandora’s Box, which the de-materialized economy of the post-industrial age almost seemed to have succeeded in closing, is once again wide open. Genetic engineering contains a reflexive dimension of danger.<sup>116</sup> Utopian elements meet with dystopian components;<sup>117</sup> and it is particularly from the fusion and convergence of the various technologies that new complexes of change arise.

#### *3.4. Critical interim résumé: convergent dis-embedding processes and negative individualization*

When drawing a critical interim conclusion, one will find that the dis-embedding processes shown above constitute a transformative complex; they converge in a far-reaching meta change.<sup>116</sup> Globalization and changes in information technology not only reciprocally reinforce one another when generating comprehensive and yet exclusive global networks. Taken together, virtual networks and gen-technological coding cause a much further reaching impulse for change than when separate. In combination, they create, as shown, radically new and comprehensive means for control, manipulation, and self-design. If all these developments, the first signs of which we are only just beginning to see, actually did materialize, then this would mean a drastic farewell to the ‘old’ modernity and its ‘subjects’. The (fictitious) autonomous and established subject, which had to be painstakingly created through a historic process of civilization and individual socialization,<sup>118,119</sup> through manifold compulsions and their internalization, is being dissolved in the course of the current social transformations. It must internalize the norms of flexible capitalism and prove capable of change.<sup>120</sup> In accordance with this re-evaluation, the avant-garde of the new age project themselves as ‘post-humans’<sup>121</sup> and leave the status of humanity to the subjected and marginalized, whose urge finally to receive full recognition as individuals is criticized and discredited as an old-fashioned insistence on core constructions.<sup>122</sup>

From the communitarian perspective, such phantasms are contrasted with an *Ethics of Authenticity*.<sup>123</sup> It traces in the (old-fashioned) self and its intuitions an essential source of ethics, just as the individual, according to Taylor, conversely needs a moral frame for his/her self-realization. This kind of view is typical for communitarianism, which represents an important current counter-movement to the apologists of the new, and it seeks to emphasize communal values against a ‘bottomless’ market liberalism. Nevertheless, it can be construed as a predominantly conservative, primarily deflective, defensive movement, which states one-sidedly that we find ourselves in a situation *After Virtue*.<sup>124</sup>

Robert Putnam's analysis reflects this attitude in his thesis of *Bowling Alone*,<sup>125,126</sup> which created a furore in the United States. In it, he describes a crisis scenario for American society and, at the same time, touches upon the general question of what still holds together (post)modern society. He refers here once again to the concept of 'social capital', which he describes as an essential presupposition for a solid democracy and also an efficient economy.<sup>127</sup> The basic idea of Putnam's version of social capital consists of the thesis that a person's family, friends and acquaintances represent an important value, onto which one can fall back in crisis situations. Conversely, the communal engagement of individuals and their personal integration is a crucial social resource, on which every society must build in order to resolve conflicts and perform communal tasks. Putnam asserts that, at present, social capital is shrinking, and, among others, he advances his argument on the model of bowling (one of America's most popular sporting activities). In the past, Americans of all social strata met with friends, in groups, and in associations to go bowling. Today, an increasing number of Americans go bowling alone, without the company of, and without communication with, others. Yet, this is just the sign of a general development: the sense of community and the urge to come together in groups is weakening and is leading to a continuously increasing detachment. If Putnam should prove to be correct, then *negative individualization*, which takes individuals out of their social contexts without leading to new forms of bonding is a possible, real, danger, but at the same time also a one-sided assumption.

#### **4. New forms of embedment? The strength of weak ties and post-traditional ligatures**

The effects of the most important current social processes of change – the globalization of politics, economy, and culture, changes in information technology and the revolution in genetic engineering, as well as their collective effect – were illuminated above primarily with regard to their disembedding, problematic effects for the individual as well as the community. Only a few optimistic positions were given a voice. We have, therefore, been 'warned', have understood the voice(s) of fear. However, having faced this fear and critically acknowledged its justified objections, we can now ask ourselves: what spaces of opportunity are opened up in the course of these transformations? Are there not, also, alongside the dissolving moments of individualization, traces of new, perhaps even less coercive mechanisms of socialization and bonding?

It is precisely in this dialectic of risk and opportunity that Ulrich Beck and Anthony Giddens understand the processes of change in the (reflexive) modern society. Individualization is understood by Beck as a historically contradictory process of societalization.<sup>44,119</sup> By means of the detachment effected by it from

existing forms of socialization and bonding, as well as the loss of traditional certainties generated in its wake, individualization now possesses a dimension of liberation and disenchantment. On the other hand, there is inherent in it a dimension of reintegration, too; new forms of social bonding and new structures arise.<sup>44,206</sup> Similarly, Giddens points out that the (time-spatial) ‘disembedding’ processes of the social relationship patterns in the wake of the current radicalized and globalized modernization are accompanied by re-embedding processes.<sup>128</sup>

