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# CYBERNETIC CAPITALISM, INFORMATIONALISM AND COGNITIVE LABOR

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ABSTRACT: This paper provides a synoptic view of 'cybernetic capitalism' – a term that attempts to capture the leading sector developments within modern capitalism and to profile the leading accounts of these developments. 'Cybernetic capitalism' is a term used in this paper in order to distinguish a group of theories, or, better, positions, on the Left that attempt to theorize the nature of the *new* capitalism. 'Third capitalism' (after mercantilism and industrialism) now relies on a systems architecture that draws on cybernetics and modern supercomputing that connects five aspects of cybernetic capitalism: informational capitalism, cultural capitalism, cognitive capitalism, finance capitalism and biocapitalism. The paper examines two of these groups, namely *informational capitalism* and *cognitive capitalism* and their differences and similarities. Among the different positions thinking about the nature of modern capitalism, there are strong overlapping characteristics which coalesce around aesthetization, design and immateriality. Value creation is still central to contemporary capitalism. That is, the universal contradiction, which might manifest itself differently in different localities, between capital and labor is still there and has been diffused to every sphere of our lives. Cybernetic capitalism implies forms of accumulation at the core of the productive process of the most relevant sectors of economy at times implying antithetical stances with the ways that capital accumulation and production is conceived by industrial capitalist economies and cultures. This implies a radical change in the dominant paradigm of organization and production generating different sets of social dilemmas for human beings and societies, sets of contradictions and overlapping tendencies in relation to other capitalisms.

## Cybernetics, catastrophe, chaos and complexity

Modern cybernetics began with Norbert Weiner who defined the field with his 1948 book *Cybernetics: or Control and Communication in the Animal and the Machine* where he developed the science of information feedback systems linking control and communication in an understanding of the computer as 'ideal central nervous system to an apparatus for automatic control' (Wiener, 1948, p. 36) and, therefore, referring to the automatic control of animal and machine. The prehistory of the term can be traced back at least to Plato where *kybernētēs* meaning 'steersman' or 'governor' (from the Latin *gubernator*)--the same root as government—was used to refer governing of the city-state as an art based on the metaphor of the art of navigation or steering a ship. Thus, from the beginning the term was associated with politics and the art of government as well as with communication and organization. It is not surprising, then, that 'cybernetics' should be a significant theoretical term in global studies particularly with the growth of cognate terms derived from the root 'cyber' as a synonym for 'virtual' and emblematic of the global, such as 'cyberspace', 'cyberculture' and 'cyberpunk'.

In this context cybernetics has figured in global studies as a code word for global communications and media studies. As an epistemology related to systemics and systems philosophy the term has functioned as an approach for investigating a wide range of phenomena in information and communication theory, computer science and computer-based design environments, and artificial intelligence. It has also been applied in management, education, child-based psychology, human systems and consciousness studies, as well as cognitive engineering and knowledge-based systems, 'sociocybernetics', human development. More generally, it has been used to analyze emergence and self-regulation, ecosystems, sustainable development, database and expert systems, and has been applied to a range of phenomena including health and medicine, musical and theatre performance, musicology, and even peace studies, and personal and spiritual development. Most recently, it has been used to analyse multimedia, hypermedia and hypertext, collaborative decision-support systems, World Wide Web studies, cultural diversity, neural nets, software engineering, vision systems, global community,

individual freedom and responsibility, urban revitalization, and environmental design.

'Governing' as a major root meaning has been picked up in all major definitions including those proposed by A.M. Ampere, the French scientist, who used it to refer to the science of government, W. Ross Ashby who talked of the 'art of steermanship' and Stafford Beer who talked of the science of effective organization. Other modern pioneers in the field tended to emphasize a more technical aspect of the study of systems: 'systems open to energy but closed to information' (Ashby); 'problems of control, recursiveness, and information' (Gregory Bateson); 'feedback as purposeful behaviour in man-machines and living organisms' (Ludwig von Bertalanffy); 'the deep nature of control' (Beer); 'relationship between endogenous goals and the external environment' (Peter Corning); 'circularity' (Heinz von Forster); 'the theory of interconnectedness of possible dynamic self-regulated systems' (G. Klaus); 'the art and science of human understanding' (Humberto Maturana); 'the study of justified intervention' (James Wilk).[1] Where one tradition emphasized circular causality in the design of computers and automata – and finds its intellectual expression in theories of computation, regulation and control, another tradition, which emerged from human and social concerns, emphasizes epistemology – how we come to know – and explores theories of self-reference to understand such phenomena as autonomy, identity, and purpose' (ASC webpage).

Cybernetics is also broadly related to systems philosophy and theory and as Charles François (1999, p. 203) notes both function as 'a metalanguage of concepts and models for transdisciplinarian use, still now evolving and far from being stabilized'. François (1999) provides a detailed history of systemics and cybernetics in terms of a series historical stages: First, Precursors (Before 1948) – the 'Prehistory of Systemic-Cybernetic Language' – going back to the Greeks and to Descartes in the modern world and ranging across the disciplines with important work in philosophy, mathematics, biology, psychology, linguistics, physiology, chemistry and so on (Hartmann, Leibnitz, Bernard, Ampère, Poincaré, Konig, Whitehead, Saussure, Christaller, Losch, Xenopol, Bertalanffy, Prigogine). Second, 'From Precursors to Pioneers (1948-1960)' beginning with Weiner who aimed to address the problem of prediction and control and the importance of feedback for corrective steering and mentioning Shannon and Weaver's (1949) *Mathematical Theory*

*of Communication,* Von Bertalanffy's 1950 paper 'An outline of general system theory', Kenneth Boulding's (1953) 'Spaceship Earth', von Neumann's theory of automata, Von Förster biological computer and his collaborators like Ashby (1956), Pask (1975) and Maturana who pursued questions in human learning, autopoiesis and cognition. François (1999) rightly devotes space to Prigogine (1955) on systemics and his escape from assumptions of thermodynamic models towards understanding dissipative structures in complex systems.[2] Third, 'Innovators (After 1960)' beginning with Simon's (1962) discussion of complexity, Miller's (1978) work on living systems, Maturana's work on autopoiesis, i.e. self-production, Mandelbrot's (1977) work on fractal forms, Zadeh (1965) work fuzzy sets and fuzzy logic, Thom's work on the theory of catastrophes, and the development of chaos theory. As François (1999) writes

> Chaos theory as the study of the irregular, unpredictable behaviour of deterministic non-linear systems is one of the most recent and important innovations in systemics. Complex systems are by nature non-linear, and accordingly they cannot be perfectly reduced to linear simplifications. (p. 214)

François also significantly details important work in ecology and economics mentioning Odum (1971), Daly (1973) on steady-state economy, Pimentel (1977) on the energy balance in agricultural production, among other works in the field. Fourth and finally, François (1999) examines 'Some Significant Recent Contributions (After 1985)' mentioning the Hungarian Csanyi's (1989) work on the 'replicative model of self-organization', Langton (1989) on AL, Sabeili's (1991) theory of processes, and McNeil (1993) on the possibility of a better synthesis between physical sciences and living systems. He ends by referencing Prat's (1964) work on the 'aura' (traces that remain after the demise of the system), Grassé on 'stigmergy'[3] (indirect communication taking place among individuals in social insect societies) and Gerard de Zeeuw (2000) on 'invisibility'.

In this full history we can see cybernetics passing through several phases: The Macy conferences that focused on the new science of cybernetics; catastrophe theory; chaos theory; and complexity theory. The Macy conferences were set up by Warren McCulloch under the auspices of the Macy Foundation from 1946-

53 to develop a general science of the human mind and began in the first year studying self-regulating and neural networks moving through a variety of topics covering cybernetics, systems theory, integrative learning.[4] Heims (1993) provides an account of the Macy conferences as a set of dialogues that forged connections between wartime science and post-war social science transforming it through the centrality of the notion of circular causation and feedback and its naturalization through increased quantification. Heims demonstrates how Norbert Wiener, von Neumann, Margaret Mead, Gregory Bateson, Warren McCulloch, Kurt Lewin, Molly Harrower, and many others, shaped ideas in psychology, sociology, anthropology, and psychiatry during the war period.

If modern cybernetics was a child of the 1950s, catastrophe theory developed as a branch of bifurcation theory in the study of dynamical systems originating with the work of the French mathematician Rene Thom in the 1960s and developed by Christopher Zeeman in the 1970s. Catastrophes are bifurcations between different equilibria, or fixed point attractors and have been applied to capsizing boats at sea and bridge collapse. Chaos theory also describes certain aspects of dynamical systems i.e., systems whose state evolve over time such as the 'butterfly effect' that exhibit characteristics highly sensitive to initial conditions even though they are deterministic systems (e.g., the weather).[5] Chaos theory goes back to Poincaré's work and was taken up mainly by mathematicians who tried to characterize reiterations in natural systems in terms of simply mathematic formulae. Both Edward Lorenz and Benoît Mandelbrot studied recurring patterns in nature—Lorenz on weather simulation and Mandelbrot (1975) on fractals in nature (objects whose irregularity is constant over different scales). Chaos theory which deals with non-linear deterministic systems has been applied in many disciplines but has been very successful in ecology for explaining chaotic dynamics. Victor MacGill[6] provides a non-technical account of complexity theory:

> Complexity Theory and Chaos Theory studies systems that are too complex to accurately predict their future, but nevertheless exhibit underlying patterns that can help us cope in an increasingly complex world. (p. 1)

Complexity is concerned with theoretical foundations of computer science being concerned with the study of the *intrinsic*

*complexity of computational tasks*[7] *and rests on understanding the* central role of randomness.

Systems theory in sociology as it was introduced through Parsonian functionalism (Parsons 1951, 1977), developed in Luhmann's 'systemtheorie' (1995) and Immanuel Wallenstein's (1974) world system theory has been largely discredited and dismissed or superseded in an attempted new synthesis (Bailey, 1994; Bánáthy, 1996). Recently, scholars are rethinking systems theory (Pickel, 2006, 2007) emphasizing 'mechanism' and focusing on related concepts such as 'emergentism' (Elder-Vass, 2007), 'self-organization' (Summers-Effler, 2007), 'complexity theory' (Walby, 2007), and 'evolutionary systems theory (Hofkirchner, 2007). Introducing a special issue of *Theory Culture and Society*, John Urry (2005) commented that the social and cultural sciences over the last few decades have experienced a number of incursions including Marxism of the 1970s, the linguistic and postmodern turns of the 1980s, and the body, performative and global culture turns of the 1990s.[8] Without commenting on the simple meta-knowledge schema he introduces, he then goes on to present the latest turn – 'complexity' – which he describes as follows:

> This turn derives from developments over the past two decades or so within physics, biology, mathematics, ecology, chemistry and economics, from the revival of neo-vitalism in social thought (Fraser *et al.* , 2005), and from the emergence of a more general 'complex structure of feeling' that challenges some everyday notions of social order (Maasen and Weingart, 2000; Thrift, 1999).
>
> Within these scientific disciplines, an array of transformations took place, loosely known as chaos, complexity, non-linearity and dynamical systems analysis. There is a shift from reductionist analyses to those that involve the study of complex adaptive ('vital') matter that shows ordering but which remains on 'the edge of chaos'. Self-assembly at the nanoscale is a current example of new kinds of matter seen as involving emergent complex adaptive systems. At the nanoscale the laws of physics operate in different ways, especially in the way that molecules stick together and through self-assembly can form complex nanoscale structures that could be the basis of whole new products, industries and forms of 'life' (Jones, 2004) (Urry, 2005, p. 1).

It is, he says, in the 1990s that the social sciences 'go complex,' which he dates from the 1996 Gulbenkian Commission on the Restructuring of the Social Sciences, chaired by Wallerstein and including non-linear scientist Prigogine, who together wanted to break down some of the divisions between the social and natural sciences. Complexity thought and the global spread of 'complexity practices' and its popularizations dates from the 1990s, including applications to the social and cultural sciences. The globalization of system analysis within and across the disciplines demands a complexity approach, but more importantly, it demonstrates that these complex systems operate at the level of infrastructure, code and content enabling certain freedoms while controlling others.

Complexity as an approach to knowledge and knowledge systems now recognizes both the developments of global systems architectures in (tele)communications and information with the development of *open knowledge production systems* that increasingly rest not only on the establishment of new and better platforms (sometimes called Web 2.0), the semantic web, new search algorithms and processes of digitization but also social processes and policies that foster *openness* as an overriding value as evidenced in the growth of open source, open access and open education and their convergences that characterize global knowledge communities that transcend borders of the nation-state. This seems to intimate new orders of global knowledge systems and cultures that portend a set of political and ethical values such as universal accessibility, rights to knowledge, and international knowledge rights to research results especially in the biosciences and other areas that have great potential to alleviate human suffering, disease and high infant mortality. Openness seems also to suggest political transparency and the norms of open inquiry, indeed, even *democracy* itself as both the basis of the logic of inquiry and the dissemination of its results (Peters & Roberts, 2010).

## Contemporary forms of cybernetic capitalism

Increasingly, cybernetics and its associated theories has become central in understanding the nature of networks and distributed systems in energy, politics and knowledge as well as becoming significant in conceptualizing the knowledge-based economy. Economics itself as a discipline has become to recognize the importance

of understanding systems rather than rational agents acting alone and pure rationality models of economic behaviour are being supplemented by economic theories that use complexity theory to predict and model transactions. More critical accounts of globalization emphasize a new form of global capitalism, as Teeple (1995) remarks:

> Globalization can be defined as the arrival of 'self-generating capital' at the global level: that is, capital as capital, capital in the form of the transnational corporation, increasingly free of national loyalties, controls, and interests. (p. 7)

The 'financialization of capitalism' is a process that seems to have accompanied neoliberalism and globalization, representing a shift from production to financial services, proliferation of monopolistic multinational corporations and the financialization of the capital accumulation process (Foster, 2007). Nassim Taleb[9] and Benoit Mandelbrot (2004) joined forces to criticize the state of financial markets and the global economy, highlighting some of the key fallacies that have prevented the financial industry from correctly appreciating risk and anticipating the current crisis including, large and unexpected changes in dynamical systems that are difficult to predict, the difficulty of predicting risk based on historical experience of defaults and losses, the idea that consolidation and mergers of banks into larger entities makes them safer but in reality imperils whole financial system.[10]

Cybernetic capitalism is a system that has been shaped by the forces of formalization, mathematization and aestheticization beginning in the early twentieth century and associated with developments in mathematical theory, logic, physics, biology and information theory. Its new forms now exhibit themselves in finance capitalism, informationalism, knowledge capitalism and the learning economy with incipient nodal developments associated with the creative and open knowledge (and science) economies. The critical question in the wake of the collapse of the global finance system and the impending eco-crisis concerns whether capitalism can promote forms of social, ecological and economic sustainability.

'Cybernetic capitalism' is a term we use in order to distinguish a group of theories, or, better, positions, on the Left that attempt to theorize the nature of the *new* capitalism. We can group these contributions as largely sociological and Left-leaning and cha-

racterize them in terms of what they share with and differ from Marxist theory of industrial capitalism. Using kinship with Marxism we can generate the following rough groupings of recent work that we have systematically itemised as:

1. Informational capitalism
2. Cultural capitalism
3. Cognitive capitalism
4. Finance capitalism
5. Biocapitalism

There are strong overlaps and conceptual connections among these five broad categories and also some interesting differences within them. We will simply assert in this paper that they are systematically related phenomena that grow out of the same forces of increasing formalization, mathematicization and aestheticization that have been in operation since the beginning of the twentieth century but that began to coalesce and impact after WWII with the development of cybernetics and a group of theories that developed to explain linear and nonlinear dynamical systems (catastrophe, chaos, complexity). These relationships and particularly the way in which they profile education are to be the subject of other papers. This largely explains why we have adopted the general theoretical description of '*cybernetic capitalism*' as a means of grouping a set of recent theorizations together.

***Group 1 – Informational capitalism: The nature of information/knowledge 'Informational', 'Digital', 'Virtual', 'Cyber', 'Fast', 'High-tech' Castells, Shiller, Morris-Suzuki, Schmiede, Fuchs***

1. *Informational capitalism*: Emerges from the work of Manuel Castells on the 'networked society.' Castells sees informationalism as a new technological paradigm (he speaks of a mode of development) characterized by "information generation, processing, and transmission" that have become "the fundamental sources of productivity and power" (Castells, 2000, p. 21). Morris-Suzuki (1997) and Schmiede (2006a, b) have used this term and Christian Fuchs (2007) also writes of an informational capitalism of *self-regulation*. Sometimes also referred to as the 'networked model' of capitalism.[11]

2. *Digital capitalism*: Emerges with Dan Schiller and Robert McChesney at the University of Illinois from the Marxist political economy tradition applied out of communication theory to questions of ownership of global communications: "networks are directly generalizing the social and cultural range of the capitalist economy as never before" (Schiller 2000: xiv). See also Peter Glotz (1999).
3. *Cyber-Capitalism:* Dyer Witheford, N. *Cyber-Marx, Cycles and Circuits of Struggle in High Technology Capitalism* (1999).
4. *Knowledge Capitalism:* Michael A. Peters & Tina Besley, *Building Knowledge Cultures: Education and Development in the Age of Knowledge Capitalism* (2006); Sheila Slaughter & Gary Rhoades, *Academic Capitalism and the New Economy* (2004).
5. *Fast capitalism*: A term that was coined by Ben Agger (1989; 2004) – Also see the journal website of the same title.[12]
6. *Virtual capitalism*: the "combination of marketing and the new information technology will enable certain firms to obtain higher profit margins and larger market shares, and will thereby promote greater concentration and centralization of capital" (Dawson & Foster, 1998, p. 63).
7. *High-tech capitalism* (Haug, 2003), or informatic capitalism (Fitzpatrick, 2002) – to focus on the computer as a guiding technology that has transformed the productive forces of capitalism and has enabled a globalized economy.

***Group 2 – Cultural capitalism: The change of culture 'new culture', 'knowing capitalism', 'new spirit', 'cultural economy'***

1. *New culture of capitalism*: This strand emerges from work in the 'new geography' and sociology and is epitomized by Richard Sennett's (2007) *The Culture of New Capitalism.*
2. *Knowing Capitalism* – Epitomized by Nigel Thrift's (2006) *Knowing Capitalism.*
3. *The New Spirit of Capitalism*, Boltanski, L. and E. Chiapello (2005).
4. *Cultural economy* – Michael Pryke and Paul du Gay.

***Group 3 – Cognitive Capitalism: Immaterial Labor***
***'Cognitive capitalism', 'affective capitalism', 'immaterial labor'***

1. *Cognitive Capitalism* – 'Affective Labour is a key feature of the new mode of cognitive capitalism based on immaterial labour. It is a key aspect of a strategy based on autonomous peer production.'[13] Yann Moulier Boutang *Le capitalisme cognitif: La Nouvelle Grande Transformation*, (2007); Vercellone C. (ed.), *Capitalismo cognitivo*, (2006); De Angelis, M. and D. Harvie (2006) 'Cognitive Capitalism and the Rat Race: How capital measures ideas and affects in UK higher education.'
2. *Immaterial Labor*: Based on Deleuze and Guattari's *Anti-Oedipus: Schizophrenia and Capitalism* (1999); Negri & Hardt (2000: 290) argue that contemporary society is an Empire that is characterized by a singular global logic of capitalist domination that is based on immaterial labor. With the concept of immaterial labour Negri and Hardt introduce ideas of information society discourse into their Marxist account of contemporary capitalism. Immaterial labor would be labor "that creates immaterial products, such as knowledge, information, communication, a relationship, or an emotional response" (Hardt/Negri 2005, p. 108; cf. also 2000, pp. 280-303), or services, cultural products, knowledge (Hardt/Negri 2000, p. 290).
3. *Affective Capitalism* - Massumi, B. (n.d.) 'The Future Birth of the Affective Fact'[14]; *Immaterial and affective labor*, Emma Dowling, Rodrigo Nunes and Ben Trott (*Ephemera, 2007*); Juan Martín Prada, 'Economies of affectivity' [15] and Michael Hardt 'Affective Labor'[16]
4. *Semio-capitalism - Precarious Rhapsody. Semio-capitalism and the Pathologies of the Post-Alpha Generation*, Franco Bernadi (forthcoming)

***Group 4 – Finance Capitalism: 'Financialization'***

1. *Finance Capitalism*: John Bellamy Foster; Glyn, A. *Capitalism Unleashed: Finance Globalization and Welfare* (2006); Leyshon, A., and N. Thrift (2007) 'The Capitalization of Almost Everything: The Future of Finance and Capitalism'; Vestergaard, J. *Discipline in the Global Economy? International Finance and the End of Liberalism* (2008)

***Group 5 – Biocapitalism & Biopolitics***

| |
|---|
| 1. *Biocapitalism*: Based loosely on Foucault's work on governmentality and biopower, and Deleuze and Guattari's *Anti-Oedipus: Schizophrenia and Capitalism* (1999); Rajan, K.S. *Biocapital: The Constitution of Postgenomic Life* (2006); Biotechnology and the Spirit of Capitalism[17] |

In what follows we examine two of these groups, namely *informational capitalism* and *cognitive capitalism* and their differences and similarities in the final section.

## Informational Capitalism

As Fuchs & Horak (2007) indicate the notion of informational capitalism was first introduced by Manuel Castells in his magnum opus *The Rise of the Network Society*. Castells describes contemporary processes in advance developed capitalist countries transforming the dominant systems of social production and organization of capitalist societies. In other words, those are processes of change that permit the reproduction of the 'fundamental logic' implicit in the capitalist system, but under different rules, different social relations, different modalities of social organization (or morphology) and at a global scale, thus the emergence of a "different kind of capitalism" (Stalder, 2006, p.48). This is the focus of Castells' analysis of the new economic globalization; the contemporary transformation of the capitalist system and its global expansion through new information technologies (Castells, 2000a). Hence, the assertion of the emergence of a 'new economy': an informational economy.

According to Castells, what is unique in this new economy is not merely its capitalist character, but the influence of technology, applied by economic actors to sustain social change. Technology, more precisely the integration of specific types of technologies in production processes helped to implement an alternative to the 1970's crisis of economic growth of 'profit making' in advanced capitalist societies. Nevertheless, it also provides something more pervasive, a new 'technique', a new logic that goes beyond the realm of economics or economic analysis. More precisely, those changes are interrelated with the creation of new forms of social structural

organization, and patterns of institutional transformation through networks.

One of the basic characteristics of contemporary globalization is the significant acceleration of interactions enabled by technology. Technologies of communication are shaping reality and reconfiguring world connectedness with a concentration of traffic taking place between certain geographical nodes over others.

Patterns of mobility and exchanges have always been mediated by technologies of communication. But today, technologies of communication become globalizing forces through which projects of material integration of social spaces at a global scale are possible, allowing emergence of "a new material for time-sharing on which the dominant social processes are reorganized and managed through flows" (Stalder, 2006, p. 146). In other words, they have made possible projects of global material and social integration. For instance, transnational strategies of integration are dominating the organization of economic activity through organizational networks (especially where corporations become transnational, finance activity becomes global, etc).

Networks based on informational technologies are complex forms of organization dominating the ways in which complex patterns of interaction are organized in the world. The understanding of these processes of interconnectedness in terms of networks has the basic advantage of enabling an analysis "based on flows, rather than isolated units, entities, and individuals" (Aneesh, 2006, p. 78) thereby allowing analysis of connectedness, of intrinsic interdependence (of economy, policy, society and culture) in terms of complex patterns of symbolic and material communication.

Precisely, Fuchs & Horak (2007) indicate that "the historical novelty is not that social relationships are networked, but that processes of production, power, hegemony, and struggles take on the form of transnational networks that are mediated by networked information- and communication technologies" (p. 12). As we observe, one of the main features of this 'new economy' is the increasing importance of knowledge or information production, or what Castells denominated as 'informationalism', implying the emergence of an economy based on new forms of production and labor. In other words, knowledge, information and communication in the globalized world – as informationalism – is manifested in the increased im-

portance of labor involved in the production of what Hardt and Negri (2000) denominated 'immaterial goods' (p. 290).

Concomitantly, in those instances, the value labor changes from mechanical production to the primacy of 'symbolic analytical services', "data analysis, financial planning and most research and development jobs and occupations" (See Webb & Shirato, 2003). Examples include the constant creation and recreation of products images through relentless marketing campaigns, the relevance of financial markets, and the increasing dependence of manufacturing and agricultural activities from services occupations.

We would like to state three initial points on the emergence of Castells' informational capitalism. First, it is important to note that there was not a one-dimensional causality on the way in which this capitalist restructuring could have been implemented. Hence, it is important to understand that the political context in which these reforms became effectively framed was dominated by market and profit oriented ideologies (e.g. neoliberalism). Second, informational technologies were used not only to ensure global networks of communication but allowed the introduction of new modes of global organization and production. In short, informational technologies enabled the creation of institutional "capacities to accumulate, store, transfer, analyzed, and use massive databases to guide decisions in the global marketplace" (Harvey, 2005, p. 3). Third, this organizational paradigm affects more than the material economic activity of societies. It introduces cultural transformations that are "not just [about] the economy" (Stalder, 2006, p. 28). In other words, it introduces changes in the paradigms of organization favouring specific forms of social and cultural interactions and values in capitalist economies.

Stalder (2006) notes that in Castells' theoretical argumentation "each paradigm supports a particular argument of social organization (or morphology) in becoming dominant over others" (p. 30). Hence, the preferred form of social organization under informationalism becomes part of complex systems of interaction based on networks rather than the centralized hierarchies that characterized the industrial age, also known as Industrialism. Industrialism was a technological paradigm based on "technologies of energy generation and distribution" which "made possible the factory and the large corporation as the organizational foundation of the industrial society" (Castells, 2001c, p. 1). Industrialism favoured specific forms

of organization required in territorially concentrated systems of manufacturing control. In contrast, informational technologies were making possible the existence of systems of production operating at a global scale coordinated by informational networks (Castells, 2001c). Thus, the transformations that we observe in contemporary societies towards an informational society are not merely based on the centrality of knowledge generation and information processing activities, but in the material basis that is giving knowledge and information generation and distribution its current and specific global character.

More important, this also implies the emergence of two sets of contradictory developments at the center of the social production systems emerging from informationalism: one based on a commodity economy and the other based on a gift economy (Fuchs, 2006). Fuchs indicates that the affordances facilitating new forms of collaborative knowledge production at the core of capitalist economies are enabling the emergence of a parallel and antagonistic economic logic: "an alternative economic model of a gift economy" (Fuchs, 2006).

Basically, due to the very nature of the requirements of open knowledge production and communication in networked systems, knowledge is extremely difficult to transform into a commodity. Knowledge cannot be easily produced and consumed through close systems in the same manner than material goods. This is resulting in increasing conflicts between the forces of informational production and the still prevalent systems of capitalist accumulation and relationships (Fuchs, 2006). Therefore, it is possible to observe the contentious contemporary struggles over the nature of information as a property.

The strategies of capitalist accumulation that contemporary systems of information and communication favour are different from those observed during the industrial age. As Fuchs appears to indicate informationalism requires more *democratic* forms of participation and collaboration in the relationships of production and accumulation of wealth in informational capitalist societies in ways that require that information should not be consider as a restricted property, but an unhindered component of social interactions .

Moreover, it is crucial to understand that for Castells, the rise of the use of technological innovations, like internet in the 90s, is not merely defined by the technological innovation itself, but it is

dependent in the ways that the consumer interests drive the implementation and use of those technologies. It is important to note that one of the main assumptions of Castells' theory is based on the affirmation of the existence of a "dialectical interaction of social relations and technological innovation, or, in Castells terminology modes of production and modes of development" (Stalder, 2006, p. 302). This last point needs some clarification to understand the nature of Castells' rupture with a traditional Marxian approach. For Castells there is no difference between modes of production and relations of production, in the sense that they are considered one dimension defined by the primacy of a particular type of organization of production and consumption. The emphasis is made in the organization of the relationships of production and consumption not in the system of production and the relations of production.

Finally, this implies the emergence of a knowledge based economy, society and culture. In other words the transition from industrial towards informational capitalism is destabilising systems of capitalist relationships thus opening possibilities for transformation of a different world, maybe a better one.

Transnational networked capitalism leading current processes of economic globalization had generated a process of accumulation not very different from those observed during the industrial age, with negative effects for many populations. And at the same time, this is generating global protests by networked civil society' groups claiming for more democratic ways of conceiving globalization. It is important to remember that the expansion of information networks in the form of global systems of transaction, and capitalism restructuring were and are still implemented by centralized, authoritarian, mostly industrial working oriented styles through many nations.

The consequences of the contradictory positions of the emerging gift and the old proprietary economy are observed in the sometimes overlapping forms in which labor and education are conceived. The movement and organization of labor is profoundly affected and also the different levels of demands over the content and functions of higher education institutions, in which the learning value is now characterize by the "central role of knowledge, information, affect and communication" (Webb & Shirato, 2003, pp. 76-77), but whose main value is conceived as a potential access to venues of mobility. In other words, the potential entrée to nodes of

activity and economic interaction requires the access to a specific, and changing, hierarchy of higher education institution. The access to those institutions potentially enables individuals, states, and business to participate or to exploit different flows generated by global networks. In those terms, higher education accreditation becomes a commodity to access a set of strategic positions allowing employability and interaction with transnational networks of capitalism. In those terms, higher educational institutions are generating accreditations as commodities, following a logic common to a proprietary economy.

At the same time, it is of critical importance to understand that the education demands for participating in the knowledge sectors of the global economy requires learning the same skills that those necessary to participate in the gift economy. This implies the cultivation of creative networking practices and dispositions, hence to openly share and produce information. These contradictions and confluences between the values that those two economies cultivate are a relevant aspect to understand today's complex capitalist system and social relationships.

## Cognitive capitalism and immaterial labor

Richard Sennett's *The Corrosion of Character* describes the enormous difference between the lives of a Fordist worker Enrico and his son Rico, who works in a more flexible and unpredictable form of capitalism. Upon reading the book, one comes to recognize the extent to which the world of work has been transformed. Even though the popular media remembers Karl Marx only during times of crisis, there are vibrant debates among Marxists themselves, regarding the transformation of work and labor processes. We should definitely take Michael Hardt and Antonio Negri into account among the prominent names of this debate. Yet, we believe a historical account about this concept would be useful before more contemporary ones.

Leopoldina Fortunati gives the names of Gabriel Tarde and Werner Sombart as far as reflections on immaterial labor after Marx are concerned. Fortunati states that Tarde's writings [*Les Lois de L'imitation* (1890) and *La Logique Sociale* (1895)], "stressed the existence of other forces (or laws) acting on a socio-psychological level, such as imitation, the law of minimal effort, and innovation. In

doing so he argued that the social teleology imposed by classical economists unaware of the true foothold of political economics was at fault for the omission of affections, and especially of desire, in analyses of valorization (spheres which were also neglected by subsequent Marxisms)" (Fortunati, 2007, p. 142). Sombart, on the other hand, in *Modern Capitalism*, argued that immaterial labor was becoming more central to capitalism and laid down three reasons for the technological developments of the time:

> first of all, the objectification of technical knowledge, which ensured a continued control over new ideas or inventions, their transmission and with it the diffusion of knowledge; secondly, the systematization of technical knowledge which allowed for a systematic progression of knowledge and its enlargement; thirdly, the mathematization of technical knowledge (Fortunati, 2007, p. 143).[18]

The revival of the contemporary versions of immaterial labor debates can be cohered around people including Antonio Negri, Michael Hardt and Maurizio Lazaratto, the journal *Futur Antereiur.* Nick Dyer-Witheford (2001) provides a smooth historical account of how these debates were chronologically shaped. Antonio Negri's writings (1988, 1989) on the "intellectual qualities of a post-Fordist proletariat enmeshed in the computers and communication networks of high-technology were intensified in the analysis of the general intellect (the socialized, collective, intelligence prophesied by the Marx of the *Grundrisse*) developed by the journal Futur Anterieur" (Dyer-Witheford, 2001, p. 70). As a precise definition of immaterial labor, we can refer to Lazzarato:

> Immaterial labor is defined as the labor that produces the informational and cultural content of the commodity. Informational content: related to big industry and tertiary sectors; skills involving cybernetics and computer control… Cultural content: kind of activities involved in defining and fixing cultural and artistic standards, fashions, tastes, consumer norms and more strategically public opinion (Lazzarato, 2006, p. 132).

The revival of these reflections reached its peak with the publication of Hardt and Negri's *Empire*.

Underlining the shift from an industrial economy towards an informational economy, Hardt and Negri focus on how the nature of labor has changed within the framework of Toyotist model, as opposed to the Fordist one. In this new phase of global capitalism, "factories will maintain zero stock" (Hardt & Negri, 2000, p. 290) and immaterial labor will gain significance. Hardt and Negri define immaterial labor as one "that produces an immaterial good, such as a service, a cultural product, knowledge, or communication" (p. 290). According to Hardt ad Negri, there are three types of immaterial labor:

> one is involved in an industrial production that has been informationalized and has incorporated communication technologies in a way that transforms the production process itself … Second is immaterial labor of analytical and symbolic tasks, which itself breaks down into creative and intelligent manipulation on the one hand and routine symbolic tasks on the other. Finally, a third type of immaterial labor involves the production and manipulation of affect and requires (virtual or actual) human contact, labor in the bodily mode (Hardt & Negri, 2000, p. 293).[19]

As far as the rise of immaterial labor is concerned, Hardt and Negri stress a point of departure from a "Marxian political economy by which labor power is conceived as 'variable capital', that is, a force that is activated and made coherent only by capital" and argue that "today productivity, wealth, and the creation of social surpluses take the form of cooperative interactivity through linguistic, communicational, and affective networks" (p. 294). Thus, they argue, in this decentralized production, "the assembly line has been replaced by the network … workers can even stay at home … and these tendencies place labor in a weakened bargaining position" (Hardt and Negri, 2000, pp. 295–296). Hardt and Negri, when thinking about this assault on labor, argued that production and life have become quite inseparable. That is, in this flexible accumulation regime, "life is made to work for production and production is made to work for life" (Hardt and Negri, 2000, p. 32).[20]

Presumably, Hardt & Negri and others' analyzes of immaterial labor was attacked for some obvious reasons in the sense that these new circuits of capital "look a lot less immaterial and intellectual to the female and Southern workers who do so much of

the grueling physical toil demanded by a capitalist general intellect whose metropolitan headquarters remain preponderantly male and Nothern" (Dyer-Witheford, 2001, p. 71; Dowling, 2007).

