



The Globalisation Timeline

WARD RENNEN AND PIM MARTENS

International Centre for Integrative Studies, University of Maastricht, Maastricht, The Netherlands

ABSTRACT

Globalisation is a complex phenomenon; it is the interactive co-evolution of millions of technological, cultural, economic, social and environmental trends at all conceivable spatiotemporal scales. Given this complexity, any attempt to give a satisfactory definition of globalisation is doomed to failure. Rather, it makes sense to take a pluralistic approach, analysing past and current processes taking place in multiple domains. In this paper we therefore identify key historical landmarks of economic, political, technological, social-cultural, and environmental developments that have pushed the process of globalisation further. Using the globalisation timeline prevents a simplification of the complexities involved in approaching globalisation, while allowing a flexible definition of contemporary globalisation.

Keywords: Globalisation, timeline, pluralistic approach.

1. INTRODUCTION

Nowadays, globalisation seems to be the topic of fierce debates, protests and even violent confrontations between alleged anti-globalists and national governments. The massive protests against globalisation became visible for the first time during the World Trade Organisation (WTO) summit in Seattle (December 1999). The massive protest in Seattle became the starting-signal for more protests any time the WTO, World Bank, G8, or multinationals were to meet somewhere – as became apparent in Quebec, Geneva, Göteborg, and Genoa. Although the anti-globalist movement was initially portrayed as a bunch of rioting teenagers, there has been a gradually growing awareness that this protest movement is quite heterogeneous. It consists of various groups of people that do not all share the same vision. Some are against globalisation in its current form, which they claim is predominantly capitalist in character, whereas others do not contest a capitalist-orientated globalisation as such, but want a more democratic and equal distribution of the benefits of globalisation.

However, in the whole discussion about globalisation hardly anybody seems to deny the phenomenon as such. Apparently, it is widely accepted that we are living in a globalising world. The debates and protests focus mostly on how globalisation should be defined, and how it should be directed – if it can be directed at all. Interestingly,

globalisation became a hot topic from the late 1980s on, but hardly anybody mentioned it in the early 1980s, which brings us to the question why globalisation is such a hot issue now, but not twenty years ago?

There are three dominant views in historical analyses of globalisation: a sceptical approach, a hyperglobalist approach, and the transformationalist thesis [1]. Those who follow the sceptical line argue that internationalisation and global connections are by no means new phenomena. The globalisation sceptics place cultural, economic, political, social, and technological developments on an evolutionary line, implying that globalisation has existed for centuries and that the sum of developments only changes the scale and scope of globalisation, but not the intrinsic characteristics of the phenomenon itself. The hyperglobalist approach, on the other hand, does not deny the importance of previous developments, but identifies a historical break-point after which contemporary globalisation emerged. The previous eras are described as pre-globalisation, or periods of internationalisation. The followers of the transformationalist thesis radicalize the hyperglobalist approach by arguing that globalisation itself is the major force underlying the rapid, widespread social, political, and economic changes that are currently reshaping and reconstituting modern societies and the world order [1].

Each of these perspectives on globalisation emphasizes different factors as the key elements behind the contemporary impact of this phenomenon. Moreover, each vision presupposes a different definition of globalisation. In this

paper we argue that, instead of attempting to define and determine globalisation by emphasising particular factors, it would be more useful to adopt a multi-dimensional, pluralistic approach. This