The dialectical movement of dissolution and re-formation possibly leads us into *Another Modernity*,<sup>129</sup> the structures of which are, to be sure, still unclear, unless their characteristic is an altogether greater indeterminacy, plurality and openness. Therefore, community is not necessarily dissolved, we are just facing other, less uniform, more fluid forms of social connection. It is exactly this that one can (theoretically as well empirically) hold against Putnam and his thesis of bowling alone, i.e. a weakening of social ties. Such loose connections<sup>130</sup> or weak ties<sup>131</sup> are perhaps not as firmly joined. They can, however, precisely because they are looser and consequently more flexible, be equally viable social resources. They represent a communal capital, on which society can be based (if one conceptualizes society as dynamic and beyond a merely functional context). For, in the same vein that a ‘patchwork-identity’ need by no means be pathological, but quite to the contrary makes it possible for individuals to express the multiple facets of their personality and, through multiple fittings, represent a way to escape the uniforming coercions of identity of modern society,<sup>132</sup> so too can network-like, rather fluid, social (group-) forms provide a foundation for commitment and solidarity that is compatible with the current, increasingly fluid conditions.<sup>133</sup>

On the other hand: even if post-modern relations may increasingly liquefy themselves<sup>134</sup> and therefore require adapted forms of social organization and social bonding, society cannot entirely dissolve into a disjunctive stream of disparate flows. The total liquefaction, the unrestrained capitulation to the conditions of a flexible capitalism, leads to the liquidation of social relations. This is because, metaphorically speaking, every river requires a bed, and if it does not possess one, it will, in meandering, create one.

Social action requires, as the river does its bed, a place, a (communal) embedment. Hooks<sup>135</sup> describes vividly how only the localization in an atmosphere of security, in her case the house of her grandmother in the midst of a hostile ‘white’ environment, granted her the strength and the stimulus for resistance against racist oppression; a resistance that nourished itself precisely from the yearning that ‘home’ should be everywhere. In this way, resistant solidarity arises even from an endangered marginal perspective when the positive experience of communal embedment is present as a foundation.

Such linking places, such places of refuge, can be either real or imaginary. It might be, say, the attic hideout of our childhood, to which we return in daydreams,

or the promising distant light on the horizon, towards which we set out.<sup>136</sup> Those real-and-imagined home-places lead us potentially to a third space of difference,<sup>137</sup> to that heterotopic *other space*, which is not simply overlapping or identical with present (social) space, but rather opens new opportunities for autonomy and difference for us,<sup>138</sup> i.e. a utopian space of hope.<sup>139</sup>

In his concept of *Life Chances*,<sup>140</sup> Ralf Dahrendorf points out the importance of embedment not only for resistance and utopian thought, but for the existence of social ties in general. In his view, liberal democracy makes available to the individual an abundance of options. By options, Dahrendorf understands choices and alternatives that are at the disposal of a person in his/her respective societal position and situation. All options are, however, devoid of meaning, unless they are bound with 'ligatures', secured frames of reference, forms of embedment and ties. Ligatures, then, refer to a person's references to meaning, community and place that provide him/her with orientation, while the options represent the contingency dimension of social action spaces, and only when taken together do they converge on that which Dahrendorf calls 'life chances'. In the course of argument he points out that modernization inevitably has signified an expansion of choices. Capitalist modernization, however, produced its (quasi-) options through the severing of ligatures. This dissolution of traditional relations and frames of reference can be no linear process, at the end of which stands an individual that can only be described via his/her wealth of options. At a certain point, the choices gained by the deconstruction of traditional ligatures lose their meaning, for: 'Ligatures without options are oppressive whereas options without bonds are meaningless'.<sup>31,140</sup>

Ligatures are therefore necessary, unless we wish to wind up in a social vacuum of completely detached virtual flows. Still, in our view, these ligatures need not necessarily be traditional – that is, (pre-)existing ligatures, as Dahrendorf believes.<sup>75,140</sup> It is also conceivable that post-traditional ligatures will emerge, which create similar forms of embedment in a different way to give these options meaning, which are, however, for the most part (*inter-actively (self-)created and kept alive*). One can even go further and assert that only through such post-traditional ligatures, which must of necessity give space to variety and difference, can the complex and diverse challenges of today be met. Otherwise there looms a fundamentalistic (backfacing) orientation, which not only seeks to combat the aberrations of modernization but also eliminates the achievements of the modern age.<sup>141</sup>