Despite these sound critiques, Dyer-Witherford acknowledges the increasing hegemony of immaterial labor along with other scholars, including Yann Moulier Boutang, who has neatly classified certain characteristics of cognitive capitalism. Comparing cognitive capitalism with industrial capitalism, Boutang states that "in industrial capitalism, accumulation concerns mainly machines and the organization of work dealt with … whereas accumulation in cognitive capitalism rests on management of knowledge and production of innovation, hence on immaterial investments" (Boutang, 2007, p. 12).[21] Along with that, Boutang stresses the differences with respect to different entrepreneurs of industrial capitalism and cognitive capitalism. While the former is defined by his/her greed and pride of loneliness and "exception of founding father", the latter is marked by the desire for fame and "pride of cooperation and connectivity" (Boutang, 2007, p. 22). Here, the issue of cooperation and connectivity directly takes us to the classification we have tried to accomplish within the framework of this chapter. We have argued that the different capitalisms we have underlined have a lot in common. In this respect, immaterial labor, cooperation and informational capitalism all have overlapping features. As it is argued with respect to information, for instance, it is not easy to control by a single person and based on networks (Fuchs, 2008a).[22] These features all have the potential for collaboration. However, it is exactly here that we might step back and be cautionary in terms of the 'cooperative or emancipatory' for two reasons: political economy and subjectivity. While the former is related to the fact that "the total assets of the top six knowledge corporations were 1,132,41 billion US dollars in 2007 and are larger than the total African GDP" (Fuchs, 2008a, p. 284), the second has to do with how labor is subsumed within cyberspace thanks to the discourse around collaboration, fun and participation. In other words, what the participation of immaterial labor within cyberspace means has not been endorsed by critical theorists, who have underlined this potential but at the same time pointed to various mechanisms through which subsumption of labor is realized in cyberspace (Fuchs, 2008b, 2007, 2002). This cautionary stance is relevant to the realm of education, as well.

David Harvie, for instance, argues that the war over value has spread over not only factory but there are also attempts to quantify the value produced by immaterial labor, especially within the framework higher education, including techniques of "quantification, surveillance and standardization" (Harvie, 2008; 2000), (De Angelis & Harvie, 2007). Neoliberal restructuring of schooling in line with market demands has also resulted in the emergence of a global policy inflation around lifelong learning and educational credentials that would be commodified. As the assembly line with certain expected demands from the factory and workplace have disappeared, schooling built around industrial lines would have been re-arranged, which would be asked to train students along the lines of the global knowledge economy and fluctuating market demands. However, the responsibility would be shared between the school and the individual. An awareness of these developments definitely takes us to the centrality of value creation to capitalism. That is, despite the changing nature of work and labor processes, value still represents "the life blood of capitalism", whether this or that (Rikowski, 2003). As it is also asserted, "the extraction of value from immaterial labor, much like that occurring at the zenith of Fordism in the automobile factories of Turin or Detroit, is not a friction-free matter" (Brophy & de Peuter, p. 179).

In this respect, one could argue that immaterial labor is quite material in terms of extraction of surplus value and exploitation and thus analyses based on the concept has to take an approach that is based on a layered and relational understanding of immaterial labor and the differential power relations among the people who exercise this kind of labor in their everyday lives, be it a creative design worker or the janitor who cleans his cutting edge PC.

## Conclusion

This paper provides a synoptic view of what we have called 'cybernetic capitalism' – a term that attempts to capture the leading sector developments within modern capitalism and to profile the leading accounts of these developments. 'Third capitalism' (after mercantilism and industrialism) now relies on a systems architecture that draws on cybernetics and modern computing that connects five aspects of cybernetic capitalism: informational capitalism, cultural capitalism, cognitive capitalism, finance capitalism and biocapi-

talism. These five elements are interrelated. In this paper we have identified the five elements but not described or analysed the interconnections among them. Clearly, there are obvious links among information, cognitive and cultural capitalism even though we are not claiming that the theorists who articulate these separate elements offer the same descriptions or that they agree in their characterizations. Finance and biocapitalism also employs similar methods and works off the same systems architectures: where the former is based on sophisticated mathematical modelling and search algorithms, the latter makes 'nature' and biogenetics central to the production process.

We have tried to underline the new features towards where global capitalism is shifting. Among the different models, there are strong overlapping characteristics which coalesce around aestheticization, design and immateriality. Yet, there is one concept that is central to all of the types, including industrial capitalism. That is value. Creation of value just for the sake of doing it is still central to contemporary capitalism. That is, the universal contradiction, which might manifest itself differently in different localities, between capital and labor is still there and has diffused to every sphere of our lives. Thus, any attempt to define any novelty to these capitalisms should bear this in mind. Along with that, spatiality is another concept we have to bear in mind in the sense that not all the globe is going through these changes simultaneously. In other words, the shiny capitalism of any global city is only possible through different mechanisms of capital accumulation, either based on the modern slavery in the sweatshops of the Third World or its own ghettoes.

Finally, these complex changes at central capitalist economies are affecting in different ways the modes in which social relationships, organization and values are conceived in society. Cybernetic capitalism implies forms of accumulation at the core of the productive process of the most relevant sectors of economy at times implying antithetical stances with the ways that capital accumulation and production is conceived by industrial capitalist economies and cultures. The different theories studying Cybernetic capitalism have the common purpose of beginning to understand the different dimensions that this radical change in the dominant paradigm of organization and production generates, the social dilemmas that produces for human beings and societies and the contradictions and overlapping that are observed in relation to other capitalisms.

## NOTES

1. See the American Society for Cybernetics (ASC) webpage for a full set of definitions at http://www.asc-cybernetics.org/foundations/definitions.htm. It would like to acknowledge Fazal Rizvi's constructive criticisms of ideas in an earlier version of this paper.

2. Prigogine has an interest in time derived from the philosopher Bergson, and later from the physicists Boltzmann and Planck, where he developed a theorem on examples of systems which were highly organized and irreversible and applied it to the energetics of embryological evolution. His work in irreversible phenomena theory led him also to reconsider their insertion into classical and quantum dynamics and to the problem of the foundations of statistical mechanics. See his discussion of his work at http://nobelprize.org/nobel_prizes/chemistry/laureates/1977/prigogine-autobio.html.

3. For the literature on stigmergy and massive online collaboration see Susi & Ziemke (2001), Gregorio (2002) and Robles, Merelo & Gonzalez-Barahona (2005).

4. See the description at http://www.asc-cybernetics.org/foundations/history/MacySummary.htm.

5. For a brief introduction see http://www.imho.com/grae/chaos/chaos.html.

6. See http://complexity.orconhosting.net.nz/.

7. See Oded Goldreich's webpage at http://www.wisdom.Weizmann.ac.il/~oded/cc.html.

8. The next section is based on Peters (2008).

9. See Taleb's homepage and publications at http://www.fooledbyrandomness.com/.

10. See the video interview at http://financemanila.net/2009/01/taleb-and-mandelbrot/.

11. See the website at http://ideas.repec.org/a/nos/voprec/2003-8-10.html .

12. See http://www.fastcapitalism.com/.

13. See the website http://p2pfoundation.net/Affective_Capitalism.

14. See http://www.radicalempiricism.org/biotextes/textes/massumi.pdf.

15. See http://www.vinculo-a.net/english_site/text_prada.html .

16. See http://www.vinculo-a.net/english_site/text_hardt.html.

17. See http://www.thenewatlantis.com/publications/biotechnology-and-the-spirit-of-capitalism.

18. Fortunati also mentions the names of the human capital theorist Gary Becker, along with Michel Foucault (with his concepts biopower and biopolitics) and Deleuze and Guattari who considered human beings to be desiring machines (Fortunati, 2007, p. 144).

19. Hardt and Negri's comments about this third type of labor is worth questioning, in terms of its immateriality, though, since this affective labor can be regarded as quite material in terms of reproduction of labor power. Along with that, we have to acknowledge that the authors clarified this point in *Multitude: War and Democracy in the Age of Empire* by arguing that the labour itself is not immaterial. What is immaterial is the product or affects it creates. (Hardt and Negri, 2004, p. 109).

20. For the same issue, Lazzarato would argue the following: "what modern management techniques are looking for is for the worker's soul to become part of the factory … workers are expected to become "active subjects" in the coordination of the various functions of production, instead of being subjected to it as simple command" (p. 133).

21. Boutang lists 22 main characteristics of cognitive capitalism, among which we can count: virtualization economy and increasing role of information, exploitation of the inventive force instead of the labor force, the fact that market precedes production, the blurring of the traditional division between capital and labor (Boutang, 2007, pp. 13-14).

22. Available at: http://fuchs.icts.sbg.ac.at/Fuchs_CriticalTheory .pdf

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# THE FUTURE OF HUMANITY

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ABSTRACT. The future of humanity is often viewed as a topic for idle speculation. Yet our beliefs and assumptions on this subject matter shape decisions in both our personal lives and public policy – decisions that have very real and sometimes unfortunate consequences. It is therefore practically important to try to develop a realistic mode of futuristic thought about big picture questions for humanity. This paper sketches an overview of some recent attempts in this direction, and it offers a brief discussion of four families of scenarios for humanity's future: extinction, recurrent collapse, plateau, and posthumanity.

## The future of humanity as an inescapable topic

In one sense, the future of humanity comprises everything that will ever happen to any human being, including what you will have for breakfast next Thursday and all the scientific discoveries that will be made next year. In that sense, it is hardly reasonable to think of the future of humanity as a *topic*: it is too big and too diverse to be addressed as a whole in a single essay, monograph, or even 100-volume book series. It is made into a topic by way of abstraction. We abstract from details and short-term fluctuations and developments that affect only some limited aspect of our lives. A discussion about the future of humanity is about how the important fundamental features of the human condition may change or remain constant in the long run.

What features of the human condition are fundamental and important? On this there can be reasonable disagreement. Nonetheless, some features qualify by almost any standard. For example, whether and when Earth-originating life will go extinct, whether it will colonize the galaxy, whether human biology will be fundamentally transformed to make us posthuman, whether machine intelligence will surpass biological intelligence, whether population size will explode, and whether quality of life will radically improve

or deteriorate: these are all important fundamental questions about the future of humanity. Less fundamental questions – for instance, about methodologies or specific technology projections – are also relevant insofar as they inform our views about more fundamental parameters.

Traditionally, the future of humanity has been a topic for theology. All the major religions have teachings about the ultimate destiny of humanity or the end of the world.[1] Eschatological themes have also been explored by big-name philosophers such as Hegel, Kant, and Marx. In more recent times the literary genre of science fiction has continued the tradition. Very often, the future has served as a projection screen for our hopes and fears; or as a stage setting for dramatic entertainment, morality tales, or satire of tendencies in contemporary society; or as a banner for ideological mobilization. It is relatively rare for humanity's future to be taken seriously as a subject matter on which it is important to try to have factually correct beliefs. There is nothing wrong with exploiting the symbolic and literary affordances of an unknown future, just as there is nothing wrong with fantasizing about imaginary countries populated by dragons and wizards. Yet it is important to attempt (as best we can) to distinguish futuristic scenarios put forward for their symbolic significance or entertainment value from speculations that are meant to be evaluated on the basis of literal plausibility. Only the latter form of "realistic" futuristic thought will be considered in this paper.

We need realistic pictures of what the future might bring in order to make sound decisions. Increasingly, we need realistic pictures not only of our personal or local near-term futures, but also of remoter global futures. Because of our expanded technological powers, some human activities now have significant global impacts. The scale of human social organization has also grown, creating new opportunities for coordination and action, and there are many institutions and individuals who either *do* consider, or *claim* to consider, or *ought* to consider, possible long-term global impacts of their actions. Climate change, national and international security, economic development, nuclear waste disposal, biodiversity, natural resource conservation, population policy, and scientific and technological research funding are examples of policy areas that involve long time-horizons. Arguments in these areas often rely on implicit assumptions about the future of humanity. By making these assumptions explicit, and subjecting them to critical analysis, it might be

possible to address some of the big challenges for humanity in a more well-considered and thoughtful manner.

The fact that we "need" realistic pictures of the future does not entail that we can have them. Predictions about future technical and social developments are notoriously unreliable – to an extent that have lead some to propose that we do away with prediction altogether in our planning and preparation for the future. Yet while the methodological problems of such forecasting are certainly very significant, the extreme view that we can or should do away with prediction altogether is misguided. That view is expressed, to take one example, in a recent paper on the societal implications of nanotechnology by Michael Crow and Daniel Sarewitz, in which they argue that the issue of predictability is "irrelevant":

> preparation for the future obviously does not require accurate prediction; rather, it requires a foundation of knowledge upon which to base action, a capacity to learn from experience, close attention to what is going on in the present, and healthy and resilient institutions that can effectively respond or adapt to change in a timely manner.[2]

Note that each of the elements Crow and Sarewitz mention as required for the preparation for the future relies in some way on accurate prediction. A capacity to learn from experience is not useful for preparing for the future unless we can correctly assume (predict) that the lessons we derive from the past will be applicable to future situations. Close attention to what is going on in the present is likewise futile unless we can assume that what is going on in the present will reveal stable trends or otherwise shed light on what is likely to happen next. It also requires non-trivial prediction to figure out what kind of institution will prove healthy, resilient, and effective in responding or adapting to future changes.

The reality is that predictability is a matter of degree, and different aspects of the future are predictable with varying degrees of reliability and precision.[3] It may often be a good idea to develop plans that are flexible and to pursue policies that are robust under a wide range of contingencies. In some cases, it also makes sense to adopt a reactive approach that relies on adapting quickly to changing circumstances rather than pursuing any detailed long-term plan or explicit agenda. Yet these coping strategies are only one part of the

solution. Another part is to work to improve the accuracy of our beliefs about the future (including the accuracy of conditional predictions of the form "if x is done, y will result"). There might be traps that we are walking towards that we could only avoid falling into by means of foresight. There are also opportunities that we could reach much sooner if we could see them farther in advance. And in a strict sense, prediction is *always* necessary for meaningful decision-making.[4]

Predictability does not necessarily fall off with temporal distance. It may be highly unpredictable where a traveler will be one hour after the start of her journey, yet predictable that after five hours she will be at her destination. The *very* long-term future of humanity may be relatively easy to predict, being a matter amenable to study by the natural sciences, particularly cosmology (physical eschatology). And for there to be a degree of predictability, it is not necessary that it be possible to identify one specific scenario as what will definitely happen. If there is at least some scenario that can be *ruled out*, that is also a degree of predictability. Even short of this, if there is some basis for assigning different probabilities (in the sense of credences, degrees of belief) to different propositions about logically possible future events, or some basis for criticizing some such probability distributions as less rationally defensible or reasonable than others, then again there is a degree of predictability. And this is surely the case with regard to many aspects of the future of humanity. While our knowledge is insufficient to narrow down the space of possibilities to one broadly outlined future for humanity, we do know of many relevant arguments and considerations which in combination impose significant constraints on what a plausible view of the future could look like. The future of humanity need not be a topic on which all assumptions are entirely arbitrary and anything goes. There is a vast gulf between knowing exactly what will happen and having absolutely no clue about what will happen. Our actual epistemic location is some offshore place in that gulf.[5]

### Technology, growth, and directionality

Most differences between our lives and the lives of our hunter-gatherer forebears are ultimately tied to technology, especially if we understand "technology" in its broadest sense, to include not only gadgets and machines but also techniques, processes, and

institutions. In this wide sense we could say that technology is the sum total of instrumentally useful culturally-transmissible information. Language is a technology in this sense, along with tractors, machine guns, sorting algorithms, double-entry bookkeeping, and Robert's Rules of Order.[6]

Technological innovation is the main driver of long-term economic growth. Over long time scales, the compound effects of even modest average annual growth are profound. Technological change is in large part responsible for many of the secular trends in such basic parameters of the human condition as the size of the world population, life expectancy, education levels, material standards of living, and the nature of work, communication, health care, war, and the effects of human activities on the natural environment. Other aspects of society and our individual lives are also influenced by technology in many direct and indirect ways, including governance, entertainment, human relationships, and our views on morality, mind, matter, and our own human nature. One does not have to embrace any strong form of technological determinism to recognize that technological capability – through its complex interactions with individuals, institutions, cultures, and environment – is a key determinant of the ground rules within which the games of human civilization get played out.[7]

This view of the important role of technology is consistent with large variations and fluctuations in deployment of technology in different times and parts of the world. The view is also consistent with technological development itself being dependent on socio-cultural, economic, or personalistic enabling factors. The view is also consistent with denying any strong version of inevitability of the particular growth pattern observed in human history. One might hold, for example, that in a "re-run" of human history, the timing and location of the Industrial Revolution might have been very different, or that there might not have been any such revolution at all but rather, say, a slow and steady trickle of invention. One might even hold that there are important bifurcation points in technological development at which history could take either path with quite different results in what kinds of technological systems developed. Nevertheless, *under the assumption that technological development continues on a broad front*, one might expect that *in the long run*, most of the important basic capabilities that could be obtained through some possible

technology, will in fact be obtained through technology. A bolder version of this idea could be formulated as follows:

> *Technological Completion Conjecture*. If scientific and technological development efforts do not effectively cease, then all important basic capabilities that could be obtained through some possible technology will be obtained.

The conjecture is not tautological. It would be false if there is some possible basic capability that could be obtained through some technology which, while possible in the sense of being consistent with physical laws and material constraints, is so difficult to develop that it would remain beyond reach even after an indefinitely prolonged development effort. Another way in which the conjecture could be false is if some important capability can only be achieved through some possible technology which, while it could have been developed, will not in fact ever be developed even though scientific and technological development efforts continue.

The conjecture expresses the idea that which important basic capabilities are eventually attained does not depend on the paths taken by scientific and technological research in the short term. The principle allows that we might attain some capabilities sooner if, for example, we direct research funding one way rather than another; but it maintains that provided our general techno-scientific enterprise continues, even the non-prioritized capabilities will eventually be obtained, either through some indirect technological route, or when general advancements in instrumentation and understanding have made the originally neglected direct technological route so easy that even a tiny effort will succeed in developing the technology in question.[8]

One might find the thrust of this underlying idea plausible without being persuaded that the Technological Completion Conjecture is strictly true, and in that case, one may explore what exceptions there might be. Alternatively, one might accept the conjecture but believe that its antecedent is false, i.e. that scientific and technological development efforts will at some point effectively cease (before the enterprise is complete). But if one accepts both the conjecture and its antecedent, what are the implications? What will be the results if, in the long run, all of the important basic capabilities that could be obtained through some possible technology are

in fact obtained? The answer may depend on the order in which technologies are developed, the social, legal, and cultural frameworks within which they are deployed, the choices of individuals and institutions, and other factors, including chance events. The obtainment of a basic capability does not imply that the capability will be used in a particular way or even that it will be used at all.

These factors determining the uses and impacts of potential basic capabilities are often hard to predict. What might be somewhat more foreseeable is which important basic capabilities will eventually be attained. For under the assumption that the Technological Completion Conjecture and its antecedent are true, the capabilities that will eventually be include all the ones that could be obtained through some possible technology. While we may not be able to foresee all possible technologies, we can foresee many possible technologies, including some that that are currently infeasible; and we can show that these anticipated possible technologies would provide a large range of new important basic capabilities.

One way to foresee possible future technologies is through what Eric Drexler has termed "theoretical applied science".[9] Theoretical applied science studies the properties of possible physical systems, including ones that cannot yet be built, using methods such as computer simulation and derivation from established physical laws.[10] Theoretical applied science will not in every instance deliver a definitive and uncontroversial yes-or-no answer to questions about the feasibility of some imaginable technology, but it is arguably the best method we have for answering such questions. Theoretical applied science – both in its more rigorous and its more speculative applications – is therefore an important methodological tool for thinking about the future of technology and, a fortiori, one key determinant of the future of humanity.

It may be tempting to refer to the expansion of technological capacities as "progress". But this term has evaluative connotations – of things getting better – and it is far from a *conceptual* truth that expansion of technological capabilities makes things go better. Even if empirically we find that such an association has held in the past (no doubt with many big exceptions), we should not uncritically assume that the association will always continue to hold. It is preferable, therefore, to use a more neutral term, such as "technological development", to denote the historical trend of accumulating technological capability.

Technological development has provided human history with a kind of directionality. Instrumentally useful information has tended to accumulate from generation to generation, so that each new generation has begun from a different and technologically more advanced starting point than its predecessor. One can point to exceptions to this trend, regions that have stagnated or even regressed for extended periods of time. Yet looking at human history from our contemporary vantage point, the macro-pattern is unmistakable.

It was not always so. Technological development for most of human history was so slow as to be indiscernible. When technological development was that slow, it could only have been detected by comparing how levels of technological capability differed over large spans of time. Yet the data needed for such comparisons – detailed historical accounts, archeological excavations with carbon dating, and so forth – were unavailable until fairly recently, as Robert Heilbroner explains:

> At the very apex of the first stratified societies, dynastic dreams were dreamt and visions of triumph or ruin entertained; but there is no mention in the papyri and cuniform tablets on which these hopes and fears were recorded that they envisaged, in the slightest degree, changes in the material conditions of the great masses, or for that matter, of the ruling class itself.[11]

Heilbroner argued in *Visions of the Future* for the bold thesis that humanity's perceptions of the shape of things to come has gone through exactly three phases since the first appearance of Homo sapiens. In the first phase, which comprises all of human prehistory and most of history, the worldly future was envisaged – with very few exceptions – as changeless in its material, technological, and economic conditions. In the second phase, lasting roughly from the beginning of the eighteenth century until the second half of the twentieth, worldly expectations in the industrialized world changed to incorporate the belief that the hitherto untamable forces of nature could be controlled through the appliance of science and rationality, and the future became a great beckoning prospect. The third phase – mostly post-war but overlapping with the second phase – sees the future in a more ambivalent light: as dominated by impersonal forces, as disruptive, hazardous, and foreboding as well as promising.

Supposing that some perceptive observer in the past had noticed some instance of directionality – be it a technological, cultural, or social trend – the question would have remained whether the detected directionality was a global feature or a mere local pattern. In a cyclical view of history, for example, there can be long stretches of steady cumulative development of technology or other factors. Within a period, there is clear directionality; yet each flood of growth is followed by an ebb of decay, returning things to where they stood at the beginning of the cycle. Strong local directionality is thus compatible with the view that, globally, history moves in circles and never really gets anywhere. If the periodicity is assumed to go on forever, a form of eternal recurrence would follow.

Modern Westerners who are accustomed to viewing history as directional pattern of development may not appreciate how natural the cyclical view of history once seemed.[12] Any closed system with only a finite number of possible states must either settle down into one state and remain in that one state forever, or else cycle back through states in which it has already been. In other words, a closed finite state system must either become static or else start repeating itself. If we assume that the system has already been around for an eternity, then this eventual outcome must already have come about; i.e., the system is already either stuck or is cycling through states in which it has been before. The proviso that the system has only a finite number of states may not be as significant as it seems, for even a system that has an infinite number of possible states may only have finitely many *perceptibly different* possible states.[13] For many practical purposes, it may not matter much whether the current state of the world has already occurred an infinite number of times, or whether an infinite number of states have previously occurred each of which is merely imperceptibly different from the present state.[14] Either way, we could characterize the situation as one of eternal recurrence – the extreme case of a cyclical history.

In the actual world, the cyclical view is false because the world had a beginning a finite time ago. The human species has existed for a mere two hundred thousand years or so, and this is far from enough time for it to have experienced all possible conditions and permutations of which the system of humans and their environment is capable.

More fundamentally, the reason why the cyclical view is false is that the universe itself has existed for only a finite amount of

time.[15] The universe started with the Big Bang an estimated 13.7 billion years ago, in a low-entropy state. The history of the universe has its own directionality: an ineluctable increase in entropy. During its process of entropy increase, the universe has progressed through a sequence of distinct stages. In the eventful first three seconds, a number of transitions occurred, including probably a period of inflation, reheating, and symmetry breaking. These were followed, later, by nucleosynthesis, expansion, cooling, and formation of galaxies, stars, and planets, including Earth (circa 4.5 billion years ago). The oldest undisputed fossils are about 3.5 billion years old, but there is some evidence that life already existed 3.7 billion years ago and possibly earlier. Evolution of more complex organisms was a slow process. It took some 1.8 billion years for eukaryotic life to evolve from prokaryotes, and another 1.4 billion years before the first multicellular organisms arose. From the beginning of the Cambrian period (some 542 million years ago), "important developments" began happening at a faster pace, but still enormously slowly by human standards. Homo habilis – our first "human-like ancestors" – evolved some 2 million years ago; Homo sapiens 100,000 years ago. The agricultural revolution began in the Fertile Crescent of the Middle East 10,000 years ago, and the rest is history. The size of the human population, which was about 5 million when we were living as hunter-gatherers 10,000 years ago, had grown to about 200 million by the year 1; it reached one billion in 1835 AD; and today over 6.6 billion human beings are breathing on this planet.[16] From the time of the industrial revolution, perceptive individuals living in developed countries have noticed significant technological change within their lifetimes.

All techno-hype aside, it is striking how recent many of the events are that define what we take to be the modern human condition. If compress the time scale such that the Earth formed one year ago, then Homo sapiens evolved less than 12 minutes ago, agriculture began a little over one minute ago, the Industrial Revolution took place less than 2 seconds ago, the electronic computer was invented 0.4 seconds ago, and the Internet less than 0.1 seconds ago – in the blink of an eye.

Almost all the volume of the universe is ultra-high vacuum, and almost all of the tiny material specks in this vacuum are so hot or so cold, so dense or so dilute, as to be utterly inhospitable to organic life. Spatially as well as temporally, our situation is an anomaly.[17]

Given the technocentric perspective adopted here, and in light of our incomplete but substantial knowledge of human history and its place in the universe, how might we structure our expectations of things to come? The remainder of this paper will outline four families of scenarios for humanity's future:

- Extinction
- Recurrent collapse
- Plateau
- Posthumanity

## Extinction

Unless the human species lasts literally forever, it will some time cease to exist. In that case, the long-term future of humanity is easy to describe: extinction. An estimated 99.9% of all species that ever existed on Earth are already extinct.[18]

There are two different ways in which the human species could become extinct: one, by evolving or developing or transforming into one or more new species or life forms, sufficiently different from what came before so as no longer to count as Homo sapiens; the other, by simply dying out, without any meaningful replacement or continuation. Of course, a transformed continuant of the human species might itself eventually terminate, and perhaps there will be a point where all life comes to an end; so scenarios involving the first type of extinction may eventually converge into the second kind of scenario of complete annihilation. We postpone discussion of transformation scenarios to a later section, and we shall not here discuss the possible existence of fundamental physical limitations to the survival of intelligent life in the universe. This section focuses on the direct form of extinction (annihilation) occurring within any very long, but not astronomically long, time horizon – we could say one hundred thousand years for specificity.

Human extinction risks have received less scholarly attention than they deserve. In recent years, there have been approximately three serious books and one major paper on this topic. John Leslie, a Canadian philosopher, puts the probability of humanity failing to survive the next five centuries to 30% in his book *End of*

*the World*.[19] His estimate is partly based on the controversial "Doomsday argument" and on his own views about the limitations of this argument.[20] Sir Martin Rees, Britain's Astronomer Royal, is even more pessimistic, putting the odds that humanity will survive the 21st century to no better than 50% in *Our Final Hour*.[21] Richard Posner, an eminent American legal scholar, offers no numerical estimate but rates the risk of extinction "significant" in *Catastrophe*.[22] And I published a paper in 2002 in which I suggested that assigning a probability of less than 25% to existential disaster (no time limit) would be misguided.[23] The concept of *existential risk* is distinct from that of extinction risk. As I introduced the term, an existential disaster is one that causes either the annihilation of Earth-originating intelligent life or the permanent and drastic curtailment of its potential for future desirable development.[24]

It is possible that a publication bias is responsible for the alarming picture presented by these opinions. Scholars who believe that the threats to human survival are severe might be more likely to write books on the topic, making the threat of extinction seem greater than it really is. Nevertheless, it is noteworthy that there seems to be a consensus among those researchers who have seriously looked into the matter that there is a serious risk that humanity's journey will come to a premature end.[25]

The greatest extinction risks (and existential risks more generally) arise from human activity. Our species has survived volcanic eruptions, meteoric impacts, and other natural hazards for tens of thousands of years. It seems unlikely that any of these old risks should exterminate us in the near future. By contrast, human civilization is introducing many novel phenomena into the world, ranging from nuclear weapons to designer pathogens to high-energy particle colliders. The most severe existential risks of this century derive from expected technological developments. Advances in biotechnology might make it possible to design new viruses that combine the easy contagion and mutability of the influenza virus with the lethality of HIV. Molecular nanotechnology might make it possible to create weapons systems with a destructive power dwarfing that of both thermonuclear bombs and biowarfare agents.[26] Superintelligent machines might be built and their actions could determine the future of humanity – and whether there will be one.[27] Considering that many of the existential risks that now seem to be among the most

significant were conceptualized only in recent decades, it seems likely that further ones still remain to be discovered.

The same technologies that will pose these risks will also help us to mitigate some risks. Biotechnology can help us develop better diagnostics, vaccines, and anti-viral drugs. Molecular nanotechnology could offer even stronger prophylactics.[28] Superintelligent machines may be the last invention that human beings ever need to make, since a superintelligence, by definition, would be far more effective than a human brain in practically all intellectual endeavors, including strategic thinking, scientific analysis, and technological creativity.[29] In addition to creating and mitigating risks, these powerful technological capabilities would also affect the human condition in many other ways.

Extinction risks constitute an especially severe subset of what could go badly wrong for humanity. There are many possible global catastrophes that would cause immense worldwide damage, maybe even the collapse of modern civilization, yet fall short of terminating the human species. An all-out nuclear war between Russia and the United States might be an example of a global catastrophe that would be unlikely to result in extinction. A terrible pandemic with high virulence and 100% mortality rate among infected individuals might be another example: if some groups of humans could successfully quarantine themselves before being exposed, human extinction could be avoided even if, say, 95% or more of the world's population succumbed. What distinguishes extinction and other existential catastrophes is that a comeback is impossible. A non-existential disaster causing the breakdown of global civilization is, from the perspective of humanity as a whole, a potentially recoverable setback: a giant massacre for man, a small misstep for mankind.

An existential catastrophe is therefore qualitatively distinct from a "mere" collapse of global civilization, although in terms of our moral and prudential attitudes perhaps we should simply view both as unimaginably bad outcomes.[30] One way that civilization collapse could be a significant feature in the larger picture for humanity, however, is if it formed part of a repeating pattern. This takes us to the second family of scenarios: recurrent collapse.

**Recurrent collapse**

Environmental threats seem to have displaced nuclear holocaust as the chief specter haunting the public imagination. Current-day pessimists about the future often focus on the environmental problems facing the growing world population, worrying that our wasteful and polluting ways are unsustainable and potentially ruinous to human civilization. The credit for having handed the environmental movement its initial impetus is often given to Rachel Carson, whose book *Silent Spring* (1962) sounded the alarm on pesticides and synthetic chemicals that were being released into the environment with allegedly devastating effects on wildlife and human health.[31] The environmentalist forebodings swelled over the decade. Paul Ehrlich's book *Population Bomb*, and the Club of Rome report *Limits to Growth*, which sold 30 million copies, predicted economic collapse and mass starvation by the eighties or nineties as the results of population growth and resource depletion.[32]

In recent years, the spotlight of environmental concern has shifted to global climate change. Carbon dioxide and other greenhouse gases are accumulating in the atmosphere, where they are expected to cause a warming of Earth's climate and a concomitant rise in sea water levels. The more recent report by the United Nations' Intergovernmental Panel on Climate Change, which represents the most authoritative assessment of current scientific opinion, attempts to estimate the increase in global mean temperature that would be expected by the end of this century under the assumption that no efforts at mitigation are made. The final estimate is fraught with uncertainty because of uncertainty about what the default rate of emissions of greenhouse gases will be over the century, uncertainty about the climate sensitivity parameter, and uncertainty about other factors. The IPCC therefore expresses its assessment in terms of six different climate scenarios based on different models and different assumptions. The "low" model predicts a mean global warming of +1.8°C (uncertainty range 1.1°C to 2.9°C); the "high" model predicts warming by +4.0°C (2.4°C to 6.4°C).[33] Estimated sea level rise predicted by these two most extreme scenarios among the six considered is 18 to 38 cm, and 26 to 59 cm, respectively.[34]

While this prognosis might well justify a range of mitigation policies, it is important to maintain a sense of perspective

when we are considering the issue from a "future of humanity" point of view. Even the *Stern Review on the Economics of Climate Change*, a report prepared for the British Government which has been criticized by some as overly pessimistic, estimates that under the assumption of business-as-usual with regard to emissions, global warming will reduce welfare by an amount equivalent to a permanent reduction in per capita consumption of between 5 and 20%.[35] In absolute terms, this would be a huge harm. Yet over the course of the twentieth century, world GDP grew by some 3,700%, and per capita world GDP rose by some 860%.[36] It seems safe to say that (absent a radical overhaul of our best current scientific models of the Earth's climate system) whatever negative economic effects global warming will have, they will be completely swamped by other factors that will influence economic growth rates in this century.

There have been a number of attempts by scholars to explain societal collapse – either as a case study of some particular society, such as Gibbons' classic *Decline and Fall of the Roman Empire* – or else as an attempt to discover failure modes applying more generally.[37] Two examples of the latter genre include Joseph Tainter's *Collapse of Complex Societies*, and Jared Diamond's more recent *Collapse: How Societies Choose to Fail or Succeed*. Tainter notes that societies need to secure certain resources such as food, energy, and natural resources in order to sustain their populations.[38] In their attempts to solve this supply problem, societies may grow in complexity – for example, in the form of bureaucracy, infrastructure, social class distinction, military operations, and colonies. At some point, Tainter argues, the marginal returns on these investments in social complexity become unfavorable, and societies that do not manage to scale back when their organizational overheads become too large eventually face collapse.