What, then, could post-traditional ligatures consist of? Scott Lash provides one indication. He, too, asserts that community depends on bonds; that is, for him, shared references to life and sense, common meanings. Yet, the plane of common significance is today most likely to be found in the field of aesthetics.<sup>142</sup> In the 'aesthetic society',<sup>143</sup> and/or the culture society,<sup>144</sup> which is penetrated deeply by



the consumer-culture of advanced capitalism,<sup>145,146</sup> significance is also created by signs and symbols and no longer merely represented by them. Therefore, societalization can also be established on this basis. Particularly when one considers the (so frequently denounced) youth-, pop-, and sub-cultures, one will find that it is indeed the signs, symbols and cultural products, and their aesthetic appeal, which constitute primarily the core of social positioning, which becomes enriched with conventional meanings only in the course of further interaction; perhaps when through listening to Hip-Hop, the political interest in one's particular situation in the ghetto awakens. From *the creative processing of everyday life*<sup>147</sup> can, by all means, arise *resistive solidarity action*.<sup>148</sup> There is, of course, always the danger that the trace of difference, which is laid in the aesthetic and its indefinable sensibility, becomes fragmented or transformed and utilized for capitalistic purposes and finally fades into conformity.<sup>130,149</sup>

Some movements – such as, for example, Culture Jamming, which re-interprets advertising symbols, or the Reclaim the Streets movement, which intends to counter the privatization of public space – turn therefore explicitly against the global culture industry.<sup>151</sup> Already this shows that political engagement need no longer happen exclusively within (national) political institutions or parties, but takes place often within the framework of globally active NGOs or informal oppositional networks (as in the case of the so-called 'anti-globalists'). And instead of positioning in the narrow local or familial sphere, many individuals engage in virtual communities<sup>152</sup> or transnational social spaces,<sup>153</sup> which overlap territorial boundaries as a third dimension, and which represent an, empirically measurable, immense capital.<sup>154</sup> This, however, consequently means that they no longer form static relationship patterns but rather (self-selected and designed) mobile figurations.<sup>155</sup>

Certainly, at present, one still rarely encounters such a rather cosmopolitan orientation,<sup>156</sup> yet it is an increasingly relevant quantity, especially as concerns the value orientation of the individual. For, paradoxically, it is precisely the tribulated self of radicalized modernity, that, via a detour through the private, heads back into (global) public space. This is what Anthony Giddens calls 'life politics': '[...] life politics concerns political issues which flow from processes of self-actualisation in post-traditional contexts, where globalising influences intrude deeply into the reflexive project of the self, and conversely where processes of self-realisation influence global strategies.'<sup>157,214</sup> This brings a whole series of new moral and political questions to the fore. What is humanity's responsibility to nature? What are the limits of scientific and technological innovation? What rights and obligations have individuals with respect to their bodies? In a similar vein, Ulrich Beck speaks of the 'social morality of one's own life', which effects a reinvention of the political, beyond the established institutions, in the underground of everyday life.

Admittedly, such a sub-politics always is, like the community of the aesthetic, at risk of becoming diffused, fragmented, or bogged down in neighbourhood issues and, consequently, ending up in a non-politics (see Ref. 8, pp. 362–375). On the other hand, it ought not to be overlooked that sub-politics and their post-traditional bonding forms, taken seriously, contain a considerable potential.

## References

1. P. Virilio (1977) *Vitesse et politique – Essai de dromologie* (Paris: Galilée).
2. I. Wilkinson (2001) *Anxiety in a Risk Society* (London/New York: Routledge).
3. Ch. Begemann (1987) *Furcht und Angst im Prozeß der Aufklärung – Zu Literatur und Bewusstseinsgeschichte des 18. Jahrhunderts* (Frankfurt: Athenäum).
4. M. Horkheimer and Th. W. Adorno (1944) *Dialektik der Aufklärung* (New York: Social Studies Association).
5. F. Neumann (1967) Angst und Politik. In F. Neumann: *Demokratischer und autoritärer Staat – Studien zur politischen Theorie* (Frankfurt: Europäische Verlagsanstalt), pp. 261–291.
6. S. Toulmin (1990) *Cosmopolis – The Hidden Agenda of Modernity* (New York: The Free Press).
7. Z. Bauman (1991) *Modernity and Ambivalence* (Cambridge: Polity Press).
8. A. K. Jain (2000) *Politik in der (Post-) Moderne – Reflexiv-deflexive Modernisierung und die Diffusion des Politischen* (München: edition fatal).
9. I. Kant (1784) Beantwortung der Frage: Was ist Aufklärung? In: *Berlinische Monatsschrift*, No. 4.
10. A. Heller (1990) *Can Modernity Survive?* (Cambridge: Polity Press).
11. M. Makropoulos (1997) *Modernität und Kontingenz* (München: Wilhelm Fink Verlag).
12. C. Castoriadis (1975) *L'institution imaginaire de la société* (Paris: Éditions du Seuil).
13. É. Durkheim (1893) *De la division du travail social* (Paris: Alcan).
14. F. Tönnies (1887) *Gemeinschaft und Gesellschaft* (Leipzig: Reissland).
15. F. Fukuyama (1989) The end of history? In *The National Interest*, **16**, 3–19.
16. U. Beck, W. Bonß and Ch. Lau (2001) Zwischen erster und zweiter Moderne. In U. Beck and W. Bonß (eds) *Die Modernisierung der Moderne* (Frankfurt: Suhrkamp), pp. 11–63.
17. G. Modelski (1972) *Principles of World Politics* (New York: The Free Press).
18. J. N. Rosenau (1980) *The Study of Global Interdependence – Essays on the Transnationalisation of World Affairs* (London/New York: Frances Pinter Publishers & Nichols Publishing Company).