Diamond argues that many past cases of societal collapse have involved environmental factors such as deforestation and habitat destruction, soil problems, water management problems, overhunting and overfishing, the effects of introduced species, human population growth, and increased per-capita impact of people.[39] He also suggests four new factors that may contribute to the collapse of present and future societies: human-caused climate change, but also build-up of toxic chemicals in the environment, energy shortages, and the full utilization of the Earth's photosynthetic capacity. Diamond draws attention to the danger of "creeping normalcy",

referring to the phenomenon of a slow trend being concealed within noisy fluctuations, so that a detrimental outcome that occurs in small, almost unnoticeable steps may be accepted or come about without resistance even if the same outcome, had it come about in one sudden leap, would have evoked a vigorous response.[40]

We need to distinguish different classes of scenarios involving societal collapse. First, we may have a merely local collapse: individual societies can collapse, but this is unlikely to have a determining effect on the future of humanity if other advanced societies survive and take up where the failed societies left off. All historical examples of collapse have been of this kind. Second, we might suppose that new kinds of threat (e.g. nuclear holocaust or catastrophic changes in the global environment) or the trend towards globalization and increased interdependence of different parts of the world create a vulnerability to human civilization as a whole. Suppose that a global societal collapse were to occur. What happens next? If the collapse is of such a nature that a new advanced global civilization can *never* be rebuilt, the outcome would qualify as an existential disaster. However, it is hard to think of a plausible collapse which the human species survives but which nevertheless makes it permanently impossible to rebuild civilization. Supposing, therefore, that a new technologically advanced civilization is eventually rebuilt, what is the fate of this resurgent civilization? Again, there are two possibilities. The new civilization might avoid collapse; and in the following two sections we will examine what could happen to such a sustainable global civilization. Alternatively, the new civilization collapses again, and the cycle repeats. If eventually a sustainable civilization arises, we reach the kind of scenario that the following sections will discuss. If instead one of the collapses leads to extinction, then we have the kind of scenario that was discussed in the previous section. The remaining case is that we face a cycle of indefinitely repeating collapse and regeneration (see figure 1).

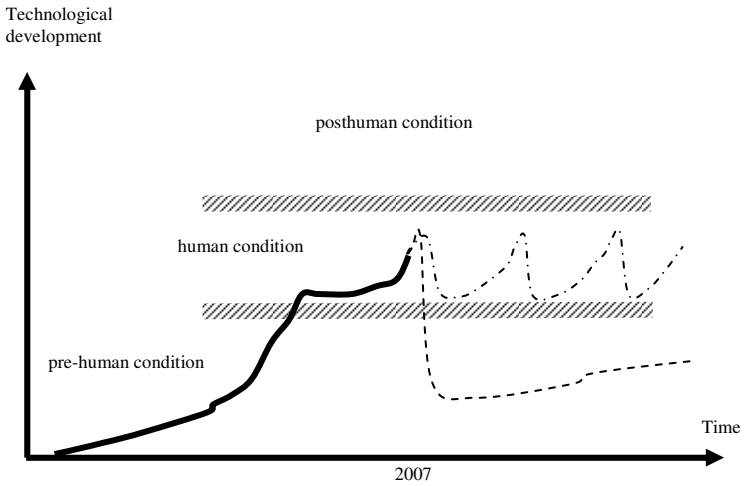


**Figure 1:** Schematic of two types of scenario for the future of humanity. One line illustrates an annihilation scenario in which the human species is destroyed a short while (perhaps a few decades) after the present time. The other line illustrates a recurrent collapse scenario, in which human civilization occilates indefinitely within the range of technological development characteristic of a human condition. (The y-axis is not an index of value; "up" is not necessarily "better".)

While there are many conceivable explanations for why an advanced society might collapse, only a subset of these explanations could plausibly account for an unending pattern of collapse and regeneration. An explanation for such a cycle could not rely on some contingent factor that would apply to only some advanced civilizations and not others, or to a factor that an advanced civilization would have a realistic chance of counteracting; for if such a factor were responsible, one would expect that the collapse-regeneration pattern would at some point be broken when the right circumstances finally enabled an advanced civilization to overcome the obstacles to sustainability. Yet at the same time, the postulated cause for collapse

could not be so powerful as to cause the extinction of the human species.

A recurrent collapse scenario consequently requires a carefully calibrated homeostatic mechanism that keeps the level of civilization confined within a relatively narrow interval, as illustrated in figure 1. Even if humanity were to spend many millennia on such an oscillating trajectory, one might expect that eventually this phase would end, resulting in either the permanent destruction of humankind, or the rise of a stable sustainable global civilization, or the transformation of the human condition into a new "posthuman" condition. We turn now to the second of these possibilities, that the human condition will reach a kind of stasis, either immediately or after undergoing one of more cycles of collapse-regeneration.

### Plateau

Figure 2 depicts two possible trajectories, one representing an increase followed by a permanent plateau, the other representing stasis at (or close to) the current status quo. The static view is implausible. It would imply that we have recently arrived at the final human condition even at a time when change is exceptionally rapid: "What we do know," writes distinguished historian of technology Vaclav Smil, "is that the past six generations have amounted to the most rapid and the most profound change our species has experienced in its 5,000 years of recorded history."[41] The static view would also imply a radical break with several long-established trends. If the world economy continues to grow at the same pace as in the last half century, then by 2050 the world will be seven times richer than it is today. World population is predicted to increase to just over 9 billion in 2050, so average wealth would also increase dramatically.[42] Extrapolating further, by 2100 the world would be almost 50 times richer than today. A single modest-sized country might then have as much wealth as the entire world has at the present. Over the course of human history, the doubling time of the world economy has been drastically reduced on several occasions, such as in the agricultural transition and the Industrial Revolution. Should another such transition should occur in this century, the world economy might be several orders of magnitudes larger by the end of the century.[43]

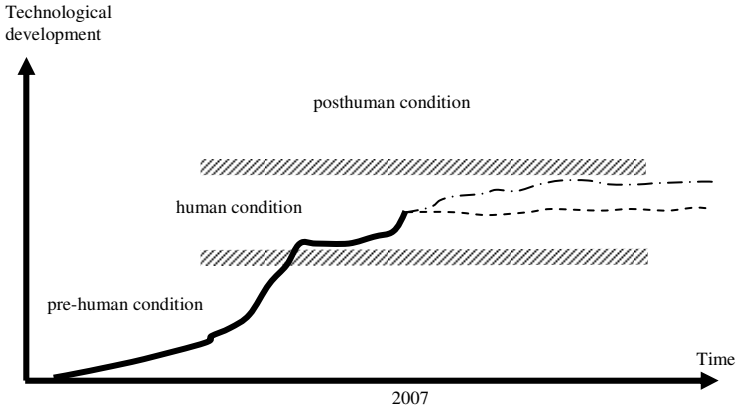


**Figure 2:** Two trajectories: increase followed by plateau; or stasis at close to the current level.

Another reason for assigning a low probability to the static view is that we can foresee various specific technological advances that will give humans important new capacities. Virtual reality environments will constitute an expanding fraction of our experience. The capability of recording, surveillance, biometrics, and data mining technologies will grow, making it increasingly feasible to keep track of where people go, whom they meet, what they do, and what goes on inside their bodies.[44]

Among the most important potential developments are ones that would enable us to alter our biology directly through technological means.[45] Such interventions could affect us more profoundly than modification of beliefs, habits, culture, and education. If we learn to control the biochemical processes of human senescence, healthy lifespan could be radically prolonged. A person with the age-specific mortality of a 20-year-old would have a life expectancy of about a thousand years. The ancient but hitherto mostly futile quest for happiness could meet with success if scientists could develop safe and effective methods of controlling the brain circuitry responsible for subjective well-being.[46] Drugs and other neurotechnologies could make it increasingly feasible for users to shape themselves into the kind of people they want to be by adjusting their personality, emotional character, mental energy, ro-

mantic attachments, and moral character.[47] Cognitive enhancements might deepen our intellectual lives.[48]

Nanotechnology will have wide-ranging consequences for manufacturing, medicine, and computing.[49] Machine intelligence, to be discussed further in the next section, is another potential revolutionary technology. Institutional innovations such as prediction markets might improve the capability of human groups to forecast future developments, and other technological or institutional developments might lead to new ways for humans to organize more effectively.[50] The impacts of these and other technological developments on the character of human lives are difficult to predict, but that they will have such impacts seems a safe bet.

Those who believe that developments such as those listed will not occur should consider whether their skepticism is really about ultimate feasibility or merely about timescales. Some of these technologies will be difficult to develop. Does that give us reason to think that they will never be developed? Not even in 50 years? 200 years? 10,000 years? Looking back, developments such as language, agriculture, and perhaps the Industrial Revolution may be said to have significantly changed the human condition. There are at least a thousand times more of us now; and with current world average life expectancy at 67 years, we live perhaps three times longer than our Pleistocene ancestors. The mental life of human beings has been transformed by developments such as language, literacy, urbanization, division of labor, industrialization, science, communications, transport, and media technology.

The other trajectory in figure 2 represents scenarios in which technological capability continues to grow significantly beyond the current level before leveling off below the level at which a fundamental alteration of the human condition would occur. This trajectory avoids the implausibility of postulating that we have just now reached a permanent plateau of technological development. Nevertheless, it does propose that a permanent plateau will be reached not radically far above the current level. We must ask what could cause technological development to level off at that stage.

One conceptual possibility is that development beyond this level is impossible because of limitation imposed by fundamental natural laws. It appears, however, that the physical laws of our universe permit forms of organization that would qualify as a posthuman condition (to be discussed further in the next section).

Moreover, there appears to be no fundamental obstacle to the development of technologies that would make it possible to build such forms of organization.[51] Physical impossibility, therefore, is not a plausible explanation for why we should end up on either of the trajectories depicted in figure 2.

Another potential explanation is that while theoretically possible, a posthuman condition is just too difficult to attain for humanity ever to be able to get there. For this explanation to work, the difficulty would have to be of a certain kind. If the difficulty consisted merely of there being a large number of technologically challenging steps that would be required to reach the destination, then the argument would at best suggest that it will take a long time to get there, not that we never will. Provided the challenge can be divided into a sequence of individually feasible steps, it would seem that humanity could eventually solve the challenge given enough time. Since at this point we are not so concerned with timescales, it does not appear that technological difficulty of this kind would make any of the trajectories in figure 2 a plausible scenario for the future of humanity.

In order for technological difficulty to account for one of the trajectories in figure 2, the difficulty would have to be of a sort that is not reducible to a long sequence of individually feasible steps. If all the pathways to a posthuman condition required technological capabilities that could be attained only by building enormously complex, error-intolerant systems of a kind which could not be created by trial-and-error or by assembling components that could be separately tested and debugged, then the technological difficulty argument would have legs to stand on. Charles Perrow argued in *Normal Accidents* that efforts to make complex systems safer often backfire because the added safety mechanisms bring with them additional complexity which creates additional opportunities for things to go wrong when parts and processes interact in unexpected ways.[52] For example, increasing the number of security personnel on a site can increase the "insider threat", the risk that at least one person on the inside can be recruited by would-be attackers.[53] Along similar lines, Jaron Lanier has argued that software development has run into a kind of complexity barrier.[54] An informal argument of this kind has also been made against the feasibility of molecular manufacturing.[55]

Each of these arguments about complexity barriers is problematic. And in order to have an explanation for why humanity's technological development should level off before a posthuman condition is reached, it is not sufficient to show that *some* technologies run into insuperable complexity barriers. Rather, it would have to be shown that *all* technologies that would enable a posthuman condition (biotechnology, nanotechnology, artificial intelligence, etc.) will be blocked by such barriers. That seems an unlikely proposition. Alternatively, one might try to build an argument based on complexity barriers for social organization in general rather than for particular technologies – perhaps something akin to Tainter's explanation of past cases of societal collapse, mentioned in the previous section. In order to produce the trajectories in figure 2, however, the explanation would have to be modified to allow for stagnation and plateauing rather than collapse. One problem with this hypothesis is that it is unclear that the development of the technologies requisite to reach a posthuman condition would necessarily require a significant increase in the complexity of social organization beyond its present level.

A third possible explanation is that even if a posthuman condition is both theoretically possible and practically feasible, humanity might "decide" not to pursue technological development beyond a certain level. One could imagine systems, institutions, or attitudes emerging which would have the effect of blocking further development, whether by design or as an unintended consequence. Yet an explanation rooted in unwillingness for technological advancement would have to overcome several challenges. First, how does enough unwillingness arise to overcome what at the present appears like an inexorable process of technological innovation and scientific research? Second, how does a decision to relinquish development get implemented globally in a way that leaves no country and no underground movement able to continue technological research? Third, how does the policy of relinquishment avoid being overturned, even on timescales extending over tens of thousands of years and beyond? Relinquishment would have to be global and permanent in order to account for a trajectory like one of those represented in figure 2. A fourth difficulty emerges out of the three already mentioned: the explanation for how the aversion to technological advancement arises, how it gets universally implemented, and how it attains permanence, would have to avoid postulating causes that in themselves would usher in a posthuman condition. For example, if

the explanation postulated that powerful new mind-control technologies would be deployed globally to change people's motivation, or that an intensive global surveillance system would be put in place and used to manipulate the direction of human development along a predetermined path, one would have to wonder whether these interventions, or their knock-on effects on society, culture, and politics, would not themselves alter the human condition in sufficiently fundamental ways that the resulting condition would qualify as posthuman.

To argue that stasis and plateau are relatively unlikely scenarios is not inconsistent with maintaining that *some aspects* of the human condition will remain unchanged. For example, Francis Fukuyama argued in *The End of History and the Last Man* that the endpoint of mankind's ideological evolution has essentially been reached with the end of the Cold War.[56] Fukuyama suggested that Western liberal democracy is the final form of human government, and that while it would take some time for this ideology to become completely universalized, secular free-market democracy will in the long term become more and more prevalent. In his more recent book *Our Posthuman Future*, he adds an important qualification to his earlier thesis, namely that direct technological modification of human nature could undermine the foundations of liberal democracy.[57] But be that as it may, the thesis that liberal democracy (or any other political structure) is the final form of government is consistent with the thesis that the general condition for intelligent Earth-originating life will not remain a *human* condition for the indefinite future.

## Posthumanity

An explication of what has been referred to as "posthuman condition" is overdue. In this paper, the term is used to refer to a condition which has at least one of the following characteristics:

- Population greater than 1 trillion persons
- Life expectancy greater than 500 years
- Large fraction of the population has cognitive capacities more than two standard deviations above the current human maximum

- Near-complete control over the sensory input, for the majority of people for most of the time
- Human psychological suffering becoming rare occurrence
- Any change of magnitude or profundity comparable to that of one of the above

This definition's vagueness and arbitrariness may perhaps be excused on grounds that the rest of this paper is at least equally schematic. In contrast to some other explications of "posthumanity", the one above does not require direct modification of human nature.[58] This is because the relevant concept for the present discussion is that of a level of technological or economic development that would involve a radical change in the human condition, whether the change was wrought by biological enhancement or other causes.

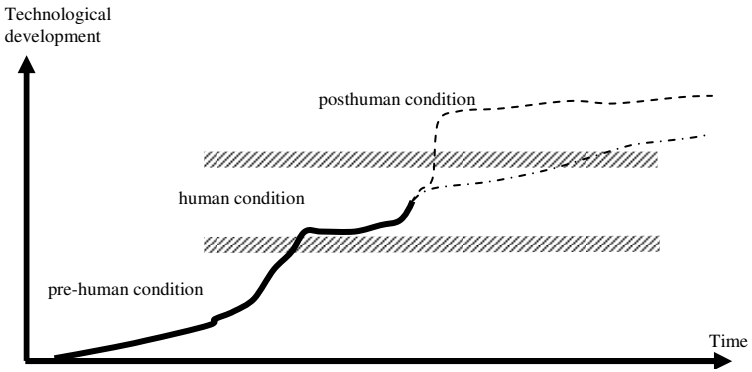


**Figure 3:** A singularity scenario, and a more incremental ascent into a posthuman condition.

The two dashed lines in figure 3 differ in steepness. One of them depicts slow gradual growth that in the fullness of time rises into the posthuman level and beyond. The other depicts a period of extremely rapid growth in which humanity abruptly transitions into a posthuman condition. This latter possibility can be referred to as *the singularity hypothesis*.[59] Proponents of the singularity hypothesis usually believe not only that a period of extremely rapid technological development will usher in posthumanity suddenly, but also that this transition will take place soon – within a few decades. Logically, these two contentions are quite distinct.

In 1958, Stanislaw Ulam, a Polish-born American mathematician, referring to a meeting with John von Neumann, wrote:

> One conversation centered on the ever accelerating progress of technology and changes in the mode of human life, which gives the appearance of approaching some essential singularity in the history of the race beyond which human affairs, as we know them, could not continue.[60]

The idea of a technological singularity tied specifically to artificial intelligence was perhaps first clearly articulated by the statistician I. J. Good in 1965:

> Let an ultraintelligent machine be defined as a machine that can far surpass all the intellectual activities of any man however clever. Since the design of machines is one of these intellectual activities, an ultraintelligent machine could design even better machines; there would then unquestionably be an 'intelligence explosion,' and the intelligence of man would be left far behind. Thus the first ultraintelligent machine is the *last* invention that man need ever make… It is more probable than not that, within the twentieth century, an ultraintelligent machine will be built...[61]

Mathematician and science fiction writer Vernor Vinge elaborated on this idea in his 1993-essay *The Coming Technological Singularity*, adjusting the timing of Good's prediction:

> Within thirty years, we will have the technological means to create superhuman intelligence. Shortly thereafter, the human era will be ended.[62]

Vinge considered several possible avenues to superintelligence, including AI in individual machines or computer networks, computer/human interfaces, and biological improvement of the natural human intellect. An important part of both Good's and Vinge's reasoning is the idea of a strong positive feedback-loop as increases in intelligence lead to increased ability to make additional progress in intelligence-increasing technologies. ("Intelligence" could here be understood as a general rubric for all those mental faculties that are relevant for developing new technologies, thus including for ex-

ample creativity, work capacity, and the ability to write a persuasive case for funding.)

Skeptics of the singularity hypothesis can object that while *ceteris paribus* greater intelligence would lead to faster technological progress, there is an additional factor at play which may slow things down, namely that the easiest improvements will be made first, and that after the low-hanging fruits have all been picked, each subsequent improvement will be more difficult and require a greater amount of intellectual capability and labor to achieve. The mere existence of positive feedback, therefore, is not sufficient to establish that an intelligence explosion would occur once intelligence reaches some critical magnitude.

To assess the singularity hypothesis one must consider more carefully what kinds of intelligence-increasing interventions might be feasible and how closely stacked these interventions are in terms of their difficulty. Only if intelligence growth could exceed the growth in difficulty level for each subsequent improvement could there be a singularity. The period of rapid intelligence growth would also have to last long enough to usher in a posthuman era before running out of steam.

It might be easiest to assess the prospect for an intelligence explosion if we focus on the possibility of quantitative rather than qualitative improvements in intelligence. One interesting pathway to greater intelligence illustrating such quantitative growth – and one that Vinge did not discuss – is uploading.

Uploading refers to the use of technology to transfer a human mind to a computer. This would involve the following steps: First, create a sufficiently detailed scan of a particular human brain, perhaps by feeding vitrified brain tissue into an array of powerful microscopes for automatic slicing and scanning. Second, from this scanning data, use automatic image processing to reconstruct the 3-dimensional neuronal network that implemented cognition in the original brain, and combine this map with neurocomputational models of the different types of neurons contained in the network. Third, emulate the whole computational structure on a powerful supercomputer (or cluster). If successful, the procedure would a qualitative reproduction of the original mind, with memory and personality intact, onto a computer where it would now exist as software.[63] This mind could either inhabit a robotic body or live in virtual reality. In determining the prerequisites for uploading, a

tradeoff exists between the power of the scanning and simulation technology, on the one hand, and the degree of neuroscience insight on the other. The worse the resolution of the scan, and the lower the computing power available to simulate functionally possibly irrelevant features, the more scientific insight would be needed to make the procedure work. Conversely, with sufficiently advanced scanning technology and enough computing power, it might be possible to brute-force an upload even with fairly limited understanding of how the brain works – perhaps a level of understanding representing merely an incremental advance over the current state of the art.

One obvious consequence of uploading is that many copies could be created of one uploaded mind. The limiting resource is computing power to store and run the upload minds. If enough computing hardware already exists or could rapidly be built, the upload population could undergo explosive growth: the replication time of an upload need be no longer than the time it takes to make a copy of a big piece of software, perhaps minutes or hours – a vast speed-up compared to biological human replication. And the upload replica would be an exact copy, possessing from birth all the skills and knowledge of the original. This could result in rapidly exponential growth in the supply of highly skilled labor.[64] Additional acceleration is likely to result from improvements in the computational efficiency of the algorithms used to run the uploaded minds. Such improvements would make it possible to create faster-thinking uploads, running perhaps at speeds thousands or millions times that of an organic brain.

If uploading is technologically feasible, therefore, a singularity scenario involving an intelligence explosion and very rapid change seems realistic based only on the possibility of quantitative growth in machine intelligence.[65] The harder-to-evaluate prospect of qualitative improvements adds some further credence to the singularity hypothesis.[66]

Uploading would almost certainly produce a condition that would qualify as "posthuman" in this paper's terminology, for example on grounds of population size, control of sensory input, and life expectancy. (A human upload could have an indefinitely long lifespan as it would not be subject to biological senescence, and periodic backup copies could be created for additional security.) Further changes would likely follow swiftly from the productivity growth brought about by the population expansion. These further

changes may include qualitative improvements in the intelligence of uploads, other machine intelligences, and remaining biological human beings.[67]

Inventor and futurist Ray Kurzweil has argued for the singularity hypothesis on somewhat different grounds. His most recent book, *The Singularity is Near*, is an update of his earlier writings.[68] It covers a vast range of ancillary topics related to radical future technological prospects, but its central theme is an attempt to demonstrate "the law of accelerating returns", which manifests itself as exponential technological progress. Kurzweil plots progress in a variety of areas, including computing, communications, and biotechnology, and in each case finds a pattern similar to Moore's law for microchips: performance grows as an exponential with a short doubling time (typically a couple of years). Extrapolating these trend lines, Kurzweil infers that a technological singularly is due around the year 2045.[69] While machine intelligence features as a prominent factor in Kurzweil's forecast, his singularity scenario differs from that of Vinge in being more gradual: not a virtually-overnight total transformation resulting from runaway self-improving artificial intelligence, but a steadily accelerating pace of general technological advancement.

Several critiques could be leveled against Kurzweil's reasoning. First, one might of course doubt that present exponential trends will continue for another four decades. Second, while it is possible to identify certain fast-growing areas, such as IT and biotech, there are many other technology areas where progress is much slower. One could argue that to get an index of the overall pace of technological development, we should look not at a hand-picked portfolio of hot technologies; but instead at economic growth, which implicitly incorporates all productivity-enhancing technological innovations, weighted by their economic significance. In fact, the world economy has also been growing at a roughly exponential rate since the Industrial Revolution; but the doubling time is much longer, approximately 20 years.[70] Third, if technological progress is exponential, then the current rate of technological progress must be vastly greater than it was in the remote past. But it is far from clear that this is so. Vaclav Smil – the historian of technology who, as we saw, has argued that the past six generations have seen the most rapid and profound change in recorded history – maintains that the 1880s was the most innovative decade of human history.[71]

### The longer term

The four families of scenarios we have considered – extinction, recurrent collapse, plateau, and posthumanity – could be modulated by varying the timescale over which they are hypothesized to occur. A few hundred years or a few thousand years might already be ample time for the scenarios to have an opportunity to play themselves out. Yet such an interval is a blip compared to the lifetime of the universe. Let us therefore zoom out and consider the longer term prospects for humanity.

The first thing to notice is that the longer the time scale we are considering, the less likely it is that technological civilization will remain within the zone we termed "the human condition" throughout. We can illustrate this point graphically by redrawing the earlier diagrams using an expanded scale on the two axes (figure 4).

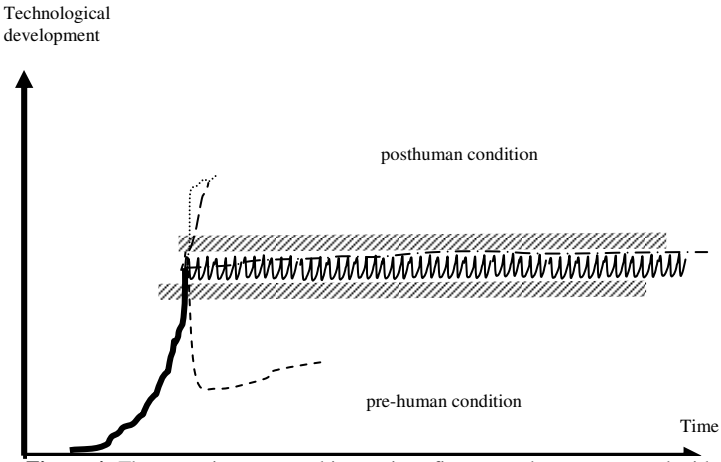


**Figure 4:** The scenarios presented in previous figures are here represented with a time axis that is slightly closer to linear and a y-axis that slightly better reveals how narrow a band the "human condition" is among all the possible levels of organismic and technological development. The graph is still a mere schematic, not a strictly quantitative representation. Note how the scenarios that postulate that the human condition will continue to hold indefinitely begin to look increasingly peculiar as we adjust the scales to reveal more of the larger picture.

The extinction scenario is perhaps the one least affected by extending the timeframe of consideration. If humanity goes extinct, it stays extinct.[72] The cumulative probability of extinction increases

monotonically over time. One might argue, however, that the current century, or the next few centuries, will be a critical phase for humanity, such that if we make it through this period then the life expectancy of human civilization could become extremely high. Several possible lines of argument would support this view. For example, one might believe that superintelligence will be developed within a few centuries, and that, while the creation of superintelligence will pose grave risks, once that creation and its immediate aftermath have been survived, the new civilization would have vastly improved survival prospects since it would be guided by superintelligent foresight and planning. Furthermore, one might believe that self-sustaining space colonies may have been established within such a timeframe, and that once a human or posthuman civilization becomes dispersed over multiple planets and solar systems, the risk of extinction declines. One might also believe that many of the possible revolutionary technologies (not only superintelligence) that *can* be developed *will* be developed within the next several hundred years; and that if these technological revolutions are destined to cause existential disaster, they would already have done so by then.

The recurrent collapse scenario becomes increasingly unlikely the longer the timescale, for reasons that are apparent from figure 4. The scenario postulates that technological civilization will oscillate continuously within a relatively narrow band of development. If there is any chance that a cycle will either break through to the posthuman level or plummet into extinction, then there is for each period a chance that the oscillation will end. Unless the chance of such a breakout converges to zero at a sufficiently rapid rate, then with probability one the pattern will *eventually* be broken. At that point the pattern might degenerate into one of the other ones we have considered.

The plateau scenarios are similar to the recurrent collapse scenario in that the level of civilization is hypothesized to remain confined within a narrow range; and the longer the timeframe considered, the smaller the probability that the level of technological development will remain within this range. But compared to the recurrent collapse pattern, the plateau pattern might be thought to have a bit more staying power. The reason is that the plateau pattern is consistent with a situation of complete stasis – such as might result, for example, from the rise of a very stable political system, propped up by greatly increased powers of surveillance and population

control, and which for one reason or another opts to preserve its status quo. Such stability is inconsistent with the recurrent collapse scenario.

The cumulative probability of posthumanity, like that of extinction, increases monotonically over time. By contrast to extinction scenarios, however, there is a possibility that a civilization that has attained a posthuman condition will later revert to a human condition. For reasons paralleling those suggested earlier for the idea that the annual risk of extinction will decline substantially after certain critical technologies have been developed and after self-sustaining space colonies have been created, one might maintain that the annual probability that a posthuman condition would revert to a human condition will likewise decline over time.[73]

## NOTES

1. (Hughes 2007).

2. (Crow and Sarewitz 2001).

3. For example, it is likely that computers will become faster, materials will become stronger, and medicine will cure more diseases; cf. (Drexler 2003).

4. You lift the glass to your mouth because you predict that drinking will quench your thirst; you avoid stepping in front of a speeding car because you predict that a collision will hurt you.

5. For more on technology and uncertainty, see (Bostrom 2007b).

6. I'm cutting myself some verbal slack. On the proposed terminology, a particular physical object such as farmer Bob's tractor is not, strictly speaking, technology but rather a *technological artifact*, which depends on and embodies technology-as-information. The individual tractor is physical capital. The transmissible information needed to produce tractors is technology.

7. See e.g. (Wright 1999).

8. For a visual analogy, picture a box with large but finite volume, representing the space of basic capabilities that could be obtained through some possible technology. Imagine sand being poured into this box, representing research effort. The way in which you pour the sand will determine the places and speed at which piles build up in the box. Yet if you keep pouring, eventually the whole space gets filled.

9. (Drexler 1992).

10. Theoretical applied science might also study potential pathways to the technology that would enable the construction of the systems in questions, that is, how in principle one could solve the bootstrap problem of how to get from here to there.

11. (Heilbroner 1995), p. 8.

12. The cyclical pattern is prominent in dharmic religions. The ancient Mayans held a cyclical view, as did many in ancient Greece. In the more recent Western tradition, the thought of eternal recurrence is most strongly associated with Nietzsche's philosophy, but the idea has been explored by numerous thinkers and is a common trope in popular culture.

13. The proviso of *closed* system may also not have seemed significant. The universe is a closed system. The universe may not be a finite state system, but any finite part of the universe may permit of only finitely many different configurations, or finitely many perceptibly different configurations, allowing a kind of recurrence argument. In the actual case, an analogous result may hold with regard to spatial rather than temporal repetition. If we are living in a "Big World" then all possible human observations are in fact made by some observer (in fact, by infinitely many observers); see (Bostrom 2002c).

14. It could matter if one accepted the "Unification" thesis. For a definition of this thesis, and an argument against it, see (Bostrom 2006).

15. According to the consensus model; but for a dissenting view, see e.g. (Steinhardt and Turok 2002).

16. (Bureau 2007). There is considerable uncertainty about the numbers especially for the earlier dates.

17. Does anything interesting follow from this observation? Well, it is connected to a number of issues that do matter a great deal to work on the future of humanity – issues like observation selection theory and the Fermi paradox; cmp. (Bostrom 2002a).

18. (Raup 1991), p. 3f.

19. (Leslie 1996).

20. Leslie defends the Cater-Leslie Doomsday argument, which leads to a strong probability shift in favor of "doom" (i.e. human extinction) occurring sooner rather than later. Yet Leslie also believes that the force of the Doomsday argument is weakened by quantum indeterminacy. Both of these beliefs – that the Doomsday argument is sound, and that if it is sound its conclusion would be weakened by quantum indeterminacy – are highly controversial. For a critical assessment, see (Bostrom 2002a).

21. (Rees 2003).

22. (Posner 2004).

23. (Bostrom 2002b).

24. Some scenarios in which the human species goes extinct may not be existential disasters – for example, if by the time of the disappearance of Homo sapiens we have developed new forms of intelligent life that continues and expands on what we valued in old biological humanity. Conversely, not all existential disasters involve extinction. For example, a global tyranny, if it could never be overthrown and if it were sufficiently horrible, would constitute an existential disaster even if the human species continued to exist.

25. A recent popular article by Bill Joy has also done much to disseminate concern about extinction risks. Joy's article focus on the risks from genetics, nanotechnology, and robotics (artificial intelligence); (Joy 2000).

26. (Drexler 1985). Drexler is even more concerned about the potential misuse of tools based on advanced nanotechnology to control and oppress populations than he is about the possibility that nanotechnology weapons systems would be used to directly cause human extinction; (Drexler 2007), p. 57.

27. (Bostrom 2002b; Yudkowsky 2007).

28. (Freitas 1999).

29. (Bostrom 1998).

30. How much worse would an existential risk be than an event that merely killed 99% of all humans but allowed for eventual recovery? The answer requires a theory of value. See e.g. (Parfit 1984; Bostrom 2003a, 2007a).

31. (Carson 1962).

32. (Ehrlich 1968; Meadows and Club of Rome. 1972).

33. (Solomon et al. 2007), p. 749.

34. Ibid, p. 750.

35. (Stern and Great Britain Treasury 2006); for references to critiques thereof, see e.g. (Nordhaus 2007; Cox and Vadon 2007).

36. These numbers, which are of course approximate, are calculated from data presented in (De Long and Olney 2006); see also (De Long 1998).

37. (Gibbon and Kitchin 1777).

38. (Tainter 1988).

39. (Diamond 2005).

40. Ibid., p. 425.

41. (Smil 2006), p. 311.

42. (United_Nations_Population_Division 2004).

43. (Hanson 2000).

44. (Brin 1998).

45. (Bostrom 2005, 2007c).

46. (Pearce 2004).

47. (Pearce 2004).

48. (Bostrom and Ord 2006; Bostrom and Sandberg 2007).

49. Molecular nanotechnology (aka molecular manufacturing, or machine-phase nanotechnology) is one area where a considerable amount of "theoretically applied science" has been done, although this has not yet resulted in a consensus about the feasibility of this anticipated technology; see e.g. (Drexler 1992).

50. (Hanson 1995; Wolfers and Zitzewitz 2004).

51. See e.g. (Bostrom 2003b; Moravec 1999; Drexler 1985; Kurzweil 2005).

52. (Perrow 1984).

53. See e.g. (Sagan 2004).

54. (Lanier 2000).

55. (Burkhead 1999).

56. (Fukuyama 1992).

57. (Fukuyama 2002).

58. E.g. (Bostrom 2003b, 2007c).

59. "Singularity" is to be interpreted here not in its strict mathematical meaning but as suggesting extreme abruptness. There is no claim that any of the quantities involved would become literally infinite or undefined.

60. (Ulam 1958).

61. (Good 1965).

62. (Vinge 1993).

63. I use the term "qualitative reproduction" advisedly, in order to sidestep the philosophical questions of whether the original mind could be quantitatively the same mind as the upload, and whether the uploaded person could survive the procedure and continue to live as an upload. The relevance of uploading to the present argument does not depend on the answers to these questions.

64. (Hanson 1994). Absent regulation, this would lead to a precipitous drop in wages.

65. The antecedent of the conditional ("if uploading is technologically feasible –") includes, of course, assumptions of a metaphysical nature, such as the assumption that a computer could in principle manifest the same level of intelligence as a biological human brain. However, in order to see that uploading would have wide-ranging practical ramifications, it is not necessary to assume that uploads would have qualia or subjective conscious experiences. The question of upload qualia would be important, though, in assessing the meaning and value of scenarios in which a significant percentage of the population of intelligent beings are machine-based.

66. To say something more definite about the probability of a singularity, we would at this stage of the analysis have to settle on a more unambiguous definition of the term.

67. The distinction between quantitative and qualitative improvements may blur in this context. When I suggest that qualitative changes might occur, I am not referring to a strict mathematical concept like Turing computability, but to a looser idea of an improvement in intelligence that is not aptly characterized as a mere speed-up.

68. (Kurzweil 2005).

69. Note that the expected arrival time of the singularity has receded at a rate of roughly one year per year. Good, writing in 1965, expected it before 2000. Vinge, writing in 1993, expected it before 2023. Kurzweil, writing in 2005, expects it by 2045.

70. (De Long 1998).

71. (Smil 2006), p. 131.

72. It is possible that if humanity goes extinct, another intelligent species might evolve on Earth to fill the vacancy. The fate of such a possible future substitute species, however, would not strictly be part of the future of *humanity*.

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# FORGET THE TRANSNATIONAL STATE

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ABSTRACT. This paper offers a critique of the ideas of the "transnational capitalist class" and "transnational state" advanced by William Robinson. It argues that the concepts and their theoretical underpinning are fundamentally flawed, and therefore that the idea of the "transnational state" should be abandoned.

> Mindsets … are exceedingly difficult to break even
> when confronted with logical inconsistencies
> and problems of empirical validity
> [Robinson, 2004, p. 93]

## Introduction

William Robinson has argued energetically over recent years that the rise of transnational capital is leading to the emergence of a "transnational capitalist class" (TCC) and a "transnational state" (TNS).[1] He argues that we are in a period of transition from the "nation-state phase of world capitalism … to a transnational phase" [Robinson, 2004: 5]; anyone who thinks otherwise is a victim of "nation-state centrism" – a mindset they need to abandon [ibid: 93]. But the "summary statement" of his work on globalization from which these phrases are taken – largely a compilation from earlier essays – is full of logical inconsistencies, and offers little evidence in support of the case for a "transnational state", despite his having promised before and acknowledged since that it might be time to provide some [Robinson, 2002, p. 500; 2005b, p. 5]. So I argue here that it is time for Robinson to abandon his own "transnationalist" mindset, and accept the less arresting but more persuasive conclusion that national states have a changing but continuing role in the global capitalist system, one in which they are oriented and supported by an increasingly interlocked network of global institutions that do not show any tendency to evolve into a transnational state [Cammack,

2006c]. The idea of such a state is an unnecessary and unhelpful diversion, and a barrier to understanding, and should be renounced.

### Global capitalism

Robinson identifies himself with the global capitalism thesis or school, which argues that "globalization represents a new stage in the evolving world capitalist system that came into being some five centuries ago", and "can be explained largely by a methodologically prior, materialist theory of capitalism" [2].[2] His initial theoretical formulation of globalization does not invoke the idea of transnationalism, but states that it "can essentially be seen as the near culmination of a centuries-long process of the spread of capitalist production around the world and its displacement of all precapitalist relations, bringing about a new form of connection between all human beings around the world" [2]:

> by the early twenty-first century the vast majority of peoples around the world had been integrated into the capitalist market and brought into capitalist production relations. No countries or regions remained outside of world capitalism, and there were no longer any pre- or non-capitalist modes of production on a significant scale [6].

Underlying this perspective is his argument that the essence of capitalism is "production undertaken through a particular form of social interaction, what I will call the *capital-labor relation* (or *capitalist production relations*), in order to exchange what is produced, *commodities*, in a market for profit" [5].[3] He argues on this basis that

> Capitalist production relations are replacing what remains of precapitalist relations around the globe. The era of the primitive accumulation of capital is coming to an end. Those cultural and political institutions that fettered capitalism are being swept aside, paving the way for the total commodification, or *marketization*, of social life worldwide [7].

These claims (all at the very least misleading, as we shall shortly see) underpin his argument that globalization represents a

shift from a *world* to a *global* economy, "a new, transnational phase in the development of the world capitalist system, [a] defining feature [of which] is *the rise of transnational capital*" [9].

However, this is a flawed hybrid perspective, which grafts onto a garbled version of the Marxist understanding of capitalism as "essentially a production relation" [8] an incompatible conception of transnationalism taken from the contemporary sociology of globalization (and in particular from Castells, Dicken and Sklair, who feature prominently as sources and interlocutors throughout). And because the understanding of the "capital-labour relation" he employs is defective, the graft does not take.

In talking as he does of peoples around the world being "brought into capitalist production relations" Robinson ignores the vital distinction between the *formal* and the *real* subsumption (or subjection) of labour to capital. It is one thing for forms of production which arise outside capitalism to be brought under its control – as for example in the use "global capital" makes of informal sector activity, home-working, or patriarchal sweatshops. Capital in this case appropriates the product, but the production process itself is not "the *specifically capitalist mode of production* in its developed form".[4] That is to say, it does not feature "factory production" – the revolutionary development which features the increasing application of machinery (capital) to the production process, rising productivity, and a fundamental switch in the character of exploitation (and the source of profit) from the extraction of absolute surplus value to the extraction of relative surplus value. There is an enormous difference, which Robinson's use of the term "capital-labour relation" to cover *both* situations overlooks, between the capitalist *appropriation* of home-working or informal sector production (which is certainly a feature of global commodity chains), and the installation of factory production and the specifically capitalist dynamic of the increasing application of capital to the production process itself (which may or may not be, and often is not).[5] Once this distinction is introduced, Robinson's argument falls to pieces.

First, there is no universal "new global capital-labor relation" [19]: the claim that "capitalist production relations are replacing what remains of precapitalist relations around the globe" conflates two fundamentally different processes, assuming homogeneity where in fact heterogeneity still prevails. Robinson presents no evidence to suggest that the production networks and commodity

chains he talks about feature capitalist relations of production' in their developed form' throughout. He can't, because they don't. He talks instead about "the global casualization or informalization of labour", which "involves alternative systems of labor control and diverse contingent categories of labor" [19] – in other words, he acknowledges the *diversity* of the social relations of production involved.[6]

Transnationalization may involve "the *functional integration* of ... internationally dispersed activities" [14] but it doesn't necessarily involve the universalization of the capital-labour relation specific to capitalism. Robinson draws on Castells' notion of the ability of the global economy "to work as a single unit in real time, making possible simultaneity and therefore real organic integration", and Dicken's contrast between shallow and deep integration of the global economy [14], but he does not substantiate the claim that "globalization is unifying the world into a single mode of production" [15].[7]

Third, it is misleading to claim that the "cultural and political institutions that fettered capitalism are being swept aside, paving the way for the total commodification, or *marketization*, of social life worldwide". By presenting this as a process which is irreversibly under way, Robinson again skips over the issue of the agency behind the process. Yet in much of the world existing social relations, sustained by powerful cultural and political institutions, still stand in the way of the universalisation of the "specifically capitalist mode of production"; and "global capital" often supports, perpetuates and benefits from them.

Fourth, then, Robinson is wrong to claim that a shift is taking place from a *world* to a *global* economy, if by this he means that whereas in the past world economy nation-states "mediated the boundaries between a world of different national economies and articulated modes of production", now they do not [10]. This fundamentally misleading suggestion arises from looking only at the alleged opposition between national and transnational fractions of capital, and forgetting for the moment the crucial role that national states still play in enforcing the *hegemony of capital over labour* within their own territories.

## Transnationalism and the transnational state

Robinson's argument depends simultaneously, then, on two diametrically opposed understandings of the idea of "transnationalism" – one narrow and specific, allegedly deriving from classical Marxism, and centred on the idea of the spread of "global capital" and of strictly capitalist relations of production; the other broad and general, deriving from the contemporary sociology of globalization, and including all manner of practices and processes not contained within borders. His argument hinges on the first, but his "evidence" relates to the second, though even here it does not go beyond the entirely uncontroversial claim that capitalist production is no longer 'national' in character.

So although he prefaces his review of the empirical evidence for his argument with the statement that "we need to focus on the production relations that underpin market relations and the social forces that drive production relations in order to identify what is qualitatively new in the current epoch" [22], he looks at neither. Instead, he takes FDI as a proxy for transnational production, on the grounds that *by definition* it "transnationalizes production" [22]. Well, it depends what you mean. There is case to be made (indeed, Marx made it) that foreign investment introduces capitalist relations of production into societies where they do not prevail, but Robinson does not pursue it. Instead he throws into his conception of transnationalization TNC reliance on local sources of funding, outsourcing and subcontracting [22–3; cf. 54], and the fact that world exports have been growing faster than world production [24], now arguing after all he has said about production that "[t]rade and FDI are in many respects the most important mechanisms of globalization and transnational integration" [23]. The focus has already switched from the universalization of capitalist relations of production to the integration of different regions into the world market.

Even here, though, the pattern of integration proves highly skewed. Remarking that world FDI inflows reached $1.27 trillion in 2000, Robinson notes that some 80 per cent of this total was concentrated in North America, Europe and Japan. He does not consider the implication that only a minor proportion of FDI is potentially effecting a revolution in relations of production around the world, and that if anything the differential patterns of investment might be reinforcing rather than effacing heterogeneity. The same point

applies to the data he later provides on cross-border mergers as evidence of the emergence of the TCC [57–62].

Turning to trade, Robinson argues that the growing significance of TNC-initiated or intra-firm trade is further evidence of globalized production, but states again that much of it involves subcontracting, licensing, franchising and outsourcing [28]. All well and good. But the issue on which this evidence is intended to bear is the production relations that underpin market relations, and the social forces which drive them. Never mind that Robinson also concedes that "the majority of trade in the world still takes place within rather than across national boundaries" [29]. Damaging though that is to the argument, the more important point is that there is nothing to support the proposition that the social relations of production around the world are reaching a point of virtually total transformation, such that capitalist relations of production proper are dominant.

No one will doubt that the developments in global production, trade and investment which Robinson describes have consequences for relations of production around the world. But having first announced that this is his concern, Robinson makes no effort to investigate it, instead counting a whole range of different forms of production as falling within the ambit of "transnational capital". Is FDI originating in the "capitalist core" having a transformative effect on the social relations of production in "peripheral" or "developing" economies? To what extent do such economies exhibit an increase in strictly capitalist relations of production? What proportion of the global workforce is subject to such relations of production, and how is it distributed? What evidence is there for the proposition that global *capitalists* wish to see all "non-capitalist" forms of labour eliminated? Such evidence as he presents actually goes against him, as he appears to think himself that capital benefits from such heterogeneity in the global system.[8]

Worse still, Robinson's subsequent presentation of empirical evidence of TCC formation revolves around exactly the same material (sometimes, as at pp. 19–20 and 68, repeated word for word) – the spread of TNCs in the developed and developing world, cross-border mergers and alliances (almost entirely in the developed world), interlocking directorates, and strategic alliances. Further evidence of the global reach of capital, but, as Robinson himself tells us, not sufficient 'to prove the existence of a TCC' [54].

What can we make, then, of the claims made for the "transnational capitalist class"? As Robinson himself reminds us [35–7], the idea of a capitalist class that has transcended national boundaries and operates on a global scale is not new. What is at issue, then, is what is new in what he has to tell us about it – the context out of which it emerges, the interests it has, its degree of coherence, its capacity to *act* as a class, and the manner in which it relates to the state. As we shall see, in each of these areas his only idea is that of the "supersession" of the national state (although the claim is no sooner made in each area than it is retracted), and on each the approach taken is one-dimensional, mechanistic and reductionist. He is unable to convince us that capitalists no longer have an interest in the national state, and he does not even try to demonstrate that they have a capacity to act as a class beyond it.

First, as noted above, Robinson reduces the issue of bourgeois class identity and interest to an opposition between *national* and *transnational* class fractions [37, 49], and argues that "as the entire circuit [of capital accumulation] becomes transnationalized, so too do classes, political processes, states, and cultural-ideological processes" [39]. There is a huge confusion here (parallel to that over the formal versus real subsumption of labour to capital) which originates in the notion that the link between production and territory has been broken. As Robinson develops the argument that the capitalist class is "increasingly less tied to territoriality or driven by national competition" [36] he talks as if production had become *extra-terrestrial* rather than *spread across numerous territories*. In doing so, he momentarily tricks himself into thinking that capitalists (however much or little they might be identified with a particular nation state) have no interest in the *local* state in any territory in which they are active. Rather, the TCC has "an objective class existence and identity in the global system *above* any local territories and politics" [47, emphasis mine]. As much else of what he has to say shows clearly, he does not actually think this all the time. But the fact remains, dispute it as he might, that the argument for a "transnational capitalist class" depends upon the bizarre notion that its activity has become *de-territorialized*.[9] He is quite right to make the uncontroversial point that the idea of a "national bourgeoisie" does not capture much of the reality of contemporary political economy, but quite wrong to assume that this means that the link between

capitalists and national (local) states is severed, or that capital is somehow "liberated from the nation-state" [39].

Second, he falls all the more readily into this error because although he dates the period of state-centrism from the Treaty of Westphalia [90], in practice he reduces the national state, in its relation to capitalism and the bourgeoisie, to the Fordist-Keynesian interventionist state (or the developmental state in the Third World), and mistakenly interprets the "end" of this state as the end of the national state altogether. The logic is crudely mechanistic – the "national bourgeoisie" needed the Fordist-Keynesian state to guarantee the conditions for *national* accumulation and legitimation, but now that transnational capital is dominant, there is no need for it any more.[10] However, the role of the national state in guaranteeing the conditions of accumulation and legitimation (or, rather, in seeking to do so, if it so happens that that is what it does) goes beyond arbitrating between "national" and "global" capital, and in general beyond the specific *form* it takes at a particular place and time. And Robinson is actually well aware that local/national states do indeed still seek to secure these conditions, and that they do so now, increasingly, through neoliberal strategies in the context of "post-Fordism".

The tension this equivocation over the continued role of the national state generates for Robinson's "transnational" theory is precisely reflected in the way in which he alternates between the claim that it has been superseded [45, 46, 90–92] and the very different claim that it has been modified, reorganised or transformed [50, 74, 75, 100, 121–125]. He recognises that the national state still mediates class relations in a way that is fundamental for capital, global or otherwise, when he states that "the mediating element of national states has been modified" [43], and when he notes that "the principal social contradiction is still between dominant and subordinate classes" [53]. He recognises it, too, when he charts the shift from welfare and developmentalist to neoliberal states around the world [121–5]. But he forgets it when he chides realists, world-system analysts and Marxists alike with thinking that "hegemony is inextricably tied up with state power, and state power is conceived in terms of the nation-state" [76], giving as his reason only the obsolescence of the idea of the global system as a "competing nation-state system" [77]. This comes of drinking too deep from the spring of international political economy (Cox appears to figure here as a

representative "Marxist"), and overlooking for the moment the different emphasis of a Marxist approach. Here as elsewhere, he can only see what his flawed methodology will let him see. Once he opts to relocate global capital to an imagined "new supranational space", he is compelled, on pain of theoretical extinction, to imagine a transnational or supranational state through which it can operate.

On his own account, though, the national state has adapted very readily to the neoliberal age, and is almost universally facilitating the activity of global capital. Indeed, he argues explicitly that transnational fractions of local elites and capitalist classes swept to power in a number of countries in the 1980s and 1990s, and "captured the 'commanding heights' of state policymaking: key ministries and bureaucracies in the policymaking apparatus, especially central banks and finance and foreign ministries, as key government branches linking countries to the global economy" [49]. As I shall say below, this is too simplistic. But the fact is that he does claim that "transnational blocs became hegemonic in the vast majority of countries and set out to thoroughly transform their countries, *using national state apparatuses* to advance globalization and to restructure and integrate them into the global economy" [ibid, emphasis mine].[11] If so, it follows directly that *there is no need for a transnational state at all, and no reason to predict the demise of national states*. Robinson has been too absorbed by banging his head against the imaginary brick wall of "state centrism" to notice that his own argument demolishes the case for a transnational state. In sum, Wood [1999, cited p. 46] and others are right about the continuing centrality of the national state, and Robinson [88–93] is wrong. And this in turn explains perfectly well what otherwise in an insoluble conundrum for Robinson – the fact that on the one hand the TCC is inchoate and the TNS only starting to take shape, while on the other the whole set-up is working like a dream, as if it were fully formed, to meet the needs of global capital.

I suggested just above, however, that his approach is too simplistic. To the constant detriment of the argument, Robinson is a thoroughgoing instrumentalist – in other words, he conceives of the state, whether national or transnational, as captured by and acting as an agent of the capitalist class. So at the national level

> Once they have been captured by transnational groups, national states internalize the authority structures of global capitalism; the global is incarnated in local social

> structures and processes. The disciplinary power of global capitalism shifts the actual policymaking power within national states to the global capitalist bloc, which is represented by local groups tied to the global economy [50].

Robinson does not attempt to explain or even illustrate the mechanism by which this act of demonic possession takes place, despite its centrality to his argument. And as argued above, he cannot easily argue *both* that transnational capital has captured and is using national states, *and* that national states are in the process of being superseded by a transnational state because the needs of capital have changed. Worse, he overlooks the possibility that national states are not acting under the control of transnational groups, but instead are acting with relative autonomy from them to impose the disciplines of global competitiveness *on all classes, capitalists included* [Cammack, 2006c]. This is consistent with the view that national states are currently strengthened, encouraged and supported in this orientation by an increasingly closely coordinated network of international agencies and institutions. On this logic, there is no reason either to describe the network of institutions around and beyond national states as a "state", or to expect anything more centralized to emerge.

Robinson cannot grasp this, because he is the prisoner of a relentless false logic: capital needs a state to act in its general interest; capital is now transnational; so capital needs a transnational state. His lack of consistency on these points involves him in a fatal contradiction. He states that the TNS apparatus has *already* arisen *under the auspices of the TCC*, and that the transnational managerial elite which represents the TCC *already* "exercises authority over global institutions, and controls the levers of global policymaking" [48]. The "transnational ruling bloc" is *already* the agent of a revolution from above, "aimed at promoting the most propitious conditions around the world for the unfettered operation of the new global capitalist production system" through "modifications made from above in global social and economic structures through the agency of TNS apparatuses" [77]. Yet this is the very same class whose boundaries are indeterminate [54], and whose existence is not yet proven. But note, again: if we accept these claims, unsubstantiated though they are, there is still no reason to believe that a "transnational state" will evolve in any more concrete or centralized

form that it already has. Whatever Robinson may say to the contrary, his argument requires that the transnational state already exists.

It is not surprising, in the light of all this, that when Robinson finally tells us what he means by the "transnational state" through which the global bourgeoisie rules, it turns out not to be a state at all, but a loose yet all-encompassing conglomeration of global institutions, nation states, and other agencies:

> This TNS apparatus is an emerging network that comprises transformed and externally integrated national states, together with the supranational economic and political forums, and has not yet acquired any centralized institutional form. The economic forums include the IMF, the WB, the WTO, the regional banks, and so on. The political forums include the Group of Seven (G-7) countries and the larger group of 22 countries, among others, as well as the U.N. system, the OECD, the EU, the Conference on Security and Cooperation in Europe (CSCE), and so on [88].

Whatever else this is, it is not a state, transnational or otherwise. Yet Robinson goes on immediately to claim that the TCC (the very same one that is inchoate or even non-existent) "has directly instrumentalized this TNS apparatus", and "has been attempting to forge a new global capitalist historic bloc" through these global institutions. And lest we should mistake his meaning, he gives as his first proposition of his thesis on the TNS that:

> Economic globalization has its counterpart in transnational class formation and in the emergence of a TNS, which has been brought into existence to function as the collective authority for a global ruling class [ibid].[12]

There is only one word for this: twaddle. And it should be noted that this is not a first rough approximation of the idea, but a considered statement of Robinson's position, maintained over a number of years [cf. Robinson, 1998], and juxtaposed to a passage which shows beyond question that the "TNS" is neither collective, nor remotely capable of exercising authority. What evidence does Robinson offer, then, in support of this unlikely proposition? Well, none to speak of. Instead we get a very pedantic lecture on nation-state centrism [88–93], a disquisition on Weber and Marx [94–9]

which touches on instrumentalism, structuralism and relative autonomy without mentioning, let alone qualifying, his own claim that the TCC has directly instrumentalized the TNS apparatus, and a rerun through the component elements of the TNS, with a couple of new ones added for good measure [100–101]. Robinson then returns to the issue of the capital-labour relation and its management by the *national state* [102–10], repeating large chunks of material from earlier chapters, and again identifying the nation-state as a "fetter to accumulation" in the latter decades of the twentieth century before describing in great detail how it has since reinvented itself in such a way that "the continued existence of the nation-state serves numerous interests of a TCC" [106]. And we learn here, courtesy of a brief discussion of Proposition 187, that "national and local territorial boundaries and political jurisdictions that in the past may have thrown up barriers to global accumulation have become functional to the globalized circuits of capital" [107]. Leaving aside the suspicion that this smacks rather of "nation-state centrism", let's just say the conclusion offered above is amply confirmed: the TNS is an unnecessary theoretical construct.

Let me offer a specific example, along with a thought experiment. When Robinson eventually turns to "some empirical reference points" for the emergence of a TNS, he tells a familiar tale – the emergence of global financial markets, the reorientation of IFIs and other supranational institutions, and the shift from welfare and developmentalist to neoliberal states. The latter section leads up to the following statement:

> Hence, far from the end of the nation-state … we are witness to its transformation into neoliberal states. These neoliberal states *as components of a TNS provide essential services for capital. These neoliberal states, acting as transmission belts and filtering devices for the transnational agenda, function as components of a TNS. They* provide essential services for capital within specific national territories [124-5, emphasis mine].

Now try the same passage again, but with the repetition and the references to the TNS removed:

> Hence, far from the end of the nation-state … we are witness to its transformation into neoliberal states. … These neoliberal states provide essential services for

> capital within specific national territories [124–5, emphasis mine].

What have we lost? Nothing, I submit, except confusion, redundancy, crude and unsubstantiated instrumentalism – and the phantom transnational state.

### Setting Robinson straight

Robinson describes a world in which capital has *already* transcended the previous link between production and territoriality, in which the national "Fordist class compromise" has *already* been abandoned, and in which national states have *already* adopted a neoliberal orientation. It follows that if the "transnational state" does not yet exist, there is no need to invent it.

The switch that he needs to make, then, is not from "the nation-state and the interstate system" [88] to the "transnational state" but from the nation-state and the interstate system to the nation-state and the *global* system. He is right to remark that "the nation-state is a historically bound phenomenon" [90], but wrong to claim that it is fated to depart the historical stage at this particular point in time, and wrong to substitute homilies on reification for analysis of the actual "complex, changing set of social relations" [90–91] that current practice is creating. In the present era, this entails thinking of the national state not as an instrument or agent of capital, whether national or global, but in relation to the logic of *global competitiveness* [Cammack, 2006c]. The re-orientation of states towards this logic certainly entails a re-orientation towards labour. But more than that, it entails the imposition of the disciplines of capitalist competition across all classes – on the working class, for sure, and not just on "national" capitalists (as reflected in the ending of support for "national Fordism" which he describes), but *on capital in general, national or not*. The fact that every one of the various bodies Robinson identifies as making up the TNS (p. 11 above) is focused on the reform and reinvigoration of national states should give him pause for thought. This is indeed a new epoch in the development of capitalism, but one not dreamed of in Robinson's philosophy. It is one in which states around the world are led, or driven, to offer "better climates for investment" – one in other words in which states indeed no longer mediate "the boundaries between a

world of different national economies and articulated modes of production" [10], but rather compete directly with each other to offer the best site for accumulation in an integrated global capitalist economy.

To grasp what is really going on, then, Robinson would need to be more aware of the orientation over the last ten years of the international institutions he airily designates as agents of the "transnational capitalist class" than he is. He would then notice that these increasingly coordinated international organizations are seeking to advance capitalism "in its most developed form" on a genuinely global scale [Cammack, 2002]; that they are therefore not so much instruments of a transnational capitalist class as relatively autonomous bearers of a broader global capitalist project [Cammack, 2003]; and that their energy has been devoted for over a decade not to imposing the "Washington Consensus", but to seeking to devise and promote strategies for converting national states into viable agents of capitalist reforms at home compatible with competitiveness on a global scale [Cammack, 2004, 2006c]. This does not do away in the slightest with "competition between states", but it changes its character:

> In the context of the completion of the world market and the universalisation of the imperatives of capitalist competition, autonomous projects for capitalist accumulation secured at the level of the state – which, in any case, have been only briefly possible in a small number of countries in the past – are generally problematic. At the level of global economic management, this situation is reflected in the emergence of global regulatory agencies (international organisations), and regional and inter-regional initiatives sponsored and carried forward by state leaders in an effort to mitigate the difficulties they face in what they take to be their 'national interest'. States naturally carry into this institutional environment their need to compete with each other, as well as their need to establish the general conditions for the global hegemony of capitalism [Cammack, 2003, p. 40].

If Robinson could entertain the possibility that states have changed but are still central, the odd snippets he quotes directly from the remarkably few primary sources on which he draws for evidence of the reorientation of the international financial institutions and UN

agencies would start to make sense. He would see, for instance, that when the World Bank's 1997 *World Development Report* states that the restructuring of key state agencies "can mostly be achieved through executive order" [123], and remarks that "globalization begins at home" [125], it is recognizing that *the national state is central to the project of building a globally competitive capitalism*; and that UNDP support for "entrepreneurial cultures in which the private sector has historically been largely absent or underdeveloped" [116] is *not* evidence of the UNDP acting at the behest of global capital, but reflects rather a broader strategy aimed at what it actually says it is – building strong entrepreneurial cultures in *every* country, or in other words promoting global competitiveness (Cammack, 2006a).

He would then be in a position to see that it is *because* national states are envisaged as the lead agents in the process, called upon precisely to reform the "cultural and political institutions that fetter capitalism", or in other words to institute *at national level* the conditions that enhance global competitiveness, that the objective of the international institutions and their allies in the G8 and elsewhere is to endow them everywhere, in the developed and developing world alike, with the capacity both to impose capitalist discipline, and to secure legitimacy [Cammack, 2006b]. This is not a project that will necessarily succeed. But although there is no reason to expect national states to last for ever, there is no immediate alternative candidate to play these roles – certainly not the imagined "transnational state". Were it not for the fact that he is periodically dazzled by it, and permanently in thrall to a crude instrumentalism, he might have seen some of this. He might then have avoided the mess he is in, in which a state that does not yet exist is already a precision instrument in the hands of an already omnipotent class that is only in the early stages of a process of formation.

## Conclusion

Little has changed since Robinson published the monograph that has been my principal focus here. He continues to insist on the need to deploy the concepts of transnational capitalist class and transnational state [Robinson, 2005a], and to see nation states as the effective agents of transnational capital:

> historical analysis reveals that in the momentary conjuncture of the late 20th and early 21st century, transnational capital and its representatives did come to capture most state apparatuses around the world in a historically unprecedented way and to utilise these national state policy-making apparatuses to advance capitalist globalisation, including developing sets of policies functional to the global accumulation of capital [Robinson, 2006, p. 531–2].

At the same time he accuses his opponents of theoreticism, in the sense of developing analyses and propositions to fit theoretical assumptions, rather than to illuminate reality [ibid, p. 532]. In fact, the argument goes precisely the other way – it is Robinson who has stuck doggedly over a decade to the defence of a theoretical position which is neither coherent nor empirically grounded. He should acknowledge that his own focus on the transformation of national states does not need it, and drop it. In doing so, he would remove what threatens to become a major distraction from the task of understanding what is indeed a new epoch in global capitalism.

## NOTES

1. Prior to the monograph examined here [Robinson 2004], see for example Robinson 1998, 2000, 2002. Subsequent to it, see Robinson 2005a, 2005b, 2006.

2. He identifies four epochs in the history of capitalism: mercantilism and primitive accumulation (1492-1789); competitive or classical capitalism (1789-late C19th); "corporate ('monopoly') capitalism" (late C19th-1970s); and "globalization", still in its early phases [4–5].

3. "The capital-labor relation is the relationship between workers and capitalists as they come together in the process of producing goods that people want or need" [5].

4. Marx [1976], p. 1019.

5. "With the production of relative surplus-value the entire real form of production is altered and a specifically capitalist form of production comes into being (at the technological level too). Based on this, and simultaneously with it, the corresponding relations of production between the various agents of production and above all between the capitalist and the wage-labourer, come into being for the first time" [ibid., p. 1024]. The definition of the global proletariat that Robinson adopts from Hardt and Negri ignores this distinction. They define it as "a broad category that includes all those whose labor is *directly and*

*indirectly* exploited by and subject to capitalist norms of production and reproduction" (cited p. 44 from Hardt and Negri, 2000, p. 52; emphasis mine).

6. Robinson adds later, in a passage laden with examples of reliance on the extraction of absolute surplus value, that "Well-known trends associated with the restructuring of the labor-capital relation taking place under globalization include 'downward levelling,' deunionization, 'ad hoc' and 'just-in-time' labor supply, the superexploitation of immigrant communities as a counterpart to capital export, the lengthening of the working day, the rise of a new global 'underclass' of supernumeraries or 'redundants' subject to new forms of social control, and new gendered and racialized hierarchies among labor" [102].

7. For this reason, the case Robinson makes for the claim that we are living in a new epoch is not persuasive. I argue that we are indeed living in such an epoch, but one characterized by a dynamic of global competitiveness [Cammack, 2003, 2006c]. The global project espoused by the international institutions is addressed explicitly to the real subsumption of labour to capital and the increased extraction of relative surplus value on a global scale. But individual capitalists, including those at the centre of the advanced capitalist countries, still resort to all means available in their pursuit of profit and of competitiveness, including continued and in some cases increased reliance on very primitive methods of production. Similarly, it is no paradox that while the international institutions rail against bribery and corruption, major transnational corporations continue to employ it on a massive scale, with the tacit and sometimes explicit support of their governments. These are simply indications of the contradictions of global capitalism, reflecting both the dynamics of uneven and combined development, and the relative autonomy of the international institutions and their project from particular existing capitals.

8. For example, he argues that the mobility of capital allows it 'to search out the most favourable conditions for different phases of globalized production, including the cheapest labour, the most favourable institutional environment (e.g., low taxes) and regulatory conditions (e.g. lax environmental and labor laws, a stable social environment, and so on' [22].

9. Thus Robinson refers to 'transnational or deterritorialized' class interests [53], and argues that transnationalization 'disembeds [national capitals] from their locations and locates them in new supranational space' [54].

10. There is a telling hiatus in the development of the argument on this point. Robinson is clear that national Fordism and the associated Fordist class compromise is defunct. But his account of its demise, which invokes Polanyi's notion of the 'double movement', breaks off when he reaches the 'first movement' of the great neoliberal transformation, or the 'maturation of transnational capitalism'. He does not go on at this point to consider whether this shift might be followed by a 'second movement', or in other words by a *global* Fordist class compromise [40–44]. When he does, over a hundred pages later [163–8], he is disappointingly agnostic.

11. Typically, the same point is restated later, but supported by the opposite argument – that capital has abandoned rather than captured the national state, and the national state has responded by changing its orientation: 'As capital became liberated from the nation-state and assumed tremendous new power relative to labor with the onset of globalization, national states shifted from reproducing Keynesian social structures of accumulation to servicing the general needs of the new patterns of global accumulation and the TCC, involving a rollback of redistributive projects' [74–5].

12. Propositions 2 and 3 state that 'The nation-state is neither retaining its primacy nor disappearing but is being transformed and absorbed into the larger structure of a TNS', and that 'The emergent TNS institutionalizes the new class relation between global capital and global labor' [88].

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# GLOBAL CAPITALISM, SOCIAL SCIENCE, AND METHODS OF CRITIQUE

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## RESPONSE TO CAMMACK'S "FORGET THE TRANSNATIONAL STATE"

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ABSTRACT. The theory of global capitalism that I have advanced over the past decade suggests that it is necessary to rethink the spatiality of capital in the new epoch, including the changing relations between transnationalizing capital, national territories, class relations and political authority. The continued existence of the nation-state and the inter-state system appear to be a central condition for the class power of transnational capital and for the reproduction of global capitalism. National state apparatuses, however, are themselves experiencing transformation and integration into emergent supranational institutional networks. The notion of a transnational state is an analytical abstraction that allows us to make sense of evident transnational social and institutional practices that are central to shaping global capitalism and to the exercise of class power by the TCC.

It is hard to make heads or tails of exactly what Professor Paul Cammack wishes to say about my work. He combines misrepresentation of my theory of global capitalism through rambling and gratuitous diatribe with several interesting points of debate on the nature of world capitalism in the 21st century. Above all, Cammack implies that in my construct nation-states have become irrelevant to global capitalism. I should "accept that national states have a changing but continuing role in the global capitalism system," he advises. This is a complete caricature of my position.

Cammack says that I believe capital has become "*extra-terrestrial* rather than *spread across numerous territories*" (emphasis in original). I have never used the term "extra-terrestrial." In fact my argument *is precisely* that as capital has transnationalized it has become spread across numerous national territories through glo-

balized circuits of production. The phrase of mine "supranational space" that Cammack cites to claim that I suggest "the demise of national states" actually refers, if he were to address the larger context in which I evoke the phrase, not to the supersession of space but to supranational space as accumulation across many national territories. Hence, the relation between transnationalizing capital and *particular national territories* needs to be reconceived. More generally we need to rethink the spatiality of capital. In previous epochs capitalists were largely based in particular national territories and turned to "their own" national states in pursing their class interests. These interests were as much in organizing the conditions for accumulation within their respective national territories and disciplining labor within these territories as in competition with national capitalists from other countries for markets and resources around the world. As capital has gone global the leading groups among national capitalist classes have interpenetrated across national borders through an array of mechanisms and arrangements. This emergent transnational capitalist class operates across borders in numerous countries and has attempted to convert the whole world into a single unified field for global accumulation.

According to Cammack I believe these transnational capitalists "have no interest in the *local* state in any territory in which they are active" (emphasis in original). I assert nothing of the sort. What in fact is my argument? As transnational capitalists operate in numerous countries they turn to local (national) states of the countries in which they operate. Just as in previous epochs, they require that these local (national) states provide the conditions for accumulation within their respective territories, including disciplining labor. Reciprocally, local managers of the national capitalist state are compelled just as they were in the past by the structural power of the capitalist system. The legitimacy of these states and the reproduction of the status of state elites as privileged strata depend on their ability to attract and retain now-globalized accumulation to the territories over which they exercise political authority. Competition among national states to attract transnationally-mobile capital becomes functional to global capital and to its ability to exercise a structural power over the direct power of states – that is, over the policymaking process of national states, in the same way as previously national capital exercised what some referred to as the "veto power" of capital over the state. In this way, the continued existence

of the nation-state and the inter-state system appear to be a central condition for the class power of transnational capital and for the reproduction of global capitalism. To give a concrete example, transnational corporations during the early 1990s were able to utilize the institutions of different nation states in order to continuously dismantle regulatory structures and other state restrictions on the operation of transnational capital in a process of "mutual deregulation."

Cammack asserts that I claim "the end of the state," "the end of the national state altogether," "the demise of national states," and that I believe the nation state is "fated to depart the historic stage at this particular point in time." Is this actually my claim? In my 2004 book that Cammack relies on for his polemic I state:

> National states may retain their form. They are not disappearing. They will be around for a long time to come (143).