19. J. N. Rosenau (1990) *Turbulence in World Politics – A Theory of Change and Continuity* (New York: Harvester/Wheatsheaf).
20. J. W. Burton (1972) *World Society* (London: Cambridge University Press).
21. E. Luard (1990) *The Globalization of Politics – The Changed Focus of Political Action in the Modern World* (New York: New York University Press).
22. E. L. Morse (1976) *Modernization and the Transformation of International Relations* (New York: The Free Press).
23. K. Ohmae (1996) *The End of Nation State – The Rise of Regional Economies: How New Engines of Property are Reshaping Global Markets* (London: Harper-Collins).
24. I. Wallerstein (1974) *The Modern World System – Capitalist Agriculture and the Origins of the European World Economy in the Sixteenth Century* (New York/London: Academic Press).
25. R. Gilpin (1986) *The Political Economy of International Relations* (Princeton: Princeton University Press).
26. A. McGrew (1992) Global politics in a transitional era. In A. McGrew and P. Lewis (eds) *Global Politics – Globalization and the Nation State* (Cambridge: Polity Press), pp. 312–330.
27. A. Maddison (1982) *Phases of Capitalist Development* (Oxford/New York: Oxford University Press).
28. P. Hirst and G. Thompson (1996) *Globalization in Question – The International Economy and the Impossibilities of Governance* (Cambridge: Polity Press).
29. R. B. McKenzie and L. R. Dwight (1991) *Quicksilver Capital – How the Rapid Movement of Wealth Has Changed the World* (New York: The Free Press).
30. S. Lash and J. Urry (1994) *Economies of Signs and Space* (London/Thousand Oaks/New Delhi: Sage).
31. F. Jameson (1991) *Postmodernism, or, The Cultural Logic of Late Capitalism* (London/New York: Verso).
32. R. Rollin (ed.) (1989) *The Americanization of the Global Village – Essays in Comparative Culture* (Bowling Green: Bowling Green State University Popular Press).
33. A. Appadurai (1990) Disjuncture and difference in the global cultural economy. In M. Featherstone (ed), *Global Culture – Nationalism, Globalization, Modernity* (London/Newbury Park/New Delhi: Sage), pp. 295–310.
34. R. Robertson (1992) *Globalization – Social Theory and Global Culture* (London/Newbury Park/New Delhi: Sage).
35. R. Robertson (1990) Mapping the global condition – globalization as a central concept. In M. Featherstone (ed), *Global Culture – Nationalism, Globalization, Modernity*. London/Newbury Park/New Delhi: Sage), pp. 15–30.
36. G. Therborn (2000) At the birth of second century sociology – times of reflexivity, spaces of identity, and nodes of knowledge. In *British*

- Journal of Sociology. Special Issue: Sociology Facing the Next Millennium*, **51**(1), 37–57.
37. M. Albrow (1996) *The Global Age – State and Society Beyond Modernity* (Cambridge: Polity Press).
  38. A. Toffler (1980) *The Third Wave* (New York: William Morrow and Company).
  39. A. Touraine (1969) *La société post-industrielle* (Paris: Denoël-Gonthier).
  40. D. Bell (1973) *The Coming of Post-industrial Society* (New York: Basic Books).
  41. J.-F. Lyotard (1979) *La condition postmoderne – Rapport sur le savoir* (Paris: Minuit).
  42. J. Baudrillard (1981): *Simulacre et simulation* (Paris: Galilée).
  43. J. R. Beniger. (1986) *The Control Revolution – Technological and Economic Origins of the Information Society* (Cambridge/London: Harvard University Press).
  44. U. Beck (1986) *Risikogesellschaft – Auf dem Weg in eine andere Moderne* (Frankfurt: Suhrkamp).
  45. T. Forrester (1987) *High-Tech Society – The Story of the Information Technology Revolution* (Cambridge: MIT Press).
  46. N. Heap, et al. (eds) (1995) *Information Technology and Society* (London/Thousand Oaks/New Delhi: Sage).
  47. A. Mody and C. Dahlman (eds) (1992) *Diffusion of Information Technology – Opportunities and Constraints [World Development, 20(12) (Special Issue)]* (Oxford: Pergamon Press).
  48. M. Castells (1996) *The Rise of the Network Society [The Information Age, Vol. I]* (Oxford/Cambridge: Blackwell).
  49. W. J. Mitchel (1998) Replacing place. In P. Lunenfeld (ed.) *The Digital Dialectic – New Essays on New Media* (Cambridge/London: MIT Press), pp. 112–127.
  50. S. G. Jones (1994) *CyberSociety – Computer-Mediated Communication and Community* (London/Thousand Oaks/New Delhi: Sage).
  51. H. Rheingold (1991) *Virtual Reality* (New York, Touchstone).
  52. M. Benedict (1991) Cyberspace – some proposals. In M. Benedict (ed), *Cyberspace – First Steps* (Cambridge/London: MIT Press), pp 119–224.
  53. M. Dodge and R. Kitchin (2001) *Mapping Cyberspace* (London/New York: Routledge).
  54. H. Spencer (1876–96) *The Principles of Sociology*, 3 Volumes (London/Edinburgh/Oxford: Williams and Norgate).
  55. A. K. Jain (2001) *Medien der Anschauung – Theorie und Praxis der Metapher* (München: edition fatal).
  56. R. Daudel and N. L. D’Agaggio (ed.) (1986) *Life Sciences and Society* (Amsterdam/New York: Elsevier).
  57. D. Weatherall and J Sheelley (ed.) (1989) *Social Consequences of Genetic Engineering* (Amsterdam/New York/Oxford: Excerta Medica).

58. J. Rifkin (1998) *The Biotech Century – Harnessing the Gene and Remaking the World* (New York: Tarcher/Putnam).
59. E. J. Sylvester and L. C. Klotz (1987 [1983]) *The Gene Age – Genetic Engineering and the Next Industrial Revolution* (New York/London: Charles Scribner's Sons/Collier Macmillan).
60. D. Nelkin and S. M. Lindee (1995) *The DNA Mystique – The Gene as a Cultural Icon* (New York: Freeman).
61. R. C. Lewontin (1995) The dream of the human genome. In J. B. Elshtain and J. T. Cloyd (eds) *The Human Body – Assault on Dignity* (Nashville/London: Vanderbilt University Press), pp. 41–66.
62. E. Russo and D. Cove (1995) *Genetic Engineering – Dreams and Nightmares* (Oxford/New York/Heidelberg: Freeman/Spektrum).
63. F. B. Rudolph and L. V. McIntire (eds) (1996) *Biotechnology – Science, Engineering, and Ethical Challenges for the 21st Century* (Washington: Joseph Henry Press).
64. W. P. Wartburg and J. Liew (1999) *Gene Technology and Social Acceptance* (Lanham/New York/Oxford: University Press of America).
65. British Medical Association (ed.) (1992) *Our Genic Future – The Science and Ethics of Genetic Technology* (Oxford/New York: Oxford University Press).
66. P. Wheale and R. McNally (ed.) (1990) *The Bio-Revolution – Cornucopia or Pandora's Box?* (London/Winchester: Pluto Press).
67. S. Sassen (1991) *The Global City – New York, London, Tokyo* (Princeton: Princeton University Press).
68. K. Busch (1974) *Die multinationalen Konzerne – Zur Analyse der Weltmarktbelegungen des Kapitals* (Frankfurt: Suhrkamp).
69. Ch. Mulhearn (1996) Change and development in the global economy. In Ch. Bretherton and G. Ponton (eds) *Global Politics – An Introduction* (Oxford/Cambridge: Blackwell), pp. 155–193.
70. K. Griffin and A. Rahman Kahn (1992) *Globalization and the Developing World – An Essay on the International Dimensions of Development in the Post-Cold War Era* (Geneva: UNRISD).
71. Th. R. Swartz and K. M. Weigert (eds) (1995) *America's Working Poor* (Notre Dame/London: University of Notre Dame Press).
72. N. Chomsky (1999) *Profit Over People – Neoliberalism and Global Order* (New York/Toronto/London: Seven Stories Press).
73. L. Sklair (2001) *The Transnational Capitalist Class* (Oxford/Cambridge: Blackwell).
74. J. A. Field (1973) Transnationalism and the new tribe. In R. O. Keohane and J. S. Nye (eds) *Transnational Relations and World Politics* (Cambridge, MA: Harvard University Press), pp. 3–22.
75. A. Sayer (1985) *The Difference that Space Makes*. In D. Gregory and J. Urry (eds) *Social Relations and Spatial Structures* (London: Macmillan), pp. 49–66.
76. D. Harvey (1989) *The Condition of Postmodernity – An Enquiry into the Origins of Cultural Change* (Oxford/Cambridge: Blackwell).