I state as well:

> Hence, far from the end of the nation-state, which a slew of studies on globalization proclaimed, we are witness to its transformation into neoliberal states. These neoliberal states as components of a TNS [transnational state] provide essential services for capital…within specific national territories. In particular, they perform three essential functions: (1) adopt fiscal and monetary policies that assure macroeconomic stability; (2) provide the basic infrastructure necessary for global economic activity (air-and seaports, communications networks, educational systems, etc.); and (3) provide coercion and ideological apparatuses (124-125).

And I also state:

> The rise of a TNS entails the reorganization of the state in each nation…and involves simultaneously the rise of truly supranational economic and political institutions. These two processes – the transformation of national states and the rise of supranational institutions – are not separate or mutually-exclusive. In fact, they are twin dimensions of the process of the transnationalization of the state. Central to my argument is that under globalization the national state does not 'wither away' but

> becomes transformed with respect to its functions and becomes a functional component of a larger TNS.

These propositions with regard to the central role of the nation-state, the national state, and the inter-state system in global capitalism run throughout all my work. Whatever else Cammack may want to say about my theoretical propositions his charge that I claim the "end of the nation-state" is such an utter misrepresentation that it cannot be taken seriously.

It is not clear to me from a reading of Cammack's polemic if he rejects that idea of transnational capital. Does he believe that capital remains organized, as it was in earlier moments of the world capitalist system, along national lines and that the development of capital has stopped frozen in its nation-state form? The notion that the leading capitalist groups worldwide are still organized nationally flies in the face of all the empirical evidence we have of the transnationalization of capital. This evidence strongly suggests that the giant conglomerates of the *Fortune 500*, for instance, metamorphosed in the latter part of the 20th century from being "U.S." corporations into transnational conglomerates bringing together capitalists and private and public institutional investors from around the globe. Cammack alternates in his polemic between charging me with not presenting any empirical evidence for the transnationalization thesis and with presenting "secondary" evidence in "snippets" with which he does not agree. On what basis does one reject the notion of the transnationalization of capital? In the first place, my own evidence is part of a vast and rapidly expanding corpus of empirical studies around the world on the transnationalization of capital. This evidence for transnationalization is so overwhelming that the phenomenon can no longer be negated. The real issue is how we interpret such transnationalization. In the second place, it would be useful for Cammack to present counter-evidence that capital still remains largely nationally-organized if this is indeed his view. And if he does agree that capital is transnational then he would do well to develop some theoretical conception of the institutional apparatuses through which it does so, a point to which I will return. First, I will extend the statement on my views of the matter.

In previous epochs of world capitalism national capitalist classes organized national production and service chains and produced commodities within their own borders that they then traded for commodities produced in other countries. This is in contrast to the

transnationalization of the *production* of goods and services. Yet the transnationalization of capital in the late 20th and early 21st centuries is *qualitatively* different than internationalization processes of the early 20th century, in that it involves not merely the geographical extension of economic activity across national boundaries but also the *functional integration* of such internationally dispersed activities. The globalization of production has entailed the fragmentation and decentralization of complex production chains and the worldwide dispersal and functional integration of the different segments in these chains. The anatomy and organization of this emergent global production and financial system has been widely examined in the academic literature. The formula for the circuit of capital, M-C-P-C'-M', representing accumulation, has transnationalized. In the earlier period the first part of this circuit, M-C-P-C', took place in national economies. Commodities were sold on the international market, and profits returned home, where the cycle was repeated. Under globalization P is increasingly globally decentralized, and so too is the entire first part of the circuit, M-C-P. Globally produced goods and services are marketed worldwide. Profits are dispersed worldwide through the global financial system that has emerged since the 1980s and which is qualitatively different from the international financial flows of the earlier period. This transnationalization of production involves not merely the spread of transnational corporate activities, but the restructuring, fragmentation, and worldwide decentralization of the production process. Global capitalism is therefore not reducible to a collection of discrete national economies, national capitals, and national circuits of accumulation connected through an international market.

The restructuring crisis that began in the 1970s signaled the transition to a new transnational stage of world capitalism, in which truly transnational capital has emerged through globally integrated production and financial circuits made possible by information technology and organizational innovations in capitalist production, and that have modified how value is created, circulated, and appropriated. Transnationally-oriented capitalists in each country shift their sights from national markets to global markets. These circuits are *global* in character, in that accumulation is embedded in *global* markets, involves *global* enterprise organization and sets of *global* capital-labor relations, especially deregulated and casualized labor pools worldwide. Competition dictates that firms must establish global as

opposed to national or regional markets. Each "national" economy has experienced over the past several decades a rearticulation through globalization that has affected capital, labor, and the state in all their dimensions and is linked less to the "national economies" of any particular country or sets of national economies in competition than to global circuits of accumulation.

Yet this unprecedented fragmentation and decentralization of production processes has involved as its flip side the unprecedented concentration and centralization of worldwide economic management, control, and decision-making power in transnational capital and its agents. There is a new transnational bourgeoisie or transnational capitalist class (TCC), a fraction of capital grounded in global markets and circuits of accumulation over national markets and circuits. This TCC is comprised of the owners of transnational capital, that is, the group that owns the leading worldwide means of production as embodied principally in the transnational corporations and private financial institutions. The TCC therefore can be located in the global class structure by its ownership and/or control of transnational capital.

As I have stated in my 2004 study that Cammack references, what distinguishes the TCC from national or local capitalists is that it is involved in globalized circuits of production, marketing, and finances unbound from particular national territories that give it an objective class existence and identity spatially and politically in the global system above any local territories and polities, and a set of class interests distinct from local and national capitalists. Capitalist globalization creates new forms of transnational class alliances across borders and new forms of class cleavages globally and within countries, regions, cities, and local communities, in ways quite distinct from the old national class structures and international class conflicts and alliances of an earlier epoch in world capitalism.

Cammack charges that I "reduce the issue of bourgeois class identity and interest to an opposition between *national* and *transnational* class fractions." I am puzzled by what Cammack wants to say here. On the basis of what I have just presented above, I do argue that there is a new fractionation among dominant groups worldwide, between national fractions grounded in national markets and circuits of accumulation and transnational fractions grounded in global markets and circuits. Here there is a contradictory logic between national and global accumulation. The interests of national

fractions of dominant groups lie in national accumulation and traditional national regulatory and protectionist mechanisms. Those of transnational groups are in deregulation, liberalization, free trade and economic integration agreements and other policies to promote globalized circuits of accumulation in an expanding global economy. Does Cammack disagree that there are such national and transnational fractions? What does he mean by I "reduce the issue of bourgeois identity" to this fractionation?

Cammack says that I provide no empirical evidence for my propositions. This is simply not true. I provide vast amount of empirical and historical evidence. I do so in the 200 page 2004 book on which he bases his polemic and which itself contains 14 tables and charts and a wealth of other empirical data that Cammack views as "snippets." I also do so, among other places he does not cite, in my two major empirical studies, my 2003 *Transnational Conflicts*, and my 2008 *Latin America and Global Capitalism*, which together comprise 800 pages of empirical and historical research, or my 1996 *Promoting Polyarchy*, which comprises 400 pages. Cammack could – but does not – offer any counter-evidence to my evidence, and nor does he attempt to demonstrate that my evidence lacks internal validity, which would be a more satisfying social scientific method of refutation than mere vituperation.

Let us focus on the matter. Cammack quotes me as asserting that transnational groups capture local states and utilize these local states to pursue their interests within each country and that "the disciplinary power of global capitalism shifts the actual policymaking power within national states to the global capitalist bloc, which is represented by local groups tied to the global economy." He then claims that I do "not attempt to explain or even illustrate the mechanism by which this act of demonic possession takes place." In fact, I dedicate hundreds of pages to empirical evidence and concrete case studies that show these mechanisms and that more generally operationalize the theoretical propositions to which Cammack objects.

To summarize but one example, in *Transnational Conflicts* I draw extensively on primary and secondary data, ranging from interviews, participant observation, and on-the-ground data collection during extended field research to the tabular presentation of realms of data from international agencies such as the World Bank and from local agencies and research. On this basis I demonstrate the

rise of new economic activities in Central America that now constitute the core of accumulation in that region, including maquiladora industrial production, transnational tourism and financial services, and new agro-industrial operations. The dominant economic groups locally have shifted a good portion of their investments into these new accumulation activities, which involve a major interpenetration of these local groups with transnational corporate capital and as well increasingly extra-regional investment by these local groups in transnational corporate circuits. As local capitalists have shifted into these new activities and transnational investment outlets so too they have organized politically in their respective countries through existing parties or the creation of new parties and corporate political associations. Operating through these political vehicles, the new transnationally-oriented elites in the region were able in the 1980s and 1990s to capture local states in elections and to place their representatives into key ministries, in particular, Central Banks, economic and foreign ministries. From these positions they pursued sweeping deregulation, liberalization and integration into the global economy, they dismantled earlier multi-class developmentalist coalitions, they reoriented local market production to the global market, they made labor flexible, they negotiated free trade agreements, and so forth. Reciprocally, local political and state elites came to recognize that their own status would require promoting these new economic activities and patterns of accumulation in alliance with the transnationally-oriented capitalists. In all of this, the supranational agencies such as the World Bank, the U.S. Agency for International Development, and the Inter-American Development Bank that form part of what I refer to as a TNS apparatus liaised through numerous mechanisms with local Central American states and elites in promoting the new transnational model of accumulation. In short, a new power bloc emerged in Central America that brought together transnational corporate and political functionaries from outside the region with new economic and political elites inside the region into what I refer to as the new global capitalist bloc.

Cammack may have an alternative interpretation of the empirical and historical evidence that I advance to support my theoretical propositions. But his claim that my propositions are “not empirically grounded” cannot be taken seriously. Cammack refers to my thesis on global capitalism as “philosophy.” Yet there is a clear distinction between social science and philosophy. The latter in-

volves logical argumentation alone and the former combines logical argumentation with empirical evidence. Cammack may or may not agree with my social scientific claims but it would be helpful for him to present empirical reference points as counter-evidence for his refutation so that I could actually engage him in social scientific debate. Cammack's methodology of critique is simply to assert the opposite of what he purports me to assert and then to offer these counter-assertions as proof that my propositions are flawed.

Returning now to the state and the TNS, the real issue is not whether global capitalism can dispense with the state – it cannot. Rather, it is that the state may be in a process of transformation in consort with the restructuring and transformation of world capitalism. The question is, to what extent and in what ways may new state forms and institutional configurations be emerging, and how may we theorize these new configurations? The national state is being transformed and has been increasingly absorbed functionally into a larger transnational institutional structure that involves complex new relations between national states and supra or transnational institutions, on the one hand, and diverse class and social forces, on the other. I have argued that a TNS apparatus is emerging under globalization *from within* the system of nation-states. An emergent TNS apparatus need not have a centralized form as historically developed in modern nations; it may exist in both transnational institutions and the transformation of national states. Transnational bodies such as the IMF and the WTO have worked in tandem with national states to rearticulate labor relations, financial institutions and circuits of production into a system of global accumulation. As national states are captured by transnational capitalist forces they tend to serve the interests of global over local accumulation processes. The TNS, for instance, has played a key role in imposing the neo-liberal model on the old Third World and therefore in reinforcing the class relations of global capitalism.

We want to do more than merely identify the increasingly salient role of a transnational institutional structure in coordinating global capitalism and imposing capitalist domination beyond national borders. Even if one were to disagree with my particular thesis of a TNS, this transnational institutionality needs to be theorized. The notion of a TNS is an analytical abstraction that allows us to make sense of evident transnational social and institutional practices that are central to shaping global capitalism and to the exercise of

class power by the TCC. Now, if one wants to be consistent with a Marxist approach to the state as an institution arising out of the configuration of class and social forces in civil society – indeed, as a class relation – then it is incumbent upon us to analyze those class and social forces in particular historical period. More specifically, we would want to identify how these social and class forces acting in and out of states, and more broadly, sets of institutions, organize themselves as collective historical agents. These social groups and classes act through collective organization and through institutions, one of the most important being the state. State apparatuses are those instruments that enforce and reproduce the class and social group relations and practices that result from such collective agency. Clearly the IMF, by imposing a structural adjustment program that opens up a given country to the penetration of transnational capital, the subordination of local labor, and the extraction of wealth by transnational capitalists, is operating as a state institution to facilitate the exploitation of local labor by global capital. How are we to understand, for example, these IMF practices? What exactly is Cammack's objection to conceiving them as transnational state practices?

I am guilty, says Cammack, of "a major distraction from the task" of understanding world capitalism. Yet it would seem from reading the conclusion of Cammack's polemic that my crime is less having committed a major distraction from understanding global capitalism as much as a major distraction from the promotion of Cammack's own thesis of "global competitiveness." It would be interesting and useful for Cammack to push further his thesis on global competition to ask deeper explanatory questions. If supra-national institutions push capital to compete around the world, as he states – a proposition with which I do not disagree – how may we theorize the role of these institutions? Who – what social and class agents – actually staff these institutions? How did they come about? *Why* would they push capital to compete worldwide? What class project to they promote? What is the relationship of these institutions to national states and their managers? What is their relationship to transnational corporations? These are the questions we might debate, and indeed these are the questions I ask in my work, and that I attempt to answer by putting forward the concept of a transnational state to interpret these institutions, in combination with neo-liberal national states, as they operate as a loose global network in function

of transnational accumulation and the social and class interests therein.

Could Cammack and I debate these matters? If the substance of Cammack's polemic is caricature and misrepresentation of my work, his *style* of debate is infantile. I have a "flawed hybrid perspective" (as opposed to his "pure" perspective?). I put forth a "garbled version of the Marxist understanding." I have a "one dimensional, mechanistic and reductionist" approach and "a huge confusion." I "momentarily trick myself into thinking [things that are not true]." I "bang my head against imaginary walls." I am "the prisoner of a relentless false logic." I advance "bizarre notions." My thesis on the transnational state is "twaddle." My propositions amount to "very pedantic lecture." If I only saw the wisdom of Cammack's own view I "might have avoided the mess I am in." Given such an unproductive and odious style of debate, I frankly have no interest in or intention to engage any further with Professor Cammack.

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# EUROPEAN INITIATIVES AND THE EASTERN PARTNERSHIP

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ABSTRACT. Zachmann and Giucci observe that the Eastern Partnership emerged from the European Neighbourhood Policy that formed the framework for the EU external policy towards most of its neighbouring countries since 2004. Valasek argues that the EU governments should take steps to ensure that the Union gets recognition for the role its member-states are playing in helping Eastern Europe to cope with the crisis. Hillion and Mayhew maintain that it is through bilateral relations that the East European states will gain the most in political and economic terms. Kochenov pinpoints the main drawbacks from which the ENP suffers and assess the likely impact of the newly-introduced Union for the Mediterranean and Eastern Partnership initiatives to revitalise the policy.

Meister and May note that the Eastern Partnership (EaP), established in May 2009, is meant to expand and deepen the existing Neighborhood Policy with the Caucasus states of Armenia, Aserbajdzhan, and Georgia, as well as with Belarus, Moldova, and Ukraine. The EaP is the beginning of a process that can lead to a new eastern policy if all the important players are actively incorporated.[1] Zachmann and Giucci observe that the Eastern Partnership emerged from the European Neighbourhood Policy that formed the framework for the EU external policy towards most of its neighbouring countries since 2004. Belarus considers it advantageous to participate in EU cooperation programs targeted on its Eastern neighbours. The decision to make Belarus a full member of the Eastern Partnership followed an obvious relaxation in the EU-Belarus relations. Zachmann and Giucci see three major motives why Belarus should become seriously engaged in the Eastern Partnership: (1) to increase the acceptability of any kind of international cooperation with Belarus, (2) to increase the ability of Belarus to attract and conduct major projects and (3) to increase the chances of a growing EU budget allocation towards technical and financial assistance to Belarus. The

Eastern Partnership will bring a breakthrough with respect to foreign financial and technical assistance to the energy sector. Zachmann and Giucci suggest that Belarus strengthen its abilities to successfully interact with potential donors and deliver strong proposal (Institutional Component), and that a limited number of highly appropriate, internally coordinated, well-founded projects are identified (Project Identification Component).[2] According to Valasek, the unfolding economic crisis will make it more difficult for the European Union to draw its neighbours in Eastern Europe closer. The economic crisis is undermining the Eastern Partnership even before it gets off the ground. The Eastern partnership remains the right vehicle for the EU's eastern policy. The EU should accelerate the disbursement of grants under the EaP. The EaP targets the weak points of the EU's eastern policy to date. The Eastern Partnership program increases EU assistance to the region and targets aid at improving governance and the rule of law. The EaP funds are relatively limited but their purpose is not to finance external or budget deficits in Eastern Europe. The EU governments should persevere with the EaP despite the crisis. Valasek argues that the EU governments should take steps to ensure that the Union gets recognition for the role its member-states are playing in helping Eastern Europe to cope with the crisis: the EU should consider expanding its macro-financial assistance, and use it to help the partnership states in coping with the economic crisis. The EU should insist that recipients of its aid follow IMF-imposed reforms. The Eastern Partnership's grants could be used to mitigate the impact of the crisis. The EU member-states should do a better job of coordinating their national assistance programmes to Eastern Europe.[3]

Hillion and Mayhew maintain that it is through bilateral relations that the East European states will gain the most in political and economic terms. Bilateral agreements will be differentiated according to the partners' objectives and capacity (the multilateral dimension represents a less obvious advantage than concrete bilateral concessions). Political dialogue gives to third countries privileged access to leaders from the member states and the European institutions. Traditional trade agreements, based on mutual reductions in tariff levels, are of limited importance today in a world of low tariffs. The EU can take steps to facilitate access by third-party enterprises to the internal market of the Union. The development of small business in countries transitioning from central planning to the

market economy is vital. Hillion and Mayhew claim that cooperation at the regional level can be a powerful instrument to promote both regional integration and efficiency in managing projects in local and regional authorities. The new funds should be used to finance the multilateral elements of the Eastern Partnership. Additional finance should be made available starting in 2010, rising to over €60 million in both 2012 and 2013. The implementation of all the elements of the Eastern Partnership, bilateral and multilateral, will require external funding of a quite different magnitude. Some of the new Member States might be reluctant to increase EU financial commitment to the East. The development of bilateral relations will be far more important to individual neighbouring states than the apparent multilateral offer of ENP. The establishment of the Eastern Partnership epitomises the adaptability and the dynamism of the ENP in general. The Eastern Partnership demonstrates that enlargement of the Union has triggered new ideas, and a deepening of existing policies. There is no risk of inconsistency between the Eastern Partnership and the ENP (the Eastern Partnership does not add much to the existing framework).[4]

Kochenov pinpoints the main drawbacks from which the ENP suffers and assess the likely impact of the newly-introduced Union for the Mediterranean and Eastern Partnership initiatives to revitalise the policy. Economic, political and security concerns merge together in the neighbourhood, demanding a cumulative approach to their solution. The European countries in the East of Europe and the Mediterranean countries have principally different expectations of their enhanced relations with the EU. The financial assistance side cannot be viewed as the main incentive offered to the ENP partners within the framework of the policy. The ENP partners are offered technical assistance and a possibility to learn the best practices from the EU and the Member States. Kochenov affirms that the addition of the Mediterranean countries to the initial ENP initiative diluted the policy and disappointed Poland and the Eastern European partner states. Both the Union for the Mediterranean and the Eastern Partnership intended to improve the context of the EU relations with its neighbouring states by *not* applying the ENP. The drawbacks of the ENP include problematic geographic choices that resulted in mixing Eastern European and Mediterranean states under the roof of one policy. The EU cannot keep up its image of a regional super-power by completely ignoring the aspirations of its

neighbours. Kochenov states that the Member States' inability to agree on the broadest-possible policy outline is likely to result in the continuation of the ENP in its present unfortunate emanation. The attempts to reform the ENP are likely to continue resulting in embarrassment for the Union and disappointment for the partner states. The ENP in its present form is unlikely to bring the results expected of it and needs to be deeply reformed.[5]

Fean holds that the EaP conceives of relations being pursued both multilaterally and bilaterally: allowing participants to benefit from the successes of others, but preventing any state being held back by the slow progress of another. Each European Commission Delegation will be assigned a new member of staff specifically to monitor the progress of the EaP. It is important to address underlying causes in order to formulate a coherent approach to conflicts resolution efforts.[6] Krakiewicz says that the Eastern Partnership is designed to foster democratization and market reforms and thus contribute to a sustainable stabilization of the post-Soviet space. The EU has set itself the goal of implementing urgent institutional reforms. The states of the Eastern neighborhood today differ significantly from the Central and Eastern European states in previous enlargement rounds. The Eastern Partnership envisages a strengthening of the bilateral relations with the post-Soviet states. The EU is offering the prospect of free trade and, in the long run, the abolishment of visa requirements. Krakiewicz contends that the Eastern Partnership stresses the importance of energy security and proposes few concrete measures to achieve it (the EU has not been able so far to develop an external energy policy and to create a common European energy market). The economic crisis has brought about a new wave of protectionism and led to skepticism of the idea of intensifying economic relations with the neighborhood. The Eastern Partnership is one element on the way towards a comprehensive strategy for the future of the region. Krakiewicz observes that the lack of European unity on a common policy vis-à-vis Russia is a significant impediment to the Eastern neighborhood policy. The EU is plagued by internal divisions over its policy towards Russia as well as a lack of coordination with the US.[7] Saari claims that the EU's southeast neighbourhood remains unstable as long as human insecurity reigns there. The EU is fully aware of the multidimensional threat that regional instability and human insecurity in the neighbourhood poses to it. The EU policy towards the neighbouring states

should include effective instruments targeting conflicts, poverty, criminality and human rights violations as well as bad governance and non-democratic developments in the region. The ENP has suffered from the lack of multilateral, regional incentives that would encourage exchange of ideas and cooperation among the neighbours themselves. The EaP includes a promise to develop comprehensive institution-building programmes with the partners. EaP fails to set clear benchmarks and to offer a clear incentive structure for the partner states.[8]

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# THE GEOPOLITICS OF CHURCH

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ABSTRACT. Morris et al. claim that, in an increasingly pluralized society, the gap between form and reality has become unacceptably stretched, and examine what are the options for change, including to the religious character of the monarchy. Dittmer and Spears focus on how specific geographies are constructed that tie certain places and peoples to either cosmic good or cosmic evil. Sidorov aims at highlighting an essential additional pillar of Russian geopolitical thinking, Third Romist geopolitics (between or around these three ideological poles, Eurasianism, Westernism, and Orthodoxy-related geopolitics, modern Russian geopolitical imaginations revolve). Yorgason and Chen explore the geopolitical frame that American popular/news magazines use to portray a major religion in the United States: the Church of Jesus Christ of Latter-day Saints.

Megoran considers the Church of England's immediate response to the Al-Qaeda attacks in the USA on 11 September 2001. Focusing on a national service of remembrance held at St. Paul's Cathedral on September 14, Megoran argues that the service was both an expression of grief at a shocking tragedy, and a (geo)political commentary (the service scripted a geopolitical text that resonated with voices that were advocating a military response). Although the organisers of the service strove to create what they considered to be an apolitical event, the service became part of a process of geopolitical scripting that made the invasions of Afghanistan and Iraq more likely, and alternative peaceful responses to the crisis of 9/11 less likely.[1] Trigger says that Irish Catholics in nineteenth-century Montreal encountered a cultural environment very different from that experienced by their compatriots in most cities of eastern North America: they had to overcome numerous obstacles in order to obtain churches and parishes they could call their own. Diocesan and parish records demonstrate that these struggles were defining events

in the formulation of Irish-Catholic ethnic consciousness in Montreal. Religious institutions acted as catalysts for debates that encouraged Montreal's Irish Catholics to define themselves in relation to the French-Catholic majority (these debates led to the entrenchment of ethnic boundaries in the urban landscape through the creation of separate parishes for the two groups).[2]

Morris et al. maintain that much of the formal structure of the UK state remains locked in the geopolitics of the late 17th century: The sovereign has to be a Christian monarch in communion with the Church of England, swearing oaths to support that Church and the Church of Scotland. In Scotland the established Church is held distinct from the state, the Church of England remains controlled by parliament where twenty-six Anglican bishops sit as of right in the House of Lords. Morris et al. claim that, in an increasingly pluralized society, the gap between form and reality has become unacceptably stretched, and examine what are the options for change, including to the religious character of the monarchy. On Morris et al.'s reading, it is time to look again at the relationship between the state and established religion in the United Kingdom. Establishment in Scotland is less controversial because it is less visible whereas in England establishment has a much greater salience. Morris et al. examine what are the *range*, today, of the vital policy questions about the state's relations with organized religion, and what seem to be the *options* for responding to them. The two established churches face continuing and serious financial challenges, partly because their congregations are both diminishing and getting older. There never has been any single model of church establishment, and each settlement has been the unique product of local political circumstance. Modern disestablishments occurring in relatively benign circumstances are more about re-presentation. Apart from establishment's traditional opponents, where debate occurs at all much of it takes place within the Church of England itself. Change is necessary to reflect the character of modern society, and can be achieved without the controversy sometimes alleged, and more often than customarily assumed on the initiative of the Church of England itself.[3]

Dittmer and Spears's study[4] is a reading of the geopolitical scripts, themes, and representations found within the *Left Behind* series. This best-selling series of twelve books portrays the last 7 years of the world, a time known in premillennial dispensationalist

eschatology as the Tribulation (the world becomes increasingly centralized, politically and economically, around Nicolae Carpathia, a figure that turns the United Nations into a one-world government called the Global Community). Dittmer and Spears focus on how specific geographies are constructed that tie certain places and peoples to either cosmic good or cosmic evil, and explores three geopolitical themes that emerge in this reading of the text, (i) addressing the importance of spectatorship in defusing the ennui caused by the characters' living through a preordained set of events, (ii) discussing the role of technology in enabling a resistant evangelical Christian identity that requires a dominating, yet not dominant, secular Other, and (iii) addressing the relationship between violence and righteousness, as portrayed within this popular series. Dittmer writes that geopolitics becomes narrativized, often into a good/evil dichotomy of places, and studies the Christian tracts produced by Jack Chick (these cartoon tracts are most often about the author's belief in a particular method of obtaining an afterlife). Chick's biblical understanding is predicated on an interpretative frame known as premillennial dispensationalism (it refers to the belief in Christ's initial return to set up an Earthly kingdom that will last 1000 years, with Christ returning again at the end for a final judgment). Dispensationalists believe that Jews are on a parallel track with the Christian church, in God's protection, until the end of time itself. The views of Chick are a geographic imaginary that has had varying degrees of policy influence over the course of American history. By adopting the geopolitical vision of Chick, believers have a framework through which to understand world events. Premillennial dispensationalists see the support of Israel as being equivalent to supporting God. Dittmer reasons that in political geography religion is too often seen as an electoral bias or simply a form of identity (there is substantially more to premillennial dispensationalism than a sense of collective identity or an electoral tendency to vote Republican).[5]

Sidorov overviews the contemporary Russian geopolitical thinking from an often overlooked angle of the Russian Orthodox form of Christianity (Russian Orthodoxy). The case of Russian Orthodoxy-related geopolitics shows that to understand the country's current geopolitical imaginations, one should take more seriously imaginary *proto*-boundaries of the *pre*-Westphalian world. Sidorov aims at highlighting an essential additional pillar of Russian geo-

political thinking, Third Romist geopolitics (between or around these three ideological poles, Eurasianism, Westernism, and Orthodoxy-related geopolitics, modern Russian geopolitical imaginations revolve). The revived modern "Third Romisms" are quite different from each other. Sidorov looks at modern geopolitical ideologies that are tied to Filofei's original eschatological treatment of the concept with essentially isolationist or empire-preservist geopolitical goals, and at how the nineteenth-century Europe and Constantinople-oriented 'Third Rome' of Danilevskii and Solov'yev finds modern adherents.[6]

Yorgason and Chen explore the geopolitical frame that American popular/news magazines use to portray a major religion in the United States: the Church of Jesus Christ of Latter-day Saints. Magazines often represent this type of Mormonism as a geopolitical entity, and sometimes even as a geopolitical threat. Yorgason and Chen define and analyze twentieth-century magazines' geopolitical discourse on Mormonism, particularly in relation to Mormon spatiality, and puts forward concepts of geopolitical optic and logic in order to more effectively distinguish between variations in geopolitical language.[7]

Digan states that in the era of adaptation, the churches in Asia never managed to be culturally much more than replicas of the parent churches: the intercontinental connection in Christianity could only serve to reinforce the North-South dependency relationship, at a time when everyone is at least aware of the need to counteract it.

> That need is acknowledged in the present-day acceptance on both sides of the more radical ecclesial goal of indigenization. Once again, however, it is one thing to agree that it should be Christian policy to counteract the dependency of the South on the North, but it is another thing to ensure that Christian practice does not in fact still reinforce it.[8]

Bremer et al. focus on the conceptual boundary: which were the mutual influences between the churches in Central and Eastern Europe in different periods, how were the mechanisms of exercising influence, and how did the confessional backgrounds shape encounters with other traditions. Bremer et al. offer an insight in different cases where conceptual borders play an important role in the region, and show the importance of religious issues for this

border, but also for the understanding of today's situation in many countries, and of the relation between different countries.[9] Sevic analyses value preferences and basic cultural behavioural patterns in Britain and Yugoslavia. Both countries are undergoing a period of significant social changes, both political and social. The UK is introducing the policy of devolution with significant constitutional changes pending, while the Yugoslav society is recovering from the conflict in the area, economic slowdowns and is searching for its new identity.[10]

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# INTERNAL CONTROL DEFICIENCY (ICD) DISCLOSURES PRIOR TO MANDATED INTERNAL CONTROL AUDITS

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ABSTRACT. Gong et al. maintain that there exist countervailing forces that may motivate managers of cross-listed firms to exert effort to detect and truthfully report existing ICDs. Ashbaugh-Skaife et al. document the determinants of ICDs for a broad cross-section of SEC registrants during a regulatory regime where the reporting of internal control problems was in a state of transition and largely voluntary. Stephens examines the impact of corporate governance quality on firm reporting of internal control deficiencies (ICDs) prior to SOX-mandated audits holding constant the existence of a control weakness.

Gong et al. write that the Sarbanes-Oxley Act of 2002 (SOX) is the most far-reaching U.S. securities law since the passage of the Securities and Exchange Act of 1933 and 1934. Managers must evaluate the effectiveness of their firms' internal control over financial reporting and disclose their conclusions on the internal control effectiveness and any material changes in internal control since the last periodic financial report. A material weakness in internal control system implies more than a remote likelihood that a material misstatement of the financial statements will not be prevented or detected. Gong et al. examine whether the Section 302 ICD disclosure made by foreign firms traded on the U.S. stock exchanges is as informative about earnings quality as the Section 302 ICD disclosure made by U.S. firms, examining the difference in the ERC between ICD disclosing firms and non-ICD disclosing firms for cross-listed firms versus U.S. firms. It is important to study the informativeness of cross-listed firms' ICD disclosure concerning earnings quality. A deficient internal control system enhances managers' ability to expropriate minority shareholders. Cross-listed firms may face lower risks of SEC enforcement and U.S. shareholder litigation than U.S. firms.

Gong et al. maintain that there exist countervailing forces that may motivate managers of cross-listed firms to exert effort to detect and truthfully report existing ICDs. U.S. firms that disclose ICDs have lower earnings quality than U.S. firms that do not disclose any ICDs (the relation between the ICD disclosure and earnings quality is significantly weaker for cross-listed firms than for U.S. firms). Cross-listed firms' Section 302 ICD disclosure is not useful to separate high quality earnings from low quality earnings. Cross-listed firms' weaker results are consistent with managers' lack of incentive to detect and disclose ICDs as discussed earlier (the weaker results for cross-listed firms are primarily driven by firms domiciled in weak investor protection countries).

Gong et al. perform a battery of robustness tests to rule out the possibility that the weaker results for cross-listed firms are due to inherent limitations of our data sources or research design. The Section 302 ICD disclosure, which is not subject to the attestation of the external auditor, serves as a reliable indicator of U.S. firms' earnings quality. Cross listing alone is unlikely to be a complete substitute for building home-country investor protection institutions. Gong et al. focus on the ICD disclosure under the Section 302 reporting regime rather than the ICD disclosure under the Section 404 reporting regime (the former affords them a better opportunity to identify the managerial disclosure incentives that would be suppressed in the presence of the external auditor). Cross-listed firms' weaker results are due to their management's lack of incentive to expend reasonable effort to detect and truthfully disclose existing ICDs. The ICD disclosure is equally informative about earnings quality for both cross-listed firms and U.S. firms but cross-listed firms' weaker results are due to some limitations of either our data sources or research designs. Gong et al. expect managers of cross-listed firms who possess greater private control benefits are less willing to detect and disclose ICDs than managers of cross-listed firms who possess less private control benefits. The contrasting results between U.S. firms and cross-listed firms imply that cross-listed firms conceal existing ICDs to a greater extent than U.S. firms.

Gong et al. consider the possibility that the Section 302 ICD disclosure is equally informative about earnings quality for both cross-listed firms and U.S. firms. The overall investor protection is generally weaker in the home countries of many cross-listed firms than in the U.S. the conservatism bias, if it exists, should be most

relevant for less severe ICDs such as deficiencies or significant deficiencies. If both U.S. firms and cross-listed firms truthfully report existing ICDs, the ICD disclosure is equally informative about earnings quality. The association between the ICD disclosure and poor earnings quality should be stronger for cross-listed firms than for U.S. firms. the propensity score matching method allows for an unlimited number of matching firm characteristics, and does not have to specify the actual relation between the firm characteristics and the dependent variable (it allows for a more accurate analysis).[1]

Ashbaugh-Skaife et al. use internal control deficiency disclosures made before the effective date for independent external audits mandated by Section 404 to study the firm characteristics that contribute to internal control risks and the incentives faced by managers to discover and disclose internal control problems. Under the management certification provisions of Section 302, the review of internal control is subject to less scrutiny by both management and the auditor. Ashbaugh-Skaife et al. document the determinants of ICDs for a broad cross-section of SEC registrants during a regulatory regime where the reporting of internal control problems was in a state of transition and largely voluntary. Three conditions must exist for a registrant to disclose internal control deficiencies under Section 302: (i) an internal control deficiency must exist, (ii) the deficiency must be discovered by management or the independent auditor, and (iii) management must conclude that the deficiency should be disclosed. Ashbaugh-Skaife et al. model pre-SOX 404 ICD disclosures as a function of internal control risk exposure factors and incentives of managers and auditors to discover and disclose any control deficiencies, and use auditor dominance, sensitivity to regulatory intervention in financial reporting due to prior restatement or SEC enforcement actions, monitoring by institutional investors, and industry litigation risk to proxy for incentives to discover and disclose ICDs. Smaller firms, firms reporting a higher frequency of losses and firms in financial distress are more likely to disclose ICD weaknesses. Firms that contract with the largest U.S. audit suppliers have had negative publicity about financial reporting as evidenced by prior restatements or sanctions from SEC Accounting and Auditing Enforcement Releases (AAERs).