77. D. Gregory (1978) *Ideology, Science and Human Geographie* (London: Hutchison).
78. A. K. Jain (2000) *Die 'Globale Klasse' – Die Verfügungsgewalt über den globalen Raum als neue Dimension der Klassenstrukturierung*. In J. Angermüller, K. Bunzmann and Ch. Rauch (eds), *Reale Fiktionen, fiktive Realitäten* (Hamburg: Lit Verlag), pp. 51–68.
79. P. J. Taylor (1995) Beyond containers – internationality, interstateness, interterritoriality. In *Progress in Human Geography*. No. 1, 1–15.
80. J. Holloway (1994) Global capital and the national state. In *Capital & Class*, **52**, 23–43.
81. S. Åkermann and J. L. Granatstein (eds) (1995) *Welfare States in Trouble – Historical Perspectives on Canada and Sweden* (Uppsala: Swedish Science Press).
82. M. Aspinwall (1996) The unholy social trinity – modelling social dumping under conditions of capital mobility and free trade. In *West European Politics*, No. 1, 125–150.
83. E. Altvater (1995) Wettlauf ohne Sieger – Politische Gestaltung im Zeitalter der Geo-Ökonomie. In: *Blätter für Deutsche und Internationale Politik*. No. 2, 192–202.
84. G. Esping-Andersen (1990) *The Three Worlds of Welfare Capitalism* (Cambridge: Polity Press).
85. L. Thurow (1996) *The Future of Capitalism – How Today's Economic Forces Shape Tomorrow's World* (New York: William Morrow & Company).
86. C. Offe (1985) *Disorganized Capitalism – Contemporary Transformations of Work and Politics* (Cambridge: MIT Press).
87. E. Altvater and B. Mahnkopf (1997) *Grenzen der Globalisierung – Ökonomie, Ökologie und Politik in der Weltgesellschaft* (Münster: Westfälisches Dampfboot).
88. D. G. Garson (ed.) (2000) *Social Dimension of Information Technology – Issues for the New Millennium* (Hershey/London: Idea Group Publishing).
89. R. Sennett (1998) *The Corrosion of Character – The Personal Consequences of Work in the New Capitalism* (New York/London: Norton & Company).
90. M. McLuhan (1964) *Understanding Media – The Extensions of Man* (New York: McGraw-Hill).
91. P. J. Tichenor, G. A. Donohue and C. N. Olien (1970) Mass media flow and differential growth in knowledge. In *Public Opinion Quarterly*, **34**, 159–170.
92. B. D. Loader (1998) Cyberspace divide – equality, agency and policy in the information society. In B. D. Loader (ed), *The Governance of Cyberspace – Politics, Technology and Global Restructuring* (London/New York: Routledge).
93. J. Rifkin (2000) *The Age of Access – The New Culture of Hypercapitalism* (New York: Tarcher/Putnam).
94. P. Jäckel (1994) Auf dem Weg zur Informationsgesellschaft? –

- Informationsverhalten und die Folgen der Informationskonkurrenz. In P. Jäckel and P. Winterhoff-Spurk (eds) *Politik und Medien – Analysen zur Entwicklung der politischen Kommunikation* (Berlin: Vistas Verlag), pp. 11–33.
95. N. Negroponte (1995) *Being Digital* (New York, Vintage Books).
  96. A. C. Clarke (1992) *How the World was One – Beyond the Global Village* (London: Bantam Books).
  97. D. Thu Nguyen and J. Alexander (1996) The coming of cyberspacetime and the end of the polity. In R. Shields (ed) *Cultures of Internet – Virtual Spaces, Real Histories, Living Bodies* (London/Thousand Oaks/New Delhi: Sage), pp. 99–124.
  98. A. Toffler and H. Toffler (1995) *Creating a New Civilization – The Politics of the Third Wave* (Atlanta: Turner).
  99. L. K. Grossman (1995) *The Electronic Republic – Reshaping Democracy in the Information Age* (New York: Viking).
  100. V. Sobchack (1996) Democratic franchise and the electronic frontier. In Z. Sardar and J. R. Ravetz (eds) *Cyberfutures* (New York: New York University Press), pp. 77–89.
  101. J. Fiske (1994) *Media Matters – Everyday Culture and Political Change* (Minneapolis/London: University of Minnesota Press).
  102. B. D. Loader (ed.) (1998) *The Governance of Cyberspace – Politics, Technology and Global Restructuring* (London/New York: Routledge).
  103. J. Ellul (1954) *La technique ou l'enjeu du siècle* (Paris: Armand Colin).
  104. J. Baudrillard (1988) *Video World and Fractal Subject*. Internet Resource: <http://www.aec.at/festival/1988en/ baud.html>.
  105. Sh. Turkle (1995) *Life on the Screen – Identity in the Age of the Internet* (New York: Simon and Schuster).
  106. S. Zizek (1997) *Cyberspace, Or, The Unbearable Closure of Being*. In S. Zizek, *The Plague of Fantasies* (London: Verso).
  107. D. J. Haraway (1991) A cyborg manifesto – science, technology, and socialist-feminism in the late twentieth century. In D. J. Haraway, *Simians, Cyborgs, and Women – The Reinvention of Nature* (London: Free Association Books), pp. 149–181.
  108. G. Anders (1980) *Die Antiquiertheit des Menschen*. 2 volumes (München: C. H. Beck).
  109. A. Gehlen (1962) *Die Seele im technischen Zeitalter – Sozialpsychologische Probleme in der industriellen Gesellschaft* (Reinbek: Rowohlt).
  110. P. N. Edwards (1997) The terminator meets commander data – cyborg identity in the new world order. In P. Taylor, S. E. Halfon and P. N. Edwards (eds), *Changing Life – Genomes, Ecologies, Bodies, Commodities* (Minneapolis: University of Minnesota Press), pp. 14–35.
  111. S. F. Gilbert (1997) Bodies of knowledge – biology and the intercultural university. In P. Taylor, S. E. Halfon and P. N. Edwards (eds): *Changing Life – Genomes, Ecologies, Bodies, Commodities* (Minneapolis: University of Minnesota Press), pp. 36–55.

112. P. Sloterdijk (1999) *Regeln für den Menschenpark* (Frankfurt: Suhrkamp).
113. D. Nelkin and L. Andrews (1999) DNA identification and surveillance creep. In P. Conrad and J. Gabe (eds) *Sociological Perspectives on the New Genetics* (Oxford/Malden: Blackwell), pp. 191–208.
114. P. Glasner (1998) Patrolling the boundaries or tracing the contours – cartographic metaphors in the human genome project. In P. Wheale, R. Schomberg and P. Glasner (eds), *The Social Management of Genetic Engineering* (Aldershot: Ashgate), pp. 29–43.
115. P. Wheale (1998) Human genome research and the human genome diversity project – some ethical issues. In P. Wheale, R. Schomberg and P. Glasner (eds), *The Social Management of Genetic Engineering* (Aldershot: Ashgate), pp. 91–115.
116. B. E. Rollin (1995) *The Frankenstein Syndrome – Ethical and Social Issues in the Genetic Engineering of Animals* (Cambridge: Cambridge University Press).
117. R. McNally and P. Wheale (1998) The consequences of modern genetic engineering – patents, ‘nomads’ and the »bio-industrial-complex«. In P. Wheale, R. Schomberg and P. Glasner (eds) *The Social Management of Genetic Engineering* (Aldershot: Ashgate), pp. 303–330.
118. N. Elias (1939) *Über den Prozeß der Zivilisation – Soziogenetische und psychogenetische Untersuchungen*. 2 volumes (Basel: Haus zum Falken).
119. M. Foucault (1975) *Surveiller et punir – Naissance de la prison* (Paris: Gallimard).
120. R. Sennett (1998) *The Corrosion of Character – The Personal Consequences of Work in the New Capitalism* (New York/London: Norton & Company).
121. G. S. Paul and E. Cox (1996) *Beyond Humanity – CyberEvolution and Future Minds* (Rockland: Charles River Media).
122. H. Steyerl (2002) Haunting humanism. In S. Steyerl: *Die leere Mitte* (München: edition fatal), pp. 41–57.
123. Ch. Taylor (1992) *The Ethics of Authenticity* (Cambridge: Harvard University Press).
124. A. MacIntyre (1981) *After Virtue – A Study in Moral Theory* (Notre Dame: University of Notre Dame Press).
125. R. D. Putnam (1995) Bowling alone – America’s declining social capital. *Journal of Democracy*, 6(1), 65–78.
126. R. D. Putnam (2000) *Bowling Alone – The Collapse and Revival of American Community* (New York: Simon & Schuster).
127. R. D. Putnam (1993) *Making Democracy Work – Civic Traditions in Modern Italy* (Princeton: Princeton University Press).
128. A. Giddens (1990) *The Consequences of Modernity* (Stanford: Stanford University Press).
129. S. Lash (1999) *Another Modernity – A Different Rationality* (Oxford/Cambridge: Blackwell).