Ashbaugh-Skaife et al. include a number of variables in their determinant model designed to capture firms' incentives to discover and report control deficiencies. Their study identifies factors

that contribute to internal control problems for a broad cross-section of publicly traded firms (i.e., both accelerated and non-accelerated filers). By considering all types of ICDs in their model, Ashbaugh-Skaife et al. avoid errors due to inconsistencies of self-classifications that are introduced when restricting the analysis to ICDs of one classification type, and model the existence of internal control deficiencies as a function of a number of internal control risk factors and the detection and reporting as a function of audit quality and the incentives that management and its auditor have for early reporting of internal control problems. Firms with greater complexity and scope of operations are more likely to encounter internal control problems. Multi-segment firms potentially face more internal control problems related to the preparation of consolidated reports. Firms are more likely to have ICDs when they have recently changed organization structure either through mergers or acquisitions or through restructurings. Failure to develop adequate controls over accounting for acquired assets can increase internal control failure risk for acquiring firms. Smaller firms have less to invest in sophisticated information systems that can enhance internal control, and they are less likely to have adequate personnel and expertise to maintain these systems. Poorly performing firms and firms in financial distress are more likely to under invest in systems and controls and have staffing problems that lead to IC weaknesses. Ashbaugh-Skaife et al. use auditor dominance, regulatory oversight in financial reporting due to prior restatement or SEC enforcement actions, monitoring by institutional investors, and industry litigation risk to proxy for incentives to discover and disclose ICDs.[2]

Kim and Park examine cross-sectional differences in stock market reactions to the disclosure of internal control deficiencies under Section 302 of the Sarbanes-Oxley Act, and hypothesize that the market punishment for internal control problems will be less severe for internal control disclosure that helps reduce market uncertainty around the disclosure. Kim and Park predict that such a relation is dependent on the types of disclosure and the market's prior knowledge of the credibility of firms' financial reporting: when firms disclose their internal control deficiencies, their abnormal stock returns are negatively associated with changes in market uncertainty (e.g., changes in the standard deviations of daily stock returns) around the disclosure. Kim and Park find that the impact of the uncertainty reduction is greater for voluntary disclosures of non-

material weakness, especially those made in the context of previous suspicious events (the negative impact of changes in market uncertainty on the abnormal stock returns remains intact even after controlling for possible simultaneity).[3]

Stephens examines the impact of corporate governance quality on firm reporting of internal control deficiencies (ICDs) prior to SOX-mandated audits holding constant the existence of a control weakness. Stephens finds companies that were audited by industry leading auditors and that have higher quality audit committees are more likely to disclose ICDs under the SOX section 302 regime – prior to the mandatory audit of internal controls, and that companies that have a CFO with financial accounting experience are more likely to accurately assess the seriousness of ICDs and classify them properly as material weaknesses rather than the less-serious significant deficiencies. Higher quality corporate governance improves the likelihood of disclosure of ICDs under the section 302 regime. The accounting background of corporate governance parties improves the accuracy of the evaluation of the level of seriousness of the ICD. Companies that were audited by industry leading auditors and that have audit committees with an accounting financial expert are more likely to have disclosed ICDs during the section 302 regime. Companies that have a CFO with accounting background are more likely to properly classify the deficiency as a "material weakness" rather than the less-serious "significant deficiency."[4]

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# UNDERSTANDING POLITICAL ACTORS' PERCEPTIONS OF PUBLIC OPINION

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ABSTRACT. According to Rounce, we have a limited understanding of how political actors involved in particular policy areas view, are affected by, and utilize public opinion. Semetko claims that studies of public opinion and political action are at an interdisciplinary crossroads. Cohen et al. write that much of what politicians do is driven by their belief in the power of media, which motivates their desire to be featured in news coverage. Manza and Cook maintain that the *potential* for public opinion (as measured in polls and surveys) to be a major factor in politics has increased dramatically.

Rounce claims that public opinion has become part of the public policy making process in various ways. Technological innovations have increased our ability to measure opinion. According to Rounce, we have a limited understanding of how political actors involved in particular policy areas view, are affected by, and utilize public opinion. Rounce establishes a framework for attempting to understand political actors' perceptions of public opinion, possible actions actors take in relation to public opinion, and the relationship between public opinion and public policy decisions. Opinion research such as polling results in the amalgamation of the opinions of many individuals into a limited category of responses. Actors may use public opinion to identify symbols, words, and concepts that resonate most clearly with the public, or that target particular segments of the public. The type of public policy will have an impact on the links between public opinion and public policy. Political actors may not always respond to public opinion in the ways in which the public may want or expect. Support actions taken by policy makers is another symbolic use of public opinion that does not require actors to actually respond to opinion. Rounce maintains that public opinion can impact policy makers' actions by defining acceptable and unacceptable policy choices, by providing support for greater spending in particular areas, and by shaping policy outcomes. Manipulation

involves providing fallacious or misleading information designed to result in the public making wrong decisions about policy options or government decisions. Public policy is responsive to public opinion even though the resulting policy may not be exactly what the public wants. Consulting public opinion may demonstrate that certain policy options would not be acceptable to the public.

> Political actors come to a policy community with certain perspectives. As members of political parties, they face particular constraints that come from the need for the party's united front. Party platforms as well as other party or elected members' communications are reflections of the opinion within the party around a particular issue. As members of interest groups, they are likely to face similar divisions of opinion within the group, which must be resolved before a group can act publicly.[1]

Cohen et al. write that much of what politicians do is driven by their belief in the power of media, which motivates their desire to be featured in news coverage: structural equation modeling revealed that politicians' belief in the power of media increases their motivation and effort to appear in media coverage, which in turn is related both to greater media prominence and to more parliamentary activity.[2] Scheb and Lyons examine the mass public's perceptions of the factors that *actually* influence Supreme Court decisions as well those that *ought* to influence such decisions, and expect significant discrepancies between what the public believes ought to be the case and what it perceives to actually be the case with regard to Supreme Court decision making and that these discrepancies have a significant negative impact on the public's assessment of the Court. The public believes that political factors have more influence on the Court than "ought" to be the case. The public perceives traditional legal factors to be less influential than they should be. The expected discrepancies do exist and significantly detract from popular regard for the Court.[3]

Salazar and Alper note that political actors' perceptions of the contexts in which they act influence their strategies and behavior. Salazar and Alper interview 28 individuals involved in British Columbia forest politics to determine their perceptions of the configuration of power, the nature of their political behavior, their dispositions with respect to institutionalized conflict resolution pro-

cesses, and their policy goals. Salazar and Alper reason that the B.C. government's efforts to address forest conflict will be hindered by the inconsistency between the conflict management strategy they have chosen and the mental models of politics held by key political actors, and the subjective realities of political actors can be used to explain variation in political behavior.[4]

Best and Krueger argue that research on political participation in the United States rarely incorporates government surveillance into individual-level empirical models. The degree and target of conflict associated with political activities influences perceptions of online government surveillance. Large segments of the public believe that the government likely monitors a range of political activities, although not all forms of political behavior are equally vulnerable. Best and Krueger maintain that political activities with links to violence and legitimate activities in opposition to the presidential administration most influence online surveillance perceptions (approval of the president moderates these perceptions). Best and Krueger conclude that nonviolent political activities in conflict with the presidential administration increase online surveillance perceptions for disapprovers of the president but not for approvers, and demand the incorporation of government surveillance into empirical studies of U.S. political participation.[5]

Semetko claims that studies of public opinion and political action are at an interdisciplinary crossroads. It may be appropriate to describe journalists as political actors and the news media as a political institution in any society. Semetko focuses on the research about the formation of and changes in attitudes, the research on social movements, and studies of frames and framing effects. In the process of European political and economic integration multilevel analysis is useful for the study of opinion formation and to assess the impact of the news on political behavior – specifically, the decision to vote or, more appropriately, not to vote. On Semetko's reading, by reporting people's experiences and linking them to the experiences of others, the media help people to interpret their own personal experience as part of a larger societal trend. The media may contribute to the politicization of one's personal experience. *Impersonal influence* refers to the role played by media in shaping perceptions of societal-level trends and developments. Television and the Internet, as it becomes more graphics than text driven, are important sources of information for political learning. News on the Internet is received

by a more interested, active (and interactive) audience. Semetko remarks that public opinion and media coverage of events and opinions facilitate or diminish opportunities for collective action. The framing of issues in the media has effects on the mobilization of social movements. The most prominent issues in the news are also the issues that become the most important in public opinion. Framing research focuses on the relationship between issues in the news and the public perceptions of these issues. Television news in many countries may be predominantly episodic because of news values and preferences for news formats (the way in which responsibility is framed in the news is influenced by the political cultures and social contexts in which the news is produced). Television news can be episodic and frame the government as responsible for social problems such as poverty. Semetko asserts that media effects may be cognitive (effects on political knowledge), attitudinal (effects on political opinions), or behavioral (effects on turnout and vote choice). The campaign news matters not only for vote choice but also for citizens' perceptions about the campaign.[6] Hahn et al. provide a multi-perspective view on the power of political events as a strategy to influence public opinion-building regarding the European Union and the European Idea. Hahn et al. examine one prominent political issue of 2007, namely the German Presidency of the Council of the EU, and look at three different groups of actors, the German Government, the media, and the audience, and analyze the public perception of events according to their varying degree of mediatization. Hahn et al. compare the three main objectives of the German Presidency on the actors' agendas and describe how issues were framed during three different time periods (the media agenda was heavily influenced by the government's scheduled events).[7]

Manza and Cook maintain that the *potential* for public opinion (as measured in polls and surveys) to be a major factor in politics has increased dramatically. Polls may be used strategically by politicians and policymakers as the means to craft legislation or policy rhetoric that will be more appealing to the public. Manza and Cook develop an analysis of the state-of-the-art in the debates over the opinion-policy link in the rapidly growing body of research on polls, public opinion, and policymaking in contemporary American politics. There is a high degree of policy responsiveness to public opinion in American politics. Politicians and state managers may perceive it to be in their interests to minimize the distance between

their own positions and that of the public. Policy feedback processes or other reciprocal institutional dynamics may influence both politicians and the public. The same factors that move public opinion also move elites and the overall direction of policymaking. Presidential polling operations have become an institutionalized feature of the White House over the past 60 years. Presidents may, under certain circumstances, have special powers to shape or direct public opinion. The views of the public may or may not matter, depending on a number of factors unique to each political issue or controversy. Levels of salience, coherence, and intensity of citizens' attitudes toward particular policy issues varies widely.[8]

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# ANALYZING THE TRANSFORMATION OF JOURNALISM FROM AN ANALOG TO A DIGITAL MEDIA SYSTEM

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ABSTRACT. As Flichy puts it, technological imagination is a key component of the development of technology. Jankowski sketches three historical periods when the relation between community and media has been central. Pavlik examines the impact of new media on news content. Garrison insists that some print and broadcast outlets take advantage of the limitless space on the Web to add additional material to online news stories that appeared in their print and broadcast versions.

Flichy says that the Internet was designed in the second half of the 1970s as an "internetwork architecture" (a metaprotocol for interaction between networks built on different principles). The Internet society is an associative coordination structure. As Flichy puts it, technological imagination is a key component of the development of technology. Internet utopias changed when the new technology left the world of designers in universities and groups of hackers (the communication utopias of wireless and Internet are fairly similar, successively referring to interpersonal communication, group communication and mass communication). Top management saw microcomputers as an opportunity to create a counter-power *vis-à-vis* the data processing division. Mainframe computing developed in a centralized way and microcomputing started off being decentralized (intranet and network data communications correspond to a more interactive mode in the development of computing). Flichy points out that the setting up of intranet or of cooperative devices in smaller businesses is related to substantial organizational change. The microcomputer followed by its connection to the Internet has not spread as fast in homes as radio and television. The computer is characterized by a high level of sociability within peer groups. Computing and the Internet are characterized by complex social relations in peer groups and between generations. The Internet constitutes the last phase in

the history of information and communication technologies. The diffusion of the new technology in the corporate world combines a centralized model from mainframe computing and an open model launched by microcomputing. The Internet is a tool for interpersonal interaction and collective communication in virtual groups, but also a new medium with multiple sources of information. Use of the Internet cannot be unified around an economic model or a communicational format: it is a system which is tending to become as complex as the society of which it is claimed to be a virtual copy.

> The two main principles of decentralization and free access in which the Internet is grounded stem essentially from the academic functioning of its founders. When the Internet subsequently became a system of communication for the general public, these two principles were perpetuated to a large extent. The network is still not managed by a single operator, and a large amount of software, especially browsers, circulates freely on the web, at least in its most basic form.[1]

Jankowski sketches three historical periods when the relation between community and media has been central, explores the transformation of the concept of community from early locality-oriented sociological studies to those conducted from a multidisciplinary examination of Internet-based communication facilities where a geographical "place" is absent, provides illustrations of three types of studies relating community and media: small-scale electronic media, community information networks, and public discussions and debates via electronic networks, examines the main methodological approaches and suggests the contours of a research agenda oriented towards further exploration of the interface between community and new media. New media are socially constructed phenomena and often deviate substantially from the designer's original intent. The concept of community is as central to present-day studies of the Internet as it was during the earlier years of sociology. New communities are being created, along with new forms of communities. Many virtual communities can be characterized by the strong ties among their members. Jankowski reasons that freenets, PENs, community information networks and digital cities are some of the types of physically based virtual communities.[2]

According to Pavlik, there is emerging a new form of journalism whose distinguishing qualities include "ubiquitous news, global information access, instantaneous reporting, interactivity, multimedia content, and extreme content customization." The Internet is a product of the convergence of telecommunications, computing, and traditional media. Pavlik posits that new media are transforming journalism in four ways: (i) the nature of news content is inexorably changing as a result of emerging new media technology; (ii) the way journalists do their work is being retooled in the digital age; (iii) the structure of the newsroom and news industry is undergoing a fundamental transformation; and (iv) new media are bringing about a realignment of the relationships between and among news organizations, journalists, and their many publics. Developments in new media are giving rise to the development of new storytelling techniques that engage the audience in more contextualized and navigable news reporting. News is becoming much more fluid (news is in a constant state of flux). Online newsrooms tend to be increasingly decentralized and flexible. The World Wide Web furnishes a low-cost global forum for anyone with a message. New media are transforming the relationships that exist among news organizations, journalists, and their many publics, including audiences, advertisers, and sources. Regulatory changes and emerging artificial intelligence tools will exert subtle but profound influences on the nature of journalism in this century. Pavlik examines the impact of new media on news content. The Internet is a journalist's medium: it offers a broad spectrum of capabilities, including interactivity, on-demand access, user control, and customization. The limits on the Internet as a journalistic medium are bandwidth, connectivity, and credibility of content. Pavlik holds that contextualized journalism has five basic dimensions or aspects: (1) breadth of communication modalities; (2) hypermedia; (3) heightened audience involvement; (4) dynamic content; and (5) customization. News in this new media environment can take advantage of the full range of communication modalities. Most online news operations do not have extensive traditions in creating multimedia content. Some news operations tend to view online reporting as merely an extension of their existing activities. Pavlik maintains that three fundamental developments have made possible a paradigmatic shift in visual storytelling: (i) digital video is set to become important not just in production but also in storytelling; (ii) a new generation of image

and sound acquisition devices opens up the possibilities available to those creating images and video, offering options ranging from panoramic views to three-dimensional immersive environments; and (iii) the growth of networked media will furnish a wide range of creative and interactive alternatives to visual storytellers. Technologies are invented to improve the efficiency, accuracy, and speed of some aspect of communication. Stories told online can make connections much more easily than in any other medium (especially through the use of hyperlinks, or clickable pointers to other online content). A primary source publishes information, and news organizations report the release of the report, providing an overview of its contents and pointing out certain notable items. The technology makes improved news content possible. A complementary new media storytelling technique with significant implications for journalism is object-oriented multimedia (it refers to the creation of digital objects in full motion video and audio). Object-oriented multimedia is the extension of digital objects from relatively static Web pages to digital video. Object-oriented multimedia permits journalists and other content creators to layer in additional content and create interactive elements and hyperlinks in motion video. Immersive storytelling is a new format for presenting and interacting with the news in a three-dimensional environment. News content is dynamic in an online environment, which enables better representation of events and processes in real life. News in an electronic, digital environment can be customized, or personalized, in a way not possible in other media. Younger audiences value the diversity of news perspectives made available via the Internet. Personalization is more a matter of obtaining news customized to an individual's life situation than a screening out of important news.[3]

Garrison says that online newspapers may publish breaking news in their online editions when they believe television or radio may get the story first. One of the main hindrances to the growth of online news has been the lack of a successful economic model. The online newspaper has a role to play in providing unique news in coordination with its print counterpart. Online newspapers can be operated on an always-on-deadline condition. Newspapers that offer constantly updated content must invest heavily in their Web sites and provide both depth and ongoing effort to keep content current. As portable news and information technologies become more common, newspapers must update often to remain competitive in the online

world. Many online newspapers have opted for the *community board site* model. Garrison insists that some print and broadcast outlets take advantage of the limitless space on the Web to add additional material to online news stories that appeared in their print and broadcast versions. The success or failure of online newspapers depends on highly complex economics. The importance of online newspapers and journalism is increasing as technologies are evolving. Online newspapers must be prepared for increased access through wireless technologies that are beginning to emerge in this decade (Web and Internet technologies are opening new opportunities to communicate with audiences through new avenues). Online news users can log onto newspapers from around the world and get different perspectives regarding the same international events.[4] According to Jenkins, most materials that appear in the media can be traced to a small number of official agencies which enjoy a very high degree of credibility. "Media reliance on law enforcement sources is not difficult to understand because, for all their flaws, agencies like the FBI should in fact be the best-informed group in the country, with access to abundant evidence from moles, infiltrators, and surveillance materials."[5]

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# THE GEOPOLITICS OF RELIGION AND ETHNICITY

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ABSTRACT. According to Ollapally, in South Asia geopolitics has to be seen as influencing and creating deeper social and political structures and orientations within states. By world order, Volgy et al. are referring to patterns of relationships over time that are structured by mechanisms and actors to make socio-political interactions across state boundaries predictable and manageable. Slaughter says that government networks strengthen compliance with international rules and norms, both through vertical enforcement and information networks and by building governance capacity in countries that have the will but not the means to comply.

Dijkink provides a historic overview of the role of religion in international relations and discusses what the new pervasiveness of religion means from the perspective of critical geopolitics: religion and geopolitics seem to have been caught in a zero-sum relationship. As Dijkink puts it, where the (geopolitical) logic of the state system or security appears to fail, religion emerges as a source for the self-image of groups or the discourse on global relations. Religious visions in Christianity and Islam as holy land, holy war or millennialism fit easily in the study of codes, script and narratives as practised in critical geopolitics.[1] Jefferson West II states that over the last twenty-five years, social and political movements which derive their inspiration and guidance from religion have become increasingly prominent actors on the global stage. Jefferson West II analyzes geopolitical discussions presented in recent publications of Fethullah Gülen (the intellectual and spiritual leader of a Muslim social movement based in Turkey and an active proponent of inter-religious dialogue at a global scale): Gülen employs a geopolitical vision that is counter to the dominant understandings of modern geopolitics. Gülen does not oppose the actions of any particular state or the structure of the global state system, but subordinates both to a functional role within a transcendental order defined by religious faith.[2]

Ollapally holds that the dominant history of South Asia is notable for tolerance and co-existence, despite highly plural societies, and offers a fresh perspective to illuminate and explain the contours of extremism in South Asia, bringing together insights from international relations and domestic politics. The conventional view posits religious ideology as the main driver of extremist violence in South Asia. We can understand the trajectory of extremism in South Asia by considering a three-way identity struggle that repeats itself across the region between ethno-religious, secular, and "geopolitical identities." Geopolitics has had far greater impact on the rise and persistence of extremism than generally believed (the impacts of religion and ethnicity have been less so). According to Ollapally, in South Asia geopolitics has to be seen as influencing and creating deeper social and political structures and orientations within states. The geopolitical interests and needs of regional and extra-regional states have increasingly had a deep impact on the shape of internal identities. The results have been a polarizing of ethnic and religious identities with disastrous consequences. Perceived geopolitical and strategic needs have shaped and modified identities (conditions of weak secularism and a highly charged geopolitical environment tend to produce the most extremist outcomes). Terrorists of the 9/11 variety and others demonstrate a positive relationship between political violence and economic standing. Ollapally contends that ethnic and religious "elites" are far from uniform. Groups turn to violence in response to *state repression*, having no other effective recourse. Despite being one of the strongest democracies, India is the venue for a large number of sustained insurgencies and extremist violence. Regional and global geopolitics have come to play an enormous role in shaping and influencing domestic structures and identities. The South Asian state's capacities may be weak in comparison to its counterparts in advanced industrial states. Ollapally thinks that the state's capacity to define national identity in South Asia is enhanced thanks to two enduring realities: the region has been persistently vulnerable to wider geopolitical pressures; and the region has been plagued by unstable secularism as a result of historical factors. The very fragmented nature of Hinduism makes it difficult for "official" versions to be developed or to take hold politically. In the context of elite manipulations, which version of identity wins may be traced in large part to state sanction or opposition. Preferential or prejudicial

economic policies can stimulate perceptions of future deprivation, leading to a sharpening of grievances.[3]

Hopkins suggests various ways in which human geographers might seek to include the experiences, identities and practices of young racialized and religious men in their future research. In engaging with the lived experiences of young people whose voices are usually silenced, often unheard and frequently distorted, Hopkins explores some of the ways in which masculinities and the experiences of young people may be mediated by the geographies of racism and religion, and suggests ways in which an agenda for research with young racialized and religious men might be taken forward.[4] Pickering claims that interaction between Asian and Western traditions reflects the geopolitical context (cyber-colonization dominates contemporary geopolitics). The interaction between Buddhism and Western psychology proceeds in the geopolitical context. Pickering looks briefly at the history of interaction, reviews some changes in Western psychology, and concludes with a comparison of Buddhist and Western attitudes to suffering. Buddhism takes suffering to be part of normal existence.[5]

Paasi explains that boundaries penetrate the society in numerous practices and discourses through which the territory exists and achieves institutionalized meanings: it is political, economic, cultural, governmental and other practices, and the associated meanings, that make a territory and concomitantly territorialize everyday life. "These elements become part of daily life through spatial socialization, the process by which people are socialized as members of territorial groups."[6] Billig emphasizes that the double neglect of banal nationalism involves academics forgetting what is routinely forgotten: people in established nations overlook the routine flagging of nationhood. "The flags melt into the background, as 'our' particular world is experienced as the world. The routine absent-mindedness, involved in not noticing unwaved flags or other symbols of nationhood, has its reflection in academic theory."[7] Billig reasons that nationhood involves a distinctive imagining of a particular sort of community rooted in a particular sort of place.[8]

By world order, Volgy et al. are referring to patterns of relationships over time that are structured by mechanisms and actors to make socio-political interactions across state boundaries predictable and manageable. There are more factors at play in the creation and maintenance of global mechanisms that shape the contours of

world order than material capabilities. Governance mechanisms are supported and made possible by states. On Volgy et al.'s reading, anarchy should be treated as a *variable* that fluctuates with time, circumstance, the extent of decentralized organization of international politics, and the capability and willingness of states to create mechanisms of governance. Dynamics operating inside IGOs ameliorate conflicts between states. The pattern of IGO creation has marched in tandem with fundamental systemic change in global affairs and efforts to reconstruct the nature of world order. Even if created by states, organizations differ in terms of their internal structure and functioning. When states begin to opt for weak over strong organizational creation, some important changes are occurring in international affairs. Institutional membership has had diverse impact on state active participation in fulfilling the organization's goals.[9]

Slaughter insists that the ability to provide credible information and an accompanying reputation for credibility become sources of soft power. Government networks often distill and disseminate information in a particular form that enhances its impact. Vertical government networks exist to use personal relationships to harness the power of national government institutions in the service of their counterpart supranational institutions. Building domestic governance capacity improves the prospect for compliance with domestic law. Slaughter argues that government networks are likely to strengthen the rule of international law in ways long demanded and expected of traditional international institutions. The core role of the state shifts from enforcer to provider and guarantor of the quality of the available information. Regulation by information holds out the simultaneous prospect of the effective exercise of power without hierarchy and of maximum diversity within a basic framework of uniformity. Within government networks, conflict can be an engine of increased trust and ultimately cooperation (conflict can destroy social and political relationships as well as deepen and improve them). Slaughter says that government networks strengthen compliance with international rules and norms, both through vertical enforcement and information networks and by building governance capacity in countries that have the will but not the means to comply. Government networks designed as structures of global governance would harness the power of discussion, debate, and heated conflict.

Slaughter outlines the structure of a disaggregated world order based on horizontal and vertical government networks co-existing with traditional international organizations, and describes the mechanisms by which these networks can establish an effective world order. Government networks constitute a global governance system, comprising both states and individuals whose collective interests stem from a common humanity. Positing and serving "global" interests can undercut or contravene specific national interests. Slaughter argues that the same factors that press toward convergence can inform a considered position of divergence for any particular country. Countries may converge toward multiple standards, as in competition policy. It is possible for groups of weaker countries to band together and form "counternetworks." The most influential national government institutions are from countries that have had reason to canvass the positions of their fellow nations and develop a nuanced synthesis.[10]

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# INSTITUTIONAL REFORM IN THE EUROPEAN UNION

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ABSTRACT. Baldwin claims that deep economic integration in Europe reduced the effectiveness of unilateral economic policy making and members reacted by embracing deeper international cooperation. Peshkopia and Imami analyze EU membership conditionality at a meso-level, focusing on its sectoral policies, and the institutional reforms in Eastern Europe by taking into account the conditions that the EU sets for each of them. On Symes's reading, governments may tinker at the edges of the institutional framework in an attempt to improve specific architectural features to facilitate decision-making. Jørgensen examines the role of the European Union in multilateral diplomacy.

Baldwin remarks that the EU has seen rapid and well defined economic integration since the mid-1980s accompanied by equally rapid and well defined reform of its economic institutions. Economic integration makes governments more interested in international cooperation. EU members have reacted to globalization by embracing deeper international cooperation. Enlargement is an indication that nations faced with deeply integrated markets feel they gain control from pooling their sovereignty on economic policy. Baldwin posits and estimates a model that distinguishes changes in decision-making costs and benefits: laws are passed up to the point where the marginal decision-making cost just equals the marginal benefit. The equilibrium flow of EU laws balances the marginal benefit (demand) and marginal cost (supply) for laws with the delay acting as a proxy for the "price." No causality can be ascribed to the correlation between the shift toward the union-of-citizens power distribution and progressive integration. Baldwin claims that deep economic integration in Europe reduced the effectiveness of unilateral economic policy making and members reacted by embracing deeper international cooperation. The institutional and political reaction of EU nations to economic integration provides lessons for the rest of the world (nations are likely to find their interests are best

served by deepening international cooperation on economic policies).[1] Saam and Sumpter contend that EU institutional reforms are far from trivial, as the recent rejection of the treaty establishing a Constitution for Europe by the French and Dutch electorate has demonstrated (all other treaties in the process of European institution building have been approved by the member states' governments). Saam and Sumpter ask how these governments reach a decision on EU institutional reforms. They do not necessarily engage in coalition formation but in peer coordination in policy networks to reach decisions in these multilateral, multiple issue, multi-stage negotiations.[2]

Peshkopia and Imami analyze EU membership conditionality at a meso-level, focusing on its sectoral policies, and the institutional reforms in Eastern Europe by taking into account the conditions that the EU sets for each of them. Peshkopia and Imami hold that because the asymmetric interdependence in EU-CEEC relations makes difficult bargaining style negotiations between them, those relations are characterized by either a tug-of-war between the EU and CEECs' clashing priorities or by a coalescence of them (although the EU membership conditionality plays a role, that role remains secondary compared to the political will of the CEECs to implement reforms toward democratization and economic development). Countries who have received an offer to join the EU have already demonstrated a political will toward democratization and economic reforms. Although the EU indirectly influences CEECs' reforms through a democratic spillover, we should not credit EU conditionality for the results of these reforms. The asymmetry of interdependence allows the EU to set the rules of the game in the accession conditionality. EU membership conditionality raises uncertainties that affect the EUCEEC interaction during the process of CEECs' preparation for EU membership. The EU-CEEC negotiation process does not resemble a traditional international negotiation and bargaining process. Peshkopia and Imami build a series of hypotheses that cover several situations where different interest combinations of both the EU and CEECs put their leaders in different interacting positions. International organizations' functions are designed according to the interests of their member states' leaders. The fact that the prospect of membership of the Balkans in the EU remains distant weakens the strategic effectiveness of the EU conditionality as an instrument of influence for the EU. States do not hesitate to implement reforms that do not have any domestic impact

but merely satisfy interests and needs of international actors and donors. There are cases when certain reforms might not represent any immediate emergency for both the EU and CEE leaders. Peshkopia and Imami implement a combined strategy wherewith they use both those techniques simultaneously. Rather than considering the reform as a whole, Peshkopia and Imami divide it into reforms covering different sectors and analyze them separately. The EU interests on reforms undertaken by a country that takes all too seriously its EU membership objective cannot be negative. Peshkopia and Imami consider EU interests to be positive on a reform when EU institutions openly and forcefully condition that reform, and consider the EU interests on a certain reform to be neutral when the EU stands ambiguous about the level, the shape, and the financial support for that reform.[3]

Symes says that the term governance describes a shift towards more decentralized and inclusive decision-making structures. The governance system comprises a complex range of components, each of which must function efficiently and in harmony with other components to allow effective decision-making. The tensions between European and national institutional frameworks hamper the development of effective management strategies for Europe's fisheries. On Symes's reading, governments may tinker at the edges of the institutional framework in an attempt to improve specific architectural features to facilitate decision-making. Participative governance will tend to operate on national and regional levels and range over a much wider agenda. There are potential disadvantages to the greater involvement of stakeholders in decision-making. Governance systems are among the most visible manifestations of institutional frameworks. The term "institutional framework" denotes the range of institutions that together form the decision-making environment. There is a danger of certain organizations within management using their prestige and influence solely to further their own interests. The different scales of governance assume appropriate sets of responsibilities that will guarantee a strong measure of coherence between policy decisions formulated at each scale. Symes claims that the introduction of integrated management will at best imply (i) a greatly expanded but possibly less influential community of stakeholders, (ii) a new set of decision-making processes and procedures, (iii) the development of new management instruments, (iv) the dilution of

property rights, and (v) the codification of relationships between different users of the sea.[4]

Jørgensen examines the role of the European Union in multilateral diplomacy. The EU is increasingly engaged in multilateral diplomacy, actually playing a leadership role in some policy fields. The EU plays a limited role in financial diplomacy and a significant role in non-proliferation. an extension to more policy fields and more analytical dimensions would provide the comprehensive understanding of the European Union multilateral diplomacy that the engagement deserves.[5] According to Pollack, the study of the European Union (EU) has been transformed during the past decade, and three distinct theoretical approaches have emerged: the first approach seeks to explain the process of European integration (it has largely abandoned the long-standing neofunctionalist-intergovernmentalist debate in favor of a rationalist-constructivist debate reflecting broader developments in international relations theory), the second approach has rejected the application of international relations theory in favor of comparative politics approaches which analyze the EU using off-the-shelf models of legislative, executive, and judicial politics in domestic politics, and the third approach sees the EU as an emerging system of multi-level governance in which national governments are losing influence in favor of supranational and subnational actors, raising important normative questions about the future of democracy within the EU.[6] Søberg investigates the quest for institutional reform in Bosnia and Herzegovina since the 1995 Dayton Peace Agreement: public demands for reform are likely to be influenced by how the current institutions are believed to be functioning and by the public support for the current institutional set-up as such. As Søberg puts it, the demands for alterations by the political elites of the different national communities highlight a continuing lack of consensus: although the Constitution allows for a revision, the political room for such changes is limited, and the challenge remains to provide adequate degree of autonomy of national groups without diminishing the quality of democracy. Søberg reasons that the need to differentiate between the protection of legitimate national and minority rights and unacceptable nationalist demands emerges as a challenge with no easy solution.[7] Mottas writes that there are plenty of issues which the European Union has so far failed to create a context within which possible solutions would be found (the Union has shown incapability to identity itself

in our contemporary world order). The present form of the European Union's function cannot guarantee the needed quick and effective responses that a supranational organisation should take. Mottas observes that one of Brussels' fundamental problems is the lack of a direct relation between the EU institutions and European societies themselves: the EU has to overcome its strictly bureaucratic character and present a different, more intelligible and more unambiguous democratic framework within which new progressive policies will be applied. Europe has to take decisions on matters that are of fundamental importance for its function and existence. Negativeness, pessimism and conservative obsessions cannot bring any political progress and do not contribute to the aim of a strong United Europe.[8]

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# HOW DOES THE STRUCTURE OF FINANCIAL FLOWS AFFECT THE STABILITY OF THE BANKING SYSTEM?

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ABSTRACT. Rochet constructs a model of the payment flows that allows him to capture in a simple fashion the propagation of financial crises in an environment where both liquidity shocks and solvency shocks affect financial intermediaries that fund long-term investments with demand deposits. Forbes maintains that banking crises are a serious concern and can be extremely costly. Landier and Ueda examine cases in which restructuring can bring economic gains.

Rochet views bilateral exposures as reflecting bilateral trust and thus interbank monitoring. The traditional thinking about prudential systems can shed, after some adjustment, new light on the desirable organization of payment systems. Rochet discusses how standard arguments of industrial organization and corporate finance could be used to shed light on alternative organizations of the payment system, and provides an analytical framework encompassing existing systems and suggesting a new organization that combines the benefits of centralized and decentralized arrangements. Rochet explores the possibilities of contagion from one institution to another that can stem from the existence of a network of financial contracts. Rochet analyzes interbank networks, focusing on possible liquidity shortages and on the coordinating role of the financial authorities in avoiding and solving them. Rochet constructs a model of the payment flows that allows him to capture in a simple fashion the propagation of financial crises in an environment where both liquidity shocks and solvency shocks affect financial intermediaries that fund long-term investments with demand deposits. Rochet introduces liquidity demand endogenously by assuming that depositors are uncertain about where they have to consume, concentrating on systemwide financial fragility and central bank policy issues. Liquidity demand arises from the strategies of agents with respect to the

coordination of their actions. Under normal conditions, a system of interbank credit lines reduces the cost of holding liquid assets. The structure of financial flows affects the stability of the banking system with respect to solvency shocks. Interregional financial connections arise because depositors face uncertainty about the location where they need to consume. Rochet focuses on the implications for the stability of the system when one bank may be insolvent.