130. R. Wuthnow (1998) *Loose Connections – Joining Together in America’s Fragmented Communities* (Cambridge/London: Harvard University Press).
131. M. S. Granovetter (1977) The strength of weak ties. In S. Leinhardt (ed), *Social Networks – A Developing Paradigm* (New York/San Francisco/London: Academic Press), pp. 347–367.
132. H. Keupp *et al.* (1999) *Identitätskonstruktionen – Das Patchwork der Identitäten in der Spätmoderne* (Reinbek: Rowohlt).
133. H. Keupp *et al.* (2001) Formenwandel sozialer Landschaften in der reflexiven Moderne – Individualisierung und posttraditionale Ligaturen. In U. Beck and W. Bonß (eds), *Die Modernisierung der Moderne* (Frankfurt: Suhrkamp), pp. 160–176.
134. Z. Bauman (2000) *Liquid Modernity* (Cambridge: Polity Press).
135. B. Hooks (1990) *Yearning – Race, Gender, and Cultural Politics* (Boston: South End Press).
136. G. Bachelard (1957) *La poétique de l’espace* (Paris: Presses Universitaires de France).
137. E. W. Soja (1996) *Thirdspace – Journeys to Los Angeles and Other Real-and-Imagined Places* (Cambridge/Oxford: Blackwell).
138. M. Foucault (1984) *Des espaces autres* [Paper for ‘Cercle d’études architecturale’, 14 March 1967]. In *Architecture, Movement, Continuité*. Vol. 5.
139. D. Harvey (2000) *Spaces of Hope* (Berkeley/Los Angeles: University of California Press).
140. R. Dahrendorf (1979) *Life Chances – Approaches to Social and Political Theory* (Chicago: University of Chicago Press).
141. Sh. N. Eisenstadt (1998) *Die Antinomien der Moderne* (Frankfurt: Suhrkamp).
142. S. Lash (1994) Reflexivity and its doubles: structure, aesthetics, community. In U. Beck, A. Giddens and S. Lash (eds), *Reflexive Modernization – Politics, Tradition and Aesthetics in the Modern Social Order* (Cambridge: Polity Press), pp. 110–173.
143. S. Giehle (1994) *Die ästhetische Gesellschaft* (Saarbrücken: Verlag für Entwicklungspolitik).
144. A. McRobby (1999) *In the Culture Society – Art, Fashion, and Popular Music* (London/New York: Routledge).
145. M. Featherstone (1992) Postmodernism and the aesthetization of everyday life. In S. Lash and J. Friedman (eds), *Modernity and Identity*. (Oxford/Cambridge: Blackwell), pp. 265–290.
146. D. Slater (1997) *Consumer Culture and Modernity* (Cambridge: Polity Press).
147. P. E. Willis (1990) *Common Culture – Symbolic Work at Play in the Everyday Cultures of the Young* (Boulder/San Francisco/Oxford: Westview Press).
148. S. Hall and T. Jefferson (1975) *Resistance through Rituals – Youth Subcultures in Post War Britain* (London: Hutchison).
149. Th. W. Adorno (1973) *Ästhetische Theorie* (Frankfurt: Suhrkamp).

150. F. Jameson (1991) *Postmodernism, or, The Cultural Logic of Late Capitalism* (London/New York: Verso).
151. N. Klein (2000) *No Logo – Taking Aim at the Brand Bullies* (Canada: Alfred A. Knopf).
152. H. Rheingold (1993) *The Virtual Community – Homesteading at the Electronic Frontier* (New York: HarperPerennial).
153. L. Pries (1998) Transnationale soziale Räume. In U. Beck (ed), *Perspektiven der Weltgesellschaft* (Frankfurt: Suhrkamp), pp. 55–86.
154. A. Blanchard and T. Horan (2000) Virtual communities and social capital. In: D. Garson (ed), *Social Dimension of Information Technology – Issues for the New Millennium* (Hershey/London: Idea Group Publishing), pp. 6–22.
155. J. Urry (2000) Mobile sociology. In: *British Journal of Sociology*, **51**(1), pp. 185–203.
156. R. Gubert (ed.) (1999) *Territorial Belonging between Ecology and Culture* (Trento: University of Trento – Sociology Series).
157. A. Giddens, A. (1991) *Modernity and Self-Identity – Self and Society in the Late Modern Age* (Stanford: Stanford University Press).

### About the Authors

**Anil K. Jain** is a Doctor in Sociology at the University of Munich (LMU) and is engaged in research on reflexive modernization. His fields of interest are in the theory of modernity/postmodernity, society and space, globalization and disparities, metaphors and knowledge, subject and resistance. His recent books are *Politik in der (Post-) Moderne – Reflexiv-deflexive Modernisierung und die Diffusion des Politischen* (Munich, 2000) and *Medien der Anschauung – Theorie und Praxis der Metapher* (Munich, 2001).

**Heiner Keupp** is Professor of social psychology at the University of Munich. He is leader of the project ‘Individualization and post-traditional ligatures’ at the Research centre on ‘reflexive modernization’. His recent books are *Identitätsarbeit heute* (Frankfurt: Suhrkamp, 1997) (edited together with R. Höfer); *Identitätskonstruktionen – Das Patchwork der Identitäten in der Spätmoderne* (Reinbek: Rowohlt, 1999).

**Renate Höfer** is a Fellow of the Institut für Praxisforschung und Projektberatung in Munich. Her recent books are *Identitätsarbeit heute* (Frankfurt: Suhrkamp, 1997) (edited together with H. Keupp) and *Jugend, Gesundheit und Identität – Studien zum Kohärenzgefühl* (Opladen: Leske + Budrich, 1999).

**Wolfgang Kraus** is a psychologist and senior researcher at the University of Munich in the research project on ‘Individualization and post-traditional ligatures

of the DFG'. His current areas of interest are narrative psychology, identity construction, postmodernism, social construction of trust. His recent book is *Das erzählte Selbst. Die narrative Konstruktion von Identität in der Spätmoderne* [*The Storied Self. The Narrative Construction of Identity in Late Modernity*, 2nd edn] (Herbolzheim: Centaurus, 2000).