Rochet sets up his basic model of an interbank network, describes the coordination problems that may arise even when all banks are solvent, analyzes the "resiliency" of the system when one bank is insolvent, investigates whether the closure of one bank triggers the liquidation of others, and shows under which conditions the intervention of the central bank is needed to prevent a domino or contagion effect. Rochet provides an example of asymmetric travel patterns and its implications for central bank intervention. Rochet tackles the issue of the impact of the insolvency of one bank on the rest of the system, investigating under which conditions the losses of one bank can be absorbed by the other banks without provoking withdrawals by depositors and what are the implications in terms of market discipline. Rochet considers the issue of contagion, investigating whether the closure of an insolvent bank generates a chain reaction causing the liquidation of solvent banks. A diversified lending system is more exposed to market discipline than a credit chain system (in the latter the insolvent bank is able to transfer a larger fraction of its losses to other banks, thus reducing the incentives for its own depositors to withdraw). The interbank market allows the minimization of the amount of resources held in low-return liquid assets. The resiliency of the interbank market allows it to cope with liquidity shocks by providing implicit insurance. Both the central bank and the depositors have only imperfect signals on the solvency of commercial banks. Rochet suggests the adoption of "market-based" risk weights, i.e., weights proportional to the systematic risks of these assets, measured by their market betas. Rochet does not neglect the limited liability of the banks under study, showing that it implies that insufficiently capitalized banks may exhibit risk-loving behaviors. Rochet develops a new formal model that tries to incorporate the most important criticisms of existing theoretical models of bank regulation, shows that minimum capital ratios can be justified by a classical agency problem between bankers and regulators, even in the absence of mispriced deposit insurance, demonstrate that,

under restrictive conditions, these capital requirements can be reduced if banks are mandated to issue subordinated debt on a regular basis (direct market discipline).

Rochet explores the interactions between market discipline and supervisory action and shows that they are complementary rather than substitutes. Banks create value by monitoring borrowers, and thus acquire private information about these borrowers. The justification of a minimum capital ratio is not an asset-substitution problem but an agency problem between the banker and the supervisors. Rochet interprets bank solvency regulations as a closure rule intended to avoid shirking by insufficiently capitalized banks. Bank assets are opaque and cannot be marked to market in continuous time. Bank supervisors can rely on market information and adapt the intensity or frequency of their examinations to the market assessment of the bank's situation. Rochet considers what would happen if subdebt holders were de facto insured in the case where the bank is liquidated. Mandatory subdebt (direct market discipline) may, under some restrictions, allow regulators to decrease capital requirements. Market discipline and supervisory action are complementary rather than substitutes: one cannot work well without the other. Banking authorities should keep arm's-length relationships with bankers and scarce supervisory resources should be used, according to priority, to control the behavior of banks in distress. Capital requirements should be viewed as intervention thresholds for banking supervisors rather than complex schemes designed to curb banks' asset allocation. Rochet focuses on what to do when banks do not comply with capital requirements. Rochet focuses on *systematic* risk, generated by a common exposure of banks to macroeconomic shocks such as recessions, asset markets crashes, and the like.

Rochet analyzes the impact of the liability structure of firms on their choices of investment and on their overall performance, and incorporates features that he believes essential to capture the specificities of commercial banks. Rochet models banks as "delegated monitors" by considering that banks have the unique ability to select and monitor investments with a positive net present value and finance them in large part by deposits. The value of the bank is affected both by closure decisions and by moral hazard on investment monitoring by bankers. Rochet provides the justification for solvency regulations: a minimum capital requirement is needed to prevent insufficiently capitalized banks from shirking. Rochet in-

troduces market discipline through compulsory subordinated debt, and shows that, under certain circumstances, it may reduce the minimum capital requirement. Rochet analyses supervisory action, and show that direct market discipline is only effective when the threat of bank closures by supervisors is credible (indirect market discipline can also be useful in allowing supervisors to implement gradual interventions). *Indirect* market discipline can be used to implement a more elaborate regulatory policy (when regulatory forbearance is excluded). Rochet designs a simple dynamic model of commercial bank behavior, where the articulation between the three pillars of Basel II can be analyzed. Rochet interprets the first pillar (capital adequacy requirement) as a closure threshold rather than an indirect mean of influencing banks' asset allocation. Market discipline (the third pillar) can be used to reduce this closure threshold, especially if there is a risk of regulatory forbearance. Rochet reexamines the traditional view on the supervisory role (second pillar). Supervisors can modulate the intensity of their interventions according to reliable signals given by market prices of the securities issued by banks.[1]

Forbes maintains that banking crises are a serious concern and can be extremely costly. The seven key lessons for bank reform on which Forbes focuses are: enact sound prudential regulations, independent supervision and strong corporate governance; provide partial, risk-adjusted deposit insurance; ensure banks operate on a commercial basis, free from political interference; encourage foreign investment in the banking system; combine bank reform with corporate restructuring; establish well-defined and speedy bankruptcy laws; and act promptly. Concentrated lending exposure can lead to banking problems. Prudential banking regulations should include guidance on valuing government securities to incorporate risk and accounting for (or even limiting) currency mismatches. The supervisory agency should establish requirements for reporting, transparency and all-around sound corporate governance. Unlimited deposit insurance can make banks less sound by encouraging them to take greater risks and reducing the incentives for depositors and regulators to monitor the banks. Deposit insurance can be important in helping small banks compete with larger banks. Unlimited deposit insurance can make banks less sound by encouraging them to take greater risks and reducing the incentives for depositors and regulators to monitor the banks. Providing unlimited insurance coverage can substantially increase the fiscal cost to the government if there is

problem in the banking system. Forbes claims that countries wishing to strengthen their banking systems should seek to improve their regulation, supervision and corporate governance. Encouraging mergers with or purchases by strong domestic or foreign banks can help ensure that privatization leads to a stronger and more efficient banking system. Encouraging foreign investment in the banking system can have widespread benefits. In developing countries foreign banks can bring in improved accounting standards, corporate governance, and transparency. Foreign banks tend to have more aggressive loan provisioning and higher loan recovery. The presence of foreign banks can also increase competition in the banking system. If governments focus solely on the banking system and ignore related corporate problems, any attempts to strengthen the banking system will be futile over the longer term. Several countries have had recurring banking crises, even if they constantly recapitalize banks to fix the "stock", but ignore the more difficult issue of limiting the continued "flow" of unprofitable lending. Bankruptcy laws today should provide a chance for an organization to reorganize and restructure. Countries wishing to strengthen their banking systems should not hesitate to draw on outside expertise.[2]

Landier and Ueda start their analysis with a simple frictionless benchmark, and exclude the possibility of debt renegotiation. Landier and Ueda examine cases in which restructuring can bring economic gains. The government should gather accurate information on underlying assets through rigorous bank examination and utilize it in designing restructuring options. The best course for a government is to combine several restructuring options to solve the multifaceted problems.[3]

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# THE EASTERN ETHOS OF RELIGION

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ABSTRACT. Muray contends that the nations of Central and Eastern Europe have alternately been pawns in geopolitical struggles. Tomka maintains that the reference to God provides a firm center for identity which is strong enough to integrate the multitude of partial identities as shaped in different spheres of life. Burgess remarks that the Russian Orthodox Church has successfully reestablished itself as an integral part of contemporary Russian culture. Bremer observes that, in Eastern Europe, religion was something the communist authorities regarded as backward, and they expected this phenomenon to vanish in the near future.

Muray contends that the nations of Central and Eastern Europe have alternately been pawns in geopolitical struggles. The nations of Central and Eastern Europe have their own distinctive cultural and religious resources for the potential resolution of the ethnic conflict. It is virtually impossible to distinguish what is religious and what is secular in the cultures of the region. Muray notes that peace is a comprehensive eschatological symbol rooted in the notion of wholeness and encompassing personal peace, social peace, and natural peace in their fundamental interrelatedness. Implicit in the realization of peace is respect for and among individuals, for ethnic and national communities. Religion and nationalism have been inseparably linked, uniting a particular nationality but cutting it off from and often demonizing others in the process. Religious communities can play an important peacemaking role among the ethnic groups and nationalities of Central and Eastern Europe. Although intimately attached to particular nationalities, all of the Christian churches in the region profess to be catholic, to be universal. Education can play a vital role in cultivating the kind of ethos necessary for the resolution of ethnic and national conflict. The guarantee and protection of the rights of ethnic and national minorities, decen-

tralization, and regional and local autonomy are indispensable for the creation of peace in the region. According to Muray, having long, distinctive histories of suffering and victimization, and identified with the sufferings of Christ, it is time for the ethnic groups and nationalities of the region together in their unique particularities, to participate in the resurrection to a newness life.[1]

Tomka maintains that the reference to God provides a firm center for identity which is strong enough to integrate the multitude of partial identities as shaped in different spheres of life: churches are important contributors to the emergence of civil society as the biggest voluntary organizations in insufficiently structured societies. The comportment in totalitarian systems and the varying success in survival are manifestations of the differing social results of Catholicism, Protestantism and Orthodoxy. As Tomka puts it, catholicism provides more spiritual and institutional support in the opposition to totalitarian systems, protestantism is more instrumental in initiating social change and in contributing to the emergence of accommodating individualities, and catholic identity is more strictly God- and Church-related. The common basis of all religions is something which may lay the foundations of a peaceful coexistence of humankind. This imagined common kernel in religious identities offers values which are not present yet in nonreligious identities. Religion is a major force in shaping individual and social life, although functioning somewhat differently in various denominational cultures. Christianity prefers face-to-face relations to impersonal social relations notwithstanding the Christian demand to love one's neighbor and the existence of a Christian social ethics. Social and political divisions and oppositions often coincide with religious and/or denominational differences.

> In contrast to scrupulously institutionalized, organized and formalized Western Christianity, Orthodox culture nurtured popular piety and spirituality. Western Christianity separated the state and the church declaring an independent yet politically active role for the church in Catholicism and a politically uninvolved, rather submissive one in Protestantism. Orthodoxy preserved the state-church-tradition as well as the full adaptation of the church to the ruler and the state in the concept of 'symphonia'. Western Christianity developed a religiously based social ethics and a wide network of institutions of social care. Orthodoxy remained passive in this respect

> both in theory and in practice up the end of 20th century. Western Christianity quite often contributed to the birth of nations and even to nationalism but preserved a critical capacity of the individual and of the church vis-à-vis the political community. The unity of religion and culture in Orthodoxy makes this religion the natural and exclusive bearer of social and national identity and willing instruments of nationalist ideologies and politics without leaving much space for critical distance.[2]

Burgess remarks that the Russian Orthodox Church has successfully reestablished itself as an integral part of contemporary Russian culture. Russians' relationship to the Orthodox Church is complex (the Orthodox tradition informs their cultural identity). Equating Russia and Orthodoxy reduces Christianity to a cultural identity and fails to recognize it as a faith that rests on a personal existential encounter with the gospel. Orthodoxy gives Russians a new sense of meaning and worth in a post-Soviet world. Orthodoxy promotes personal values that make community possible: committed work, honesty in relationships, and concern for one's neighbor. The reconstruction of Orthodox identity in Russia is characterized by opportunity and by peril ("the peril of underwriting ethnic Russian xenophobia, the peril of being reduced to a civil religion, and the peril of aligning itself too closely with the Russian nation"). Burgess reasons that Russia is not on its way to becoming an Orthodox culture in the way that it was up to the early twentieth century. The reconstruction of Russian identity as Orthodox identity may open up social space in which the church can do its proper work.[3]

Kenworthy holds that the standard depiction of the Orthodox Church in the historiography of Imperial Russia portrayed a moribund institution. Orthodoxy preached to the masses a doctrine of resignation and acceptance of one's lot. The capital's clergy developed a powerful and effective social mission. During the Reform era a new theology began to develop in the Church that challenged the assumptions of the Church's role as restricted to its liturgical and sacramental functions.[4] Thériault emphasizes that when the churches unified and re-established their structures in the 1990s, debates emerged over the public role the churches should play in the new Republic. The concept of secularization, whether used as description, experience, or theoretical argument, comes to play a central role in debates over religious instruction. Thériault provides a historical

account of the containment of religious instruction in the former GDR and the development of new practices within the small Catholic Church and the historically more dominant Protestant churches. Defenders of the status quo believed that religious instruction ought to be integrated into the community. Catholic proponents of the status quo stressed the dangers of losing their catechetical instruction as well as other pastoral activities, such as the pastoral care of the youth and family circles. Proponents of reform reminded their skeptical interlocutors that the GDR was not an easy place for Christians. The confessional differences and theological trends within confessions mattered as principles were reinforced as a result of the experiences during the GDR.[5]

Bremer points out that, in Eastern Europe, religion was something the communist authorities regarded as backward, and they expected this phenomenon to vanish in the near future. The churches' loss of influence during communism was not only due to the political circumstances and to suppression, but also to social developments. The rising significance of religious belief after the fall of communism was a process of searching for something new, for a new self-identification. Bremer maintains that religion is an explanation of the world, of human existence and of salvation (religious convictions are of lasting significance). The church tried to define the borderlines of its doctrine. Religious borderlines offer possibilities of encounter and exchange. In Russia, the Orthodox Church was under a very close control through the authorities which led indirectly to a rise of spirituality and of theology. The Orthodox Church in Russia supported the idea of the Russian Empire, with different nations and different religions in it. Orthodox churches developed different relationships to their respective state and nation. The churches in South Eastern Europe are shifting between a national consciousness and one which concerns the state. According to Bremer, within the Catholic Church there have always been movements and tendencies which tried to stress the autonomy of the local church in opposition to Rome. Catholicism became narrowly linked with nationality above all in Slovakia and Croatia. In all local orthodox churches laity does not play a prominent role, and obedience to the clergy is of high importance. Protestant churches respect authority, but it is not so clearly linked with persons (the authority the Scripture enjoys in Protestant is comparable to the role of the *magisterium* of the Catholic Church). In Central and Eastern Europe

churches had no chance to learn how to live, to react, to behave in a pluralistic society: they were urged to act in a new environment, and had to develop a position towards all kinds of questions concerning social ethics. Frequently the churches are very reluctant to accept criticism.[6] On the basis of data from the survey of religion and values in Central and Eastern Europe *Aufbruch – 2007*, Naletova questions the applicability of the basic theoretical propositions about the relations between religion and modernity, such as theory of secularisation (classically understood) and rational choice theory, and the thesis about the vicarious nature of religion, to the religious situation in the traditionally Orthodox part of Eastern Europe (Romania, Moldova, Serbia, Bulgaria, Belarus and Ukraine). Naletova explores the possibility of viewing the religious modernity/modernities in the postcommunist traditionally Orthodox area of Eastern Europe as an alternative to the (secular) modernity of Western Europe, and the region itself as an "other-worldly" Europe. Naletova points out the important role that religion (and traditional churches) plays in the social and political life of this region.[7]

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# THE FUTURE OF JOURNALISM

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ABSTRACT. Pavlik asserts that the space and time limitations of analog print and broadcast media have foreshortened the news. Salwen writes that in most cases online news sites operated by print and broadcast news outlets have not made full and responsible use of their sites. Hachten puts it that the intermixing and overlapping of news and entertainment and/or sensationalism is a central concern about today's journalism.

Hiltz and Turoff considered that once computer-mediated communication was widespread we will become the Network Nation, "exchanging vast amounts of both information and social-emotional communications with colleagues, friends and strangers who share similar interests, who are spread out all over the nation."[1] Siepmann states that television provides a maximum extension of the perceived environment with a minimum of effort. "It is bringing the world to people's door."[2] Rheingold asserts that people in virtual communities do just about everything people do in real life, but we leave our bodies behind. "People in virtual communities use words on screens to exchange pleasantries and argue, engage in intellectual discourse, conduct commerce, exchange knowledge, share emotional support, make plans, brainstorm, gossip, feud, fall in love, find friends and lose them, play games, flirt, create a little high art and a lot of idle talk."[3] Rogers and Malhotra stress that computers were not originally perceived as communication tools: the early use of computers was limited to number-crunching and other repetitive data-handling tasks. "The potential of computers for human communication, and thus for digital democracy, however, has been realized most fully only in the 1990s with the rapid diffusion of the Internet."[4]

Pavlik asserts that the space and time limitations of analog print and broadcast media have foreshortened the news. Objectivity and truth can best be pursued through a storytelling medium that

supplies the texture and context possible in an online, multimedia, and interactive environment. Journalists need to think about a global audience that can comment, provide perspective, and offer new insight into the complexities of an increasingly global society. Pavlik contends that networked new media can be interactive, on-demand, customizable, can incorporate new combinations of text, images, moving pictures, and sound, can build new communities based on shared interests and concerns, and have almost unlimited space to offer levels of reportorial depth, texture, and context. The potential to customize content means readers may select only the content that appeals to them. The public in the digital age frequently seeks to publish its own views on world events and how media report on them. The best national news providers online are those that offer original material designed specifically for theWeb. Many national news sites cover breaking news (the better sites use their vast reservoirs of space to add depth and texture). Some of the most popular online journalism is news about information technology. Pavlik points out that news content on the Internet has been evolving through three stages: (i) online journalists mostly just republish content from their motherships; (ii) the journalists create original content, augmenting it with such additives as hyperlinks to other Web sites, some interactive capabilities, some multimedia content, and some customization of sites and information, where readers create their one own personal news categories, stock listings, and other content; (iii) it is characterized by original news content designed specifically for the Web as a new medium of communication and frequently of increasingly specialized focus.

> Typically, journalism and any other form of systematic inquiry attempt to derive a version of the truth by gathering information from a variety of sources and reconstructing what most probably occurred. We can never know whether we have revealed it, and mostly we can only hope to approximate it through triangulation, like the best research in either the physical or social sciences. By offering different perspectives on what may or may not have occurred, journalism can facilitate the public's understanding of an event or process by revealing as many verifiable facts as possible. Drawing on those facts, we can each reach our own conclusions about what did or did not happen.[5]

Pavlik examines three broad areas of new media tools for digital news gathering and production: (i) tools for image acquisition and processing in which journalists interact directly with the content of those images, (ii) it reviews tools for processing handwritten notes and audio content, and (iii) it considers the mobile journalist workstation as an integrated system of news gathering and production for the reporter in the field. The Internet is a tool for secondary data collection and for accessing public transactional records. It is essential that all journalists critically evaluate the information they obtain online, to verify online information from off-line sources and never to rely exclusively on online information for a story.

Salwen writes that in most cases online news sites operated by print and broadcast news outlets have not made full and responsible use of their sites. News, unlike entertainment, mandates a greater degree of social responsibility. Online news sites can contribute original information, stimulate public debate about issues, and emerge as important news media and social forces. Original news, rather than recycled news, contributes to public knowledge. Online news sites are gradually moving away from the era of "shovelware." News is not something most users search for when they go to search engines (it is an enticement they encounter to grab their interest and keep them on the site). Much online news reading is fortuitous, when users are enticed to click on news stories while doing other things on the Web. People may first learn of breaking news on television and then go online to search for more details. Search engines are not primarily news organizations committed to providing the public with news and public affairs information. Some news organizations use their online news sites to provide additional information about news stories that appeared in their offline sites. Another potential source for original online news editorial content would be ISPs. Online news services have no fixed deadlines: they could potentially put their notes or announcements of any ongoing news online. Salwen observes that the practice of offering free online service for general coverage and charging for special stories or features or services without advertising represents a testable economic model for online news sites. Blogs are controversial because they are often untrue. They are uncensored and free for everyone to use, and may make them appear a desirable new outlet for news but lack the checking for good journalism and are often regarded as personal views, rants, and responses. Online news organizations must provide original and

important content that affects people's lives if they are to be taken seriously. An option for online news sites is to take advantage of their immediacy and compete against all-news cable television networks with real-time news. Online news sites have an advantage over allnews cable television networks in that users do not have to passively wait for stories to unfold. Most print and broadcast organizations view their online sites as supplements to their primary news products.[6]

Hachten says that television news has remade, glamorized, and expanded the reach and impact of daily journalism. Media organizations today are more concerned about making money than they are in providing the news of the day as completely and accurately as possible. Serious public-affairs journalism is an important resource of American public life that should be nurtured and shielded from the various influences. Hachten remarks that the bright mirror of American journalism has acquired some serious cracks, becoming at times a distorted mirror. News should provide placement in time reporting what is happening and explaining to us the background or the history of a particular story, and should point out the similarities and differences in events (many events fit a certain pattern and as such have added significance). Media are separated into the *entertainment media* and the *news media*. Hachten puts it that the intermixing and overlapping of news and entertainment and/or sensationalism is a central concern about today's journalism. The serious news media can at times pursue the same stories and share the news values of trivial or entertainment-oriented media. The crisis in journalism may be related to the reality that we are becoming an increasingly polarized society. The current unhappiness with news media and journalists comes during a period of rapid technological change in news communication and entertainment media. Change brought on by electronic media threatens the viability of traditional ways of reporting the news and offers promising new ways of disseminating information. American journalism is the most informative and most free anywhere and is an influential and significant source of news for news organizations of other nations. Television news easily switches locales to bring information and comments from a variety of sources. Newspapers and news magazines have the space and the time to provide more stories in greater detail and background and offer greater analysis than broadcasting. Hachten contends that the expectations for objectivity, balance, and impar-

tiality are much higher for daily journalism. Comment and predictions should be clearly identified and separated from hard or just-appearing news. Transnational communication is evolving toward a single, integrated global communication system that espouses free, independent journalism. The increasing capability to broadcast and publish news globally has changed our world and our perceptions of our world. Western mass media have conditioned much of the world to use the media for entertainment and leisure. The flow of news and mass culture throughout the world has had a variety of important effects on our global community. The changes and decline in quality of television news are related to its continuing loss of viewers; as audiences splinter or evaporate, network producers use more soft features, as well as sensational and entertainment-oriented news to attract a greater audience. Television news is becoming packaged entertainment with less hard news (the most successful way to be a journalist is to give up most of what is involved in being a reporter).[7]

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# THE ROLE OF THE NEWS MEDIA IN CONNECTION WITH GLOBAL TERRORISM

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ABSTRACT. Gadarian maintains that the news media instill fear in the public by focusing on terrorism and continually highlighting the most threatening aspects of the War on Terror. Comer et al. claim that terrorists seek to communicate threat to the widest possible audience, and examine proximal and media-based contact with actual terrorist events, and the subsequently changed social ecology after terrorism has been perpetrated. Ross asserts that some established media outlets are sympathetic or appear overly accommodating to certain terrorist organizations. Nacos explains how media and communication figure prominently into both terrorism and counterterrorism.

On Hoffman's reading, without the media's coverage the act's impact is arguably wasted, remaining narrowly confined to the immediate victim(s) of the attack, "rather than reaching the wider 'target audience' at whom the terrorists' violence is actually aimed. […] Only by spreading the terror and outrage to a much larger audience can the terrorists gain the maximum potential leverage that they need to effect fundamental political change."[1] Hoffman asserts that much like previous information revolutions that affected terrorist and insurgent external communications, "a new information revolution has occurred to empower these movements with the ability to shape and disseminate their own message in their own way, enabling them to completely bypass traditional, established media outlets."[2] Hoffman remarks that all major terrorist and insurgent groups have Web sites: while most terrorists certainly crave the attention that the media eagerly provide, the publicity that they receive cuts both ways. "The public attitudes and reactions that they hope to shape by their violent actions are both less predictable and less malleable than either the terrorists or the pundits believe."[3]

Gadarian maintains that the news media instill fear in the public by focusing on terrorism and continually highlighting the

most threatening aspects of the War on Terror. The public's support for hawkish policy originated with concern over future terrorism. Gadarian raises the question of whether the media helps or hinders the public's ability to gauge reality and to form sensible attitudes in a threatening environment (threatening news messages especially affect those individuals already concerned about terrorism). The media's attention to terrorism may ultimately damage the public's ability to form opinions and to hold political leaders accountable. News stories about terrorism influence attitudes by enhancing a sense of threat and by cueing citizens on how to connect that sense of threat to a policy option. Gadarian argues that the threat of terrorism provides a unique context under which aggressive policy may appear to be the best political choice to both elites and the public. If the media influence attitudes through heightening emotion, then television news exposure should have a larger effect than newspaper reading. The effect of television news on foreign policy attitudes depends on respondents' level of concern about terrorism. Newspaper reading has no significant effect on foreign policy attitudes either on its own or when controlling for television exposure. Media exposure heightens the influence of threat on attitudes. Gadarian posits that exposure to threatening news content affects foreign policy attitudes and that threatening visual information will add to a sense of threat and persuade respondents to support hawkish policy (media affects foreign policy attitudes through providing information and through invoking emotion and reminding citizens of the country's vulnerability to attack).

As Gadarian puts it, media coverage may manipulate citizens to adopt hawkish policy by using visual information (media coverage of terrorism magnifies the sense of threat and vulnerability by being overly attentive to threat). *Threatening story content* influences attitudes regardless of the way the content is presented. The effect of threat is large and substantively important for pushing opinions in the hawkish direction. Threat and the type of media exposure interact in affecting foreign policy attitudes. Media exposure affects foreign policy attitudes through moderating the influence of threat on policy attitudes. Politics shapes how citizens interpret media messages and apply that information to their preferences. Gadarian points out that television news exposure has the largest impact on respondents already concerned about terrorism. The presentation of threatening news matters in shaping public

opinion on foreign policy. Sensationalistic news coverage moves the American public in a more hawkish direction.[4]

Altheide holds that the mass media play a large role in the public perception and acceptance of criminal behaviour by the United States of America: public acceptance of illegal actions by the US government in the Iraq War, as well as steps taken to combat terrorism, have been influenced by entertainment media content and media logic about crime and fear. Altheide emphasizes the cultural and mass communication contexts that have promoted fear of crime, while also justifying illegal state actions to combat crime and terrorism: propaganda and news management contribute to a discourse of fear and symbolic negation of the 'other' and valorize criminal conduct as necessary and heroic.[5] Beer et al. contend that public responses to terrorist attacks are complex and dynamic, involving multiple political actors and different psychological dimensions, changing over time. There are many publics, co-existing in multiple, constantly shifting, political media environments. These publics respond to the flow of media reports of terrorist events with a parallel flow of psychological reactions, reflecting the psychological states of particular individuals as much as they do the state of the world.[6]

Surette et al. notice that media oriented terrorist events have not been conceptualized or measured in a coherent manner. Surette et al. develop and employ a measure that can be applied to terrorist events or to terrorist groups to compare terrorist activity for twenty terrorist groups and two hundred terrorist events. The media orientation measure taps into five factors of media orientation and differentiates high from low media orientated events and active and inactive media oriented terrorist groups. Terrorist groups that were engaged in regional struggles were less media oriented. The terrorist group with the highest fatality and injury averages ranked ninth in its media orientation score (death and injury was not a necessary indicator of media orientation). Media savvy well-known terrorist groups did not pursue media oriented activity as a constant strategy.[7] Comer et al. claim that terrorists seek to communicate threat to the widest possible audience, and examine proximal and media-based contact with actual terrorist events, and the subsequently changed social ecology after terrorism has been perpetrated. Televised news can have deleterious effects on children's global perceptions of threat and vulnerability. Heavy TV viewing cultivates distorted perceptions of the world. Parents can offer commentary to guide youth in-

ferences and help children to make sense of that which is portrayed on TV. Parental promotion of children's media literacy may help children better attend to the probability of personal terrorism victimization. Comer et al. examine associations between televised news regarding risk for future terrorism and children's anxiety and threat perceptions, and investigate the effects of training mothers in an empirically based approach, coping and media literacy (CML), to addressing such news content with their children. The ways in which parents typically react to terrorism-related news with their children are not sufficient in reducing child threat perceptions to levels comparable to those evidenced by children who viewed terrorism-related news with CML-trained parents.[8]

Ross asserts that some established media outlets are sympathetic or appear overly accommodating to certain terrorist organizations. The resource-intensive nature of owning and operating newspapers or radio or television stations has been mitigated because many terrorist groups now have their own websites. Few news organizations have reporters who specialize solely in covering terrorism. Ross reviews the power and nuances of the media's interaction with terrorists, their organizations, and their sources: terrorists use the media as a tool to gain increased coverage and communicate their message.[9] Nacos holds that in the age of global communication and international media the messengers of hate and terror can easily spread powerful words and images around the globe. International and domestic terrorists exploit the traditional and the new communication means to achieve a host of crucial objectives (today's global communication and media networks overshadow the domain of national media). Nacos explains how media and communication figure prominently into both terrorism and counterterrorism. Each new communication technology increased terrorists' ability to exploit the expanding news industry for their purposes. Terrorists recognized the utility of the Internet and other means of communication early on: the Internet allows terrorists to circumvent the gatekeepers of the traditional media and communicate with each other as well as with individuals and groups around the globe. The Internet is a global means of communication and an unprecedented source of information, it is easily accessible, inexpensive, mostly unregulated, and it allows users to remain anonymous, giving them access to potentially huge audiences and the ability to target specific groups. When extremists resort to political violence, the media gates

open for the "propaganda of the deed." Nacos remarks that terrorists typically want to publicize their political causes and depend on the mass media to explain and discuss their rationale for resorting to violence: the practice of media representatives interviewing leading terrorists and treating them like legitimate political actors elevates the status of terrorists. The emergence of mega-media organizations has resulted in greater competition and insatiable appetites for sensational infotainment[10] that is believed to keep audiences captivated and boost ratings. Terrorists are successful in utilizing the traditional and the new media for their propaganda or publicity goals as well as other media-centered objectives.[11]

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# THE DECONSTRUCTION OF THE MODERN STATE AND THE FORMATION OF GOVERNMENT NETWORKS

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ABSTRACT. Fearon writes that the incentive effects of imposing partitions on weak states apply to relations between insurgents and governments, and to relations among states. Cooper points out that what happened in 1989 was not just the end of the Cold War, but also the end of the balance-of-power system in Europe. Grant and Barysch note that both the EU and China are helping to shape a new international order. Slaughter examines the relations between government networks and traditional international organizations.

Fearon claims that an international order in which major powers go around carving up lesser powers on an *ad hoc* basis would make all states significantly less secure: the overwhelmingly accepted diagnosis of the cause of separatist nationalism implies a policy remedy no major power can stomach. There are good reasons to be skeptical of partition as a general solution to nationalist wars. There is no end of cultural difference in the world suitable for politicization in the form of nationalist insurgencies. Fearon writes that the incentive effects of imposing partitions on weak states apply to relations between insurgents and governments, and to relations among states. States have powerful incentives to naturalize the boundaries, to provide a justification for why they are as they are so as to fend off internal and external challenges. The nation-state system is not incentive compatible (the system itself creates incentives that work to undermine the system). Nationalist insurgencies are frequently initiated by small minorities within an ethnic group. Violent conflict between states and ethnic groups or their would-be leaders has been quite common in the post-World War II period. Fearon contends that a policy of ad hoc partition would implicitly fix criteria for international intervention in support of redrawing borders or otherwise reconstituting states. The leaders of the major powers realize that the formal equality of sovereign states is worth respecting.[1]

Cooper points out that what happened in 1989 was not just the end of the Cold War, but also the end of the balance-of-power system in Europe. Thinking about foreign affairs requires a conceptual map which simplifies the landscape and focuses on the main features. Europe has now moved beyond the balance-of-power system. The international system has become less unified since the end of the Cold War. While Europe is developing a more orderly security system, other parts of the world are becoming more disorderly. Cooper explains the changes that have taken place and offers a framework for understanding the post-Cold War world. Europeans face the twin challenge of making their own new model of security work while living with a world that continues to operate on the old rules. The old systems were combined to produce something like a world order of balance between empires or blocs. Major inter-state conflicts were usually outside the Cold War framework. The system lacked legitimacy: the ideologies of both sides rejected the division of the world into two camps. The end of the Cold War has brought the re-arrangement of the international scene and domestic change. What came to an end in 1989 were the political systems of three centuries: the balance-of-power and the imperial urge. Cooper says that the imperial urge is dead in the countries most capable of imperialism. Where the state is too weak to be dangerous, non-state actors may become too strong. An important characteristic of the modern order is the recognition of state sovereignty and the consequent separation of domestic and foreign affairs. The collective-security element of the UN Charter represents an attempt to throw the weight of the international system behind the *status quo.* The European Union is a developed system for mutual interference in each other's domestic affairs. Democracy and democratic institutions are firmly wedded to the territorial state (identity and democratic institutions remain primarily national). Traditional states will remain the fundamental unit of international relations for the foreseeable future. Cooper puts it that Europe should consist more or less entirely of states which are no longer governed by the territorial imperative. NATO and the EU have played an important role in reinforcing the fact that Western Europe countries no longer want to fight each other. The EU represents security through transparency, and transparency through interdependence. There is a new European order based on openness and mutual interference. Lying behind the post-modern international order is the post-modern state. The decon-

struction of the modern state proceeds rapidly. The world would be a safer and more peaceful place if countries fought only when there are vital interests to defend. In Western Europe we are moving towards a system of overlapping roles and responsibilities.[2]

Grant and Barysch note that both the EU and China are helping to shape a new international order. The rise of the new economic powers is affecting the fabric of international diplomacy. Two kinds of multipolarity are plausible: one competitive (based on the assertion of national power), the other cooperative (based on multilateral rules and organizations). The new international system will be predominantly multilateral. China and the EU are both regional powers intent on developing a political clout that matches their economic weight. China has built increasingly close ties with several Latin American governments. Grant and Barysch claim that a serious chill between the EU and China would diminish the prospect of China engaging with and helping to shape global multilateral institutions. China has been strongly attached to the Westphalian principles of national sovereignty andnoninterference. There is a genuine evolution in Chinese thinking on multilateralism. According to Grant and Barysch, China's foreign policy is somewhere between the extremes set by the liberal internationalists and the assertive nationalists. Europeans have good reasons to be optimistic about China's future. Grant and Barysch analyze the current state of China-EU relations, look at the growing economic tensions between them, and their common interest in an open international trading system, consider the impact of US policy on the EU-China relationship, and make the case for a new kind of strategic partnership, focused on climate change, Africa and nonproliferation (Europe's dialogue with China should focus on working through, and strengthening, multilateral institutions). EU and China have a dense political relationship, including dialogues on subjects that range from human rights to science, migration and monetary policy. A strategic relationship should cover not only economics, but also high politics and questions of security, and should focus on a smaller number of major priorities. The EU's relationship with China has dealt with questions such as whether China should be clasified as a market economy status, or whether the EU should place claims on the number of Chinese bras imported. The member-states perceive themselves as having different short term commercial interests in China. The two sides do not engage in an organized dialogue that sets priorities and focuses on

the long term. Grant and Barysch think that the relationship is likely to become more strategic, for three reasons: (i) the EU is slowly becoming a more coherent actor in the field of foreign policy (when the EU governments have a common position, the Union should be able to represent that position more effectively), (ii) China wants its relationship with the EU to become more strategic (a multipolar world is both a description of the reality that is emerging in the 21st century, and desirable), and (iii) China is moving to the top of the agenda of European politicians (many people who never thought much about China have become aware of its growing economic might, as well as the accompanying opportunities and problems).[3]

Slaughter examines the relations between government networks and traditional international organizations. Regulatory or judicial networks with a particular substantive focus can network with one another to address a particular problem or set of problems. The transgovernmental networks of the Commonwealth and international institutions like the UN or the WTO are necessary, and complement each other, in an effective global governance system. The Commonwealth is a forum for multiple policy-development meetings at the transgovernmental and transnational levels. The creation of a genuinely global networked order will mean considerable expansion of many existing functional networks to include a much wider range of countries. In their horizontal form, government networks are looser and less coercive than other forms of international organization. In their vertical form, government networks can be the critical ingredient that gives a supranational organization real power. Slaughter asserts that a disaggregated world order would include vertical as well as horizontal government networks. States have the option of ensuring that primary power remains in the hands of national authorities, with supranational entities playing a subsidiary role. Government networks can exist both within and alongside formal organizations in a wide variety of modes.

Slaughter says that nation-states coming together and committing to international obligations that require extensive domestic implementation can trigger the formation of government networks to fulfill these obligations. The "EU method" of legislating at the supranational level but implementing at the national level requires the formation of government networks. International organizations are increasingly differentiated in terms of the types of functions performed within them and by them. The ability to use government

networks as the working machinery of a formal international treaty or convention provides a guarantee of continuing respect for national sovereignty in the implementation of international commitments. Government networks span every region in the globe, linking the majority of the world's countries in one way or another. States entering into treaties and creating accompanying organizations can also create government networks directly. Slaughter explores both what government networks can do now and what they could do in the future, if they were self-consciously created and used as primary mechanisms of global governance.

Slaughter discusses the present impact of government networks in terms of convergence, but also informed divergence of national rules, principles, and judicial decisions around the world, addresses improved compliance with international agreements through capacity building and through vertical networks, and claims that government networks improve cooperation due to network effects and to the availability of new regulatory approaches through government networks that are particularly suitable for addressing a host of global problems. Information networks promote convergence through technical assistance and training. Some regulatory information networks have an explicit agenda of convergence on one particular regulatory model. A way to understand the power of government networks in promoting convergence is through their role as distillers and disseminators of credible information in a world of information overload.[4]

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# THE RISE OF GLOBAL POLICY NETWORKS

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ABSTRACT. Grant and Barysch maintain that the strengthening of multilateral rules and institutions should be a priority for the strategic dialogue and an overarching objective of the partnership. As Bava puts it, the challenge is the transformation of the economy, coupled with improved human resource development and governance. Slaughter argues that networks of government officials increasingly exchange information and coordinate activity to combat global crime and address common problems on a global scale.

Grant and Barysch maintain that the strengthening of multilateral rules and institutions should be a priority for the strategic dialogue and an overarching objective of the partnership. The EU and its member-states are doing a lot to help China make its economy greener and more energy efficient (in 2007 China overtook the US to become the world's biggest emitter of carbon dioxide). The EU and its member-states have established a broad range of projects on energy and climate change with various parts of the Chinese government. The focus of the "EU-China climate change partnership" is the transfer of technologies for cleaner and renewable energy at minimal cost. China's rulers could use the state media to educate the public, and they could try to force local authorities to enforce environmental laws and energy efficiency targets. China's leaders may decide that both the stability of their regime and the global clout of their country depend on a China-first policy of untrammelled growth. Grant and Barysch explain that Europe's leaders should make the point that there is no more important single issue in EU-China relations than climate change. A partnership between the EU and China can only succeed if they work together effectively in international organisations. The EU and China will make the most of their expanding economic relationship if they both support an international system of trade and investment rules. China is an economic superpower that is also a diplomatic and military power in its neigh-

bourhood. China says that it cannot be expected to assume major responsibilities in global talks on trade or climate change because it is still in the process of becoming rich. The EU should argue to the Chinese that strong global rules on trade and investment are in their interest. The Europeans should show their willingness to support serious reforms of international financial institutions.

Grant and Barysch argue that the Europeans should use their dialogue with the Chinese on global governance to bring China closer to existing economic institutions. The Europeans are well-placed to claim that multilateralism can serve China's interests at the global level. China's model of economic development is leading to friction with the EU and the US. The EU and its member-states have a poor record of thinking strategically about their interests in foreign policy. China needs open markets, clear rules on trade and strong dispute settlement mechanisms. The EU and China should work together to convince the world's other powers to maintain an open global system. Growing economic tensions risk spilling over to the still fragile political relationship between the EU and China.[1]

Bava emphasizes that the 21st century is touted to be the Asian age, belonging to China and India. Two issues are shaping India's rise: the political dividend it has garnered as the world's largest democracy and its growing economic status. India's performance in soft infrastructure has changed the perception of the Indian economy to a major extent. India's engagements with the regional and global levels are seen reflected in four sets of relationships: (i) there is the immediate region of South Asia, where India shares a border with 6 other countries (regional conflicts have prevented South Asia from emerging as a strong economic entity and impeded the economic benefits to the countries), (ii) the major Powers – US, EU, China, Russia and Japan (the presence and role of the US and China influence the political dynamics and strategic stability of South Asia), (iii) a set of relations reflects an expanding set of networks with South-East Asian countries (aimed at enhancing trade and economic relations), and West Asia and Central Asia (focused on strengthening and further securing India's energy security), and also covers the Indian Ocean and littoral, and (iv) the engagement with Latin America and Africa, where India is actively pursuing its energy requirements.

As Bava puts it, the challenge is the transformation of the economy, coupled with improved human resource development and

governance. India's perception of its own role and the perception of the others is evolving and shifting. In India, foreign policy making has long been the purview of the government. The country's economic modernization and liberalisation program is proceeding slowly. One sees a disjunction between India's current and potential global economic and political role. India is seeking to build strategic political and economic alliances at the bilateral, regional and global level that hold promise of rich security dividends. India looks at the region as a natural trading partner. The role of Indian diasporas and a growing political conscious of its influence in the US and Great Britain is earning India valuable political and economic mileage. Bava argues that India seeks to articulate its national interest but to speak for development issues. India will increasingly be called upon to take a political stand. India's foreign policy demonstrates an increasing tempering of idealism with pragmatism. India's foreign policy shows a mix of balancing and hedging of interests (it will enter into a security provider role only within the UN framework). Current institutions of global governance are a product of World War II and do not reflect the current changing geopolitical situation. India is targeting states that will bring it specific and tangible security, political and economic benefits. India's political and economic relations with the existing major powers and emerging powers will have a major impact on future global political and economic governance. Indian foreign policy seeks to enhance its power and influence by enhancing bilateral cooperation with the US, Europe/ EU, China, and Russia. Civilizational states like China and India will be players in changing world politics.[2]

Slaughter argues that networks of government officials increasingly exchange information and coordinate activity to combat global crime and address common problems on a global scale. Governments must be able not only to negotiate treaties but also to create the capacity to comply with them. A world of government networks, working alongside and even within traditional international organizations, should be particularly attractive to the United States. Government networks could provide multilateral support for domestic government institutions in failed, weak, or transitional states. Government networks cast a different light on U.S. power, one that is likely to engender less resentment worldwide. The international institutions created in the late 1940s are outdated and inadequate to meet contemporary challenges. Slaughter holds that the

diversity of the peoples to be governed makes it almost impossible to conceive of a global demos. A major element of global governance has been the rise of global policy networks. Global policy networks grow out of various "reinventing government" projects (they focus on the many ways in which private actors and perform government functions). We need global rules without centralized power but with government actors who can be held to account through a variety of political mechanisms. A world order based on government networks holds great potential. Government networks have developed their own identity and autonomy in specific issue areas. Slaughter asserts that government networks have become the signature form of governance for the European Union, and are driven by many of the multiple factors that drive the hydra-headed phenomenon of globalization itself. Government networks offer a flexible and relatively fast way to conduct the business of global governance, coordinating national government action while initiating and monitoring different solutions to global problems. Government networks can interact with a wide range of NGOs, civic and corporate, but their responsibilities and constituencies are far broader. The significance of the concept of the disaggregated state becomes fully apparent in contrast to the unitary state. The fiction of a unitary will and capacity for action has worked well enough for purposes of description and prediction of outcomes in the international system.

Slaughter points out that the foundational premise of state sovereignty traditionally assumed that members of the international system have no right to pierce the veil of statehood. The paradigmatic form of international cooperation is the multilateral international convention. Slaughter describes the world as it is when viewed through the lens of disaggregated rather than unitary states: a network is a pattern of regular and purposive relations among like government units working across the borders that divide countries from one another and that demarcate the "domestic" from the "international" sphere. Slaughter distinguishes among regulatory networks that are located within traditional international organizations, those created as a result of executive agreements, and those generated spontaneously through increasingly regular contacts between specific regulators, identifying three broad types of networks: information networks, enforcement networks, and harmonization networks. Judges are forming their own organizations and are actively developing principles that allow them to cooperate better in transnational liti-

gation (they participate in both information and enforcement networks). "World order" describes a system of global governance that institutionalizes cooperation and sufficiently contains conflict. International organizations must constitute an international bureaucracy equivalent in form and function to the multiple domestic bureaucracies of the states "underneath" them. Global governance is a matter of addressing the issues and resolving the problems that result from citizens going global. Financial regulators are becoming accustomed to describing the new international financial architecture as a combination of networks with traditional international institutions. Slaughter outlines a conception of a disaggregated world order based on government networks, describes the more limited but critical role that could be played by networks between supranational officials and their national counterparts, and explores the possibility for international organizations themselves to disaggregate into judicial, regulatory, and legislative components. A world order based on a combination of horizontal and vertical government networks could be both a feasible and a desirable response to the globalization paradox. States can be disaggregated for many purposes and in many contexts and still be completely unitary actors when necessary. The structural core of a disaggregated world order is a set of horizontal networks among national government officials in their respective issue areas. Horizontal information networks bring together regulators, judges, or legislators to exchange information and to collect and distill best practices. Enforcement networks spring up due to the inability of government officials in one country to enforce that country's laws. Harmonization networks bring regulators together to ensure that their rules in a particular substantive area conform to a common regulatory standard. [3]

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# THE EFFECT OF INSTITUTIONAL THICKENING ON GLOBAL GOVERNANCE OUTCOMES

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ABSTRACT. Slaughter notices that government networks that were constituted as mechanisms of global governance could acknowledge the power of discussion and argument in helping generate high-quality solutions to complex problems. Hettne posits that governance can be exercised by state or public sector actors, but also by non-state actors. Hansen et al. explain the similarities and differences between the security strategies of Russia, Europe and the Middle East since the end of the Cold War until 2007. Drezner holds that the proliferation of rules, laws and institutional forms can have a paradoxical effect on global governance.

Slaughter notes that states can decide that the only way to reduce tariffs or subsidies is to adopt a body of rules prohibiting them and allow an independent court or tribunal to enforce those rules. The European Union has created Europe-level "information agencies," designed to collect and disseminate information needed by networks of national regulators. Slaughter sets forth three ways in which government networks currently contribute to world order: (1) by creating convergence and informed divergence; (2) by improving compliance with international rules; and (3) by increasing the scope, nature, and quality of international cooperation. Government networks improve compliance with international treaties and customary law. Government networks enhance international cooperation by providing the mechanisms for transferring regulatory approaches that are proving increasingly successful domestically to the international arena. Government networks are the ideal mechanism of international cooperation on international problems that have domestic roots. Vertical government networks could be designed to implement international rules and strengthen domestic institutions in any number of ways. Vertical networks can strengthen, encourage, backstop, and trigger the better functioning of their counterpart domestic institutions. Slaughter notices that government networks that were

constituted as mechanisms of global governance could acknowledge the power of discussion and argument in helping generate high-quality solutions to complex problems. Government networks exercise different types of power to accomplish results. Slaughter proposes five basic principles designed to ensure an inclusive, tolerant, respectful, and decentralized world order: the horizontal norms of global deliberative equality, legitimate difference, and positive comity, and the vertical norms of checks and balances and subsidiarity. Some set of constitutional principles must operate at a metalevel across all types of government networks.

The principles Slaughter puts forward reflect values of equality, tolerance, autonomy, interdependence, liberty, and self-government. The process both of identifying specific values and translating them into principles must be a collective one. The state is disaggregating: its component institutions are all reaching out beyond national borders in various ways, finding that their once "domestic" jobs have a growing international dimension (they encounter their foreign counterparts and create horizontal networks). Government networks can significantly expand the capacity of national governments to engage the host of nonstate actors who are themselves operating through networks. The only way to formalize networks is to negotiate an intergovernmental international organization, by treaty, and reconstitute an existing network as a committee of the organization. The entire world of transgovernmental relations remains largely hidden from the formal rules and foundational principles of traditional international law. The role of "the executive" in foreign affairs includes a variety of diverse actors networking with their foreign counterparts for different reasons. Slaughter examines the different places that executive transgovernmental networks can be found, both within international organizations and without, and highlights the pioneering nature of EU governance, which is dependent on networks of both ministers and regulators. The most concentrated site for multilevel governance is the European Union itself: it has emerged as a regulatory state, exercising power through rule making rather than taxing and spending.

Slaughter identifies three types of networks, each arising and operating in a different context: (i) the networks of executive officials that develop within established international organizations, (ii) the networks of officials that develop under the umbrella of an agreement negotiated by heads of state, and (iii) the networks of

national regulators that develop outside any formal framework. The transgovernmental regulatory networks that have spurred the greatest concern are those that have emerged outside formal intergovernmental agreements. It is possible to envision global governance by government networks as radiating outward from the European Union itself. Slaughter holds that the relative density of the concentric circles of government networks spreading from various regions in the world reflect a host of different factors: relative homogeneity of political systems; degree of trust among government officials; degree of economic development; degree of economic interdependence, shading into genuine economic integration; and relative willingness of national governments specifically to delegate government functions beyond their borders to networks of national officials. In one category of networks, talking is the primary activity. In a second category of networks, talk leads to action. A third category comprises harmonization networks. These three types of networks have overlapping functions. Information exchange through transgovernmental networks is important among agencies that engage in the business of gathering information.

Slaughter states that information networks often actively collect and distill information about how their members do business. Participants in information networks can actively cooperate in uncovering new information of value to all members. Once a network is established, it essentially becomes a conduit for information about members' reputations. Specific government networks embody a system of regulation by information, in which power flows from an ability to exercise influence through knowledge and persuasion. Enforcement cooperation is the sharing of information and the collaborative development of specific enforcement strategies in individual cases. Harmonization efforts demonstrate the complex interrelationship between formal international agreements, transgovernmental interaction, and domestic regulation. Judicial networks have developed differently from regulatory networks, but comprise a distinctive and increasingly important world of their own. In cataloguing actual outcomes of government network activities, Slaughter describes the exercise of different kinds of power (government networks are pioneering various forms of soft power), and analyzes the current impact of government networks on world order in three categories: convergence, compliance, and cooperation. Government networks promote convergence of national laws and regulations, can improve

the quality and depth of cooperation across nations, and are uniquely capable of addressing the many global problems that flow from domestic sources. Slaughter maintains that government networks co-exist and increasingly interact with networks of nongovernmental actors, both from the private and nonprofit sectors. The coercive power of vertical networks is much greater than that of horizontal networks (they have a critical role to play in making selected international agreements as effective as possible).[1]

Hettne posits that governance can be exercised by state or public sector actors, but also by non-state actors. Governance can be seen as the content as well as the process of world order. New forms of governance represent the political content of the emerging transnational space created by globalization. Globalisation can be conceived of as a further deepening and expansion of the market system. Globalism is the current hegemonic development paradigm. The liberal view of globalization stresses the homogenising influence of market forces towards an open society. The purpose of political order is to facilitate the free movement of economic factors. Regionalisation needs a strong civil society at the regional level. Global cosmopolitanism emphasises the role of community at the global level and the formation of global norms.[2]

Hansen et al. explain the similarities and differences between the security strategies of Russia, Europe and the Middle East since the end of the Cold War until 2007. The actors had limited room for manoeuvring because of the massive power gap to the United States. States have been inclined to pursue bandwagoning strategies in order to adapt to the current, unipolar world order if located in relatively secure areas. Ideological compatibility and the possession of nuclear weapons dampen the incentive to pursue hard balancing strategies. The vast majority of states has lost strategic importance and foreign policy leverage. Hansen et al. characterize the contemporary world order as unipolar, because a defining characteristic is the asymmetric distribution of power leaving the United States as the only superpower. Hansen et al. focus on the states that lost relatively as a consequence of the shift from bipolarity to unipolarity and seek to explain how this loss has affected their foreign policy strategies. In order to explain world politics, we must understand the challenges, options and choices of the losers as well as those of the winners. The losers face the massive task of formulating and implementing policies of adaptation to the unipolar world order.

Hansen et al. assume the other range of responses of the other states to be restricted, because they have only one option for superpower alignment: the United States, that a state's response to a particular world order is influenced by the likelihood of military conflict, and that a state's response to a particular world order is affected by its ideological distance to the great power(s). Hansen et al. investigate how relative power, relative security and relative ideology affect the choice of offensive and defensive security strategies, and define a unipolar world order as the combination of (i) a highly asymmetric distribution of power in the international system leaving one state significantly stronger than the rest, and (ii) the political project of the unipole. Hansen et al. focus on the "grand strategies" in the realm of security politics (i.e. the formulation and implementation of strategies necessary to preserve or improve the international position of the state).[3]

Drezner holds that the proliferation of rules, laws and institutional forms can have a paradoxical effect on global governance. Issue linkage and organizational reputation can *temporarily* increase the viscosity of global governance. Drezner revisits the realist-institutionalist debate to understand why institutions initially contribute to rule-based outcomes, discusses why the proliferation and legalization of global governance structures can undercut rather than reinforce institutionalist theories of world politics, and examines the Doha Declaration to determine what factors prevented short-term forum-shopping on intellectual property rights.[4]

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# THE IMPORTANCE OF SOCIAL AND INSTITUTIONAL FACTORS FOR FACILITATING AND ACHIEVING SUSTAINABLE AGRICULTURE

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ABSTRACT. Boulanger and Messerlin argue that more international trade is essential for an increase in the global resilience of agriculture and that better targeting of public and private policies is critical. On Karami and Keshavarz's reading, sustainability, climate change, and replacing fossil fuels with renewable energy are relatively new challenges for agriculture. Wu and Sardo argue that an effective, long-term sustainability of agriculture must primarily gain farmers acceptance. Wilson analyzes the recent *transition* from agriculture as a producer of food and fibre to that of agriculture as a producer of *multifunctional* products and spaces. Casper affirms that new discoveries and farming techniques make agriculture more productive, efficient, and friendly to the environment.

Boulanger and Messerlin argue that more international trade is essential for an increase in the global resilience of agriculture and that better targeting of public and private policies is critical. European tax-payers are likely to grow more reluctant to pay subsidies to large farmers that are based on increasingly faraway productions and yields. The political legitimacy of subsidies to farmers for the provision of environmental services is unclear. Designing research and development investments (subsidies) is not straightforward. European funds should be devoted to stimulate research and development appropriate to countries poorer than Europe.[1]

Murphy examines the wider scientific and social contexts of modern plant breeding and agriculture, and contends that the long-term success of international agriculture is dependent on a diverse, mixed ecology of public and private agents and agencies. One of the primary concerns of global agriculture over the coming decades should be to provide sufficient food to sustain increasing human

populations.[2] Dakora et al. maintain that sustainable agriculture depends on appropriate agricultural practices and, to maintain high yields, it requires the use of plant cultivars that respond to environmental constraints. There are a range of identifiable constraints to adoption of BNF in agriculture for poverty alleviation. Legume crops are an important source of protein, oil and secondary metabolites and they are also used as a natural nitrogen source in agriculture. small scale farmers can adopt soybean and use of BNF to commercialise agriculture.[3] Lichtfouse points out that agriculture is a central driver for solving most society issues (agriculture is the activity that provides food, renewable energies and materials to humans).[4]

Karami and Keshavarz write that the results of several decades of attempt to achieve sustainable agriculture have not been satisfactory (conventional agriculture is still the dominant paradigm): in promoting sustainable agriculture our perception should shift from a technocratic approach to a social negotiation process that reflects the social circumstances and the power conditions. Agriculture has made great progress in feeding the ever-increasing population. On Karami and Keshavarz's reading, sustainability, climate change, and replacing fossil fuels with renewable energy are relatively new challenges for agriculture. Sustainability has changed our understanding of agriculture. Modern agriculture has diminished the importance of farming as a way of life. There is a growing skepticism about the ability of modern agriculture to increase productivity in order to meet future demand. Karami and Keshavarz claim that the way out of current crisis of promoting sustainable agriculture is to shift our perception from a technocratic approach to a social negotiation process. Agriculture is social as much as agronomic and ecological. Agriculture is a system of processes that take place within a threefold environmental framework, biophysical environment, socio-political environment, and economic and technological environment. Rural sustainability is being undermined by agriculture (agriculture is the dominant user of rural land). Sustainable agriculture must be socially constructed on the basis of different perspectives and through stakeholders' interaction.

Karami and Keshavarz observe that there is a consensus on three basic features of sustainable agriculture: (i) maintenance of environmental quality, (ii) stable plant and animal productivity, and (iii) social acceptability. The way out of the negative environmental consequences of agriculture is only by going into the process of

further modernizing agriculture. Technology adoption in agriculture is related to demographic characteristics of farmers. The impact of attitude and behavior of rural men on sustainability of agriculture is often acknowledged. Agriculture is vital for sustainable rural development and recognized as a main means for reducing poverty and ensuring economic growth. The social impact assessment is of particular importance in considering the social sustainability of agriculture. Social sustainability is a core dimension of sustainable agriculture.[5]

Wu and Sardo argue that an effective, long-term sustainability of agriculture must primarily gain farmers acceptance. Today's agriculture has achieved the scientific and technical ability to provide food for a steadily increasing world population. Strategies for a sustainable agriculture are urgently needed and an arsenal of sometimes contrasting ways to achieve sustainability is available. Progress towards sustainability can be achieved provided that prejudice-free, flexible *system approaches* are adopted. An agriculture based on subsidies is not sustainable.[6]

Wilson analyzes the recent *transition* from agriculture as a producer of food and fibre to that of agriculture as a producer of *multifunctional* products and spaces. A new *consciously orchestrated* multifunctional agriculture may begin to take shape in both the developed and developing world. The conceptualisation of multifunctional agriculture is only possible when considered against the background of debates on the transition to post-productivism. Wilson claims that only by contextualising multifunctionality in the context of debates on the transition from productivism to post-productivism will it be possible to understand what multifunctional agriculture is about and to anchor the notion of multifunctionality theoretically in the context of agricultural change. Global agriculture has witnessed profound changes in food and fibre production, actor spaces, policy frameworks, food regimes, ideologies, and impacts on the environment. The notion of *multifunctional agriculture* may be a more appropriate concept to describe and comprehend contemporary agricultural/rural trajectories. Wilson says that multifunctionality should be understood as an overarching normative *concept* that both describes *and* explains contemporary agricultural change.

Wilson emphasizes the importance of geography and spatial patterns in the conceptualisation of multifunctional agriculture. Current debates on the transition to post-productivist agriculture share

many similarities with debates about "other" transitions. Discussions about multifunctional agriculture have to imply *normative* and *subjective* value judgements. The notion of *multifunctional agriculture* can only be fully appreciated within the framework of a possible parallel "territorialisation" of Fordist/post-Fordist modes of accumulation. The *farming techniques* dimension provides relatively tangible evidence for conceptualisations of both productivist *and* post-productivist agriculture. *Environmental impacts* of agriculture have increased through productivist farming practices. Wilson stresses that the environmental impacts of productivist agriculture has mirrored those of *industrial productivism* under Fordist modes of production. Intensification of agriculture is usually associated with increased *biochemical inputs*. Productivist agriculture has had a substantial *impact on soils* through soil pollution linked to increased use of biochemical inputs, soil compaction through the use of heavy machinery, and soil erosion and salinisation through over-intensive irrigation. The notion of productivist agriculture cannot be disassociated from parallel debates and developments in the social sciences that have influenced the way agricultural change has been conceptualized.

Wilson discusses conceptualizations of *post productivist* agriculture which has superseded productivism. Agriculture continues to be a dominant process despite reduced farm numbers and the loss of political power of agricultural actors. Similarities in most European countries can be found for the relative loss of the central hegemonic position of agriculture in society. Conceptualizations of post-productivist agriculture have largely been based on the experience of the UK. Wilson discusses how a *revised transition model* may form a useful basis for reconceptualising multifunctional agriculture. The notion of *multifunctional agriculture* better encapsulates the diversity, non-linearity and spatial heterogeneity that can currently be observed in modern agriculture and rural society.[7]

Casper affirms that new discoveries and farming techniques make agriculture more productive, efficient, and friendly to the environment. Casper looks at the development of farming, where the agricultural areas of the world are located, and how agriculture has shaped civilization over time. The primary aim of agriculture is to have the land produce abundantly and to protect it from deterioration and misuse. Casper maintains that climate and soil are critical to the success of agriculture. Modern agriculture is much more efficient

and more food can be produced today than ever before. American agriculture is always being counted and measured, and prices are analyzed and reported so that people have meaningful information (people involved in agriculture are always looking for new and innovative ways to conserve natural resources and improve farming techniques). Aquaculture is the fastest-growing sector of U.S. agriculture, as well as global food production. The success of agriculture is closely tied to soil fertility and health. Alternative agriculture places more emphasis on conservation of the land and preserving resources. Sustainable agriculture looks at the farming cycle as a whole system. Organic farming (a small section of agriculture) has been growing over recent years. An increasing amount of agricultural production in the United States originates from within metropolitan areas (urban agriculture is the conversion of unused parcels of land in cities into sustainable food-production areas). [8]

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# SHAPING A NEW WORLD ORDER

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ABSTRACT. Slaughter catalogues the more specific ways in which government networks respond to global problems and could do so even more creatively and effectively in the future. Grant and Barysch hold that the EU will follow the US in using more "antisubsidy" tariffs to keep out Chinese goods that are deemed artificially cheap because of improper state aid. Laffey contends that Chomsky's political writings are a significant resource for thinking about contemporary world politics. Kedourie states that nationalism is a doctrine that pretends to supply a criterion for the determination of the unit of population proper to enjoy a government exclusively its own.

Slaughter thinks that judges are forging relationships with their regional and international counterparts. The catalyst for the creation and implementation of the EU legal system was a set of relationships developed between the ECJ and lower national courts in EU member states. In the EU legal system (the most developed set of vertical networks), neither national nor international tribunals hold the definitive upper hand. Judges are drawing on a domestic understanding of transjudicial relations rather than a diplomatic one. Slaughter sets forth five different categories of judicial interaction: constitutional cross-fertilization, the construction of a global community of human rights law, relations between national courts and the ECJ, private transnational litigation, and face-to-face meetings among judges around the world. Judges are more likely to reach consensus on the relevant cases from courts around the world when consulting on a particular issue than on a particular answer or position. When a developing international rule moves too far out of line with a prevailing domestic democratic consensus, the national courts will not follow. On Slaughter's reading, the growth of judicial cooperation in transnational litigation is enabled and characterized by three important developments: (i) courts are adapting the general notion of international comity, or the comity of nations, to fit the specific needs of courts, (ii) judges are necessarily evaluating the

independence and quality of fellow judges of other nations, and (iii) judges are negotiating with one another to determine which national court should take control over which part of multinational lawsuits. Judicial comity provides the framework and the ground rules for a global dialogue among judges in the context of specific cases, and has four distinct strands: (i) a respect for foreign courts qua courts, rather than simply as the face of a foreign government, (ii) the related recognition that courts in different nations are entitled to their fair share of disputes, (iii) a distinctive emphasis on individual rights and the judicial role in protecting them, and (iv) a greater willingness to clash with other courts when necessary, as an inherent part of engaging as equals in a common enterprise. Where courts begin from a presumption of identity, then they scrutinize each other according to the same criteria that they would apply to other domestic tribunals in the same circumstances. The networks of national constitutional courts are focused on the provision and exchange of information and ideas. Networks of courts in transnational litigation are essentially enforcement networks. Relations between the European Court of Human Rights and constitutional courts outside Europe are information networks that may become harmonization networks. The legislature's function is to represent as much as it is to regulate (legislators are most directly tied to territorially defined policies). The high turnover among legislators gives them little incentive to invest in long-term relationships with their foreign counterparts. Parliamentarians lack the specialized technical expertise and disengagement from popular politics that have played such a large role in bolstering judicial and regulatory networks. Regulatory networks are highly issue-specific and are composed of members with largely the same professional training and socialization. Different parliaments are organized differently in terms of committee structures and the allocation of power among individual legislators. Individual legislators are more likely to come together across borders based on common party affiliation or a common interest in a particular set of issues.

Slaughter sets forth a number of ways in which legislators are networking with one another on specific political issues, whether within or without existing international organizations, discusses the wide array of legislative networks, including actual regional parliaments, that exist both to express and advance regional identity and also to counteract or at least slow down a variety of forces pushing

regional economic integration, and turns to the ways in which legislators are bolstering fellow legislators around the world, through the professionalization of democratic representation and the socialization and support of individual representatives. Many legislators are networking with one another to enhance their collective voice both inside international organizations and independently. National legislators periodically find themselves working together within the context of international organizations. Parliamentarians have been considerably more active in regional politics than in global politics. The European Union is gradually constructing a set of vertical legislative networks between a genuine supranational parliament and its national counterparts, similar to its vertical judicial networks. The past decade has witnessed many initiatives in EU parliamentary relations that have important implications for other parts of the world. Legislators are creating international networks of representatives elected nationally in order to counter the existing networks of national officials. Economic integration ultimately requires legislative harmonization or at least mutual recognition. Legislative, judicial, and regulatory networks, both horizontal and vertical, must fit together, and must coexist with traditional international organizations. Slaughter catalogues the more specific ways in which government networks respond to global problems and could do so even more creatively and effectively in the future, and distinguishes among three broad categories of government networks: information networks, enforcement networks, and harmonization networks. Enforcement networks contribute to world order by helping nations enforce law they have individually or collectively determined to serve the public good. Governments acting as unitary actors can conclude treaties and establish international institutions that in turn create and host government networks. In Europe the preexisting government network is exerting the pressure to create the more formal organization at the supranational level. The phenomenon of supranational lawmaking requiring national implementation through government networks is the hallmark of the EU method of integration.[1]

Grant and Barysch write that the core of the EU-China relationship remains trade and investment. Europeans blame the burgeoning bilateral deficit on China's protectionism, industrial policies and exchangerate peg. Europe's aggressive stance risks poisoning the relationship with China. The EU should avoid use international

organisations such as the WTO and the IMF to address contentious issues. Many European businesses are becoming frustrated about the difficulties of competing in China. The EU's trade balance with China has shown a widening deficit. On Grant and Barysch's reading, there are several reasons why China is unlikely to have a future as a producer of low-cost, labour-intensive goods: (i) China itself is struggling to compete in global markets for clothes and other basic manufactured goods, (ii) China does not have an unlimited supply of under-utilized labour (the changing balance in the labour market will allow many more workers to demand higher wages and better working conditions), and (iii) China's specialisation continues to shift into more sophisticated industrial goods (if not into cutting-edge technology). Thus, the move into capital-intensive industries will mean more pressure on industries that are the mainstay of the big eurozone countries. The EU's official approach to doing business with China has traditionally emphasised cooperation rather than confrontation. Grant and Barysch hold that the EU will follow the US in using more "antisubsidy" tariffs to keep out Chinese goods that are deemed artificially cheap because of improper state aid. China has not yet been awarded market economy status by the EU. The EU sticks to its dialogue-based approach, while trying to make it more effective. The global slowdown stopped the rise of China's external surplus in the first quarter of 2008. EU countries are trying to coordinate their responses to sovereign wealth funds. The EU should encourage China to discuss currency issues in a wider format. The EU is supporting China's reform processes, in areas ranging from banking to energy savings and social security. The US engages with China through multiple channels, such as the strategic economic dialogue.[2]

Laffey contends that Chomsky's political writings are a significant resource for thinking about contemporary world politics (his analysis of world politics grows out of his understanding of power and its significance for human freedom). The collapse of the Soviet Union in the early 1990s was the harbinger of a new world order. International military, trade, and political relations were progressively institutionalised, leading to growing interdependence between states in Western Europe, North America and East Asia. Capitalist relations of ownership and production are taken for granted. The liberal world will respond with force if necessary to defend itself, as the responses to Iraqi aggression in Kuwait and to Al-Qaeda demonstrate. Much of Chomsky's work stems from an

interest in how power shapes the context of people's everyday lives. Laffey writes that Chomsky regards private property as an obstacle to human freedom (a rich understanding of institutionalised power is a necessary prerequisite to remaking the world in ways that enhance human freedom). Chomsky sees the corporation as an authoritarian and totalitarian organization. The legal personality of the modern corporation and the wider institutional context within which it operates are a political achievement. Corporations represent concentrations of unaccountable power (they are an obstacle to democracy and the exercise of human freedom). The foreign policy of a particular state reflects domestic structures of class power. Patterns in foreign policy are traceable to these structures of power and interest. The liberal order is peaceful and benign, both internally and in its relations with the outside. Within social formations shaped by dramatic differences in wealth and power population control is a persistent problem. Population control takes coercive forms. Careful attention to the structures of everyday life in liberal societies reveals that they are not peaceful. Analysis of US foreign policy tends systematically to accept at face value the stated aims of policy-makers. The relationship between intellectuals and power has been a constant theme in Chomsky's work.[3] Kedourie states that nationalism is a doctrine that pretends to supply a criterion for the determination of the unit of population proper to enjoy a government exclusively its own, for the legitimate exercise of power in the state, and for the right organization of a society of states. "The doctrine holds that humanity is naturally divided into nations, that nations are known by certain characteristics which can be ascertained, and that the only legitimate type of government is national self-government."[4]

## REFERENCES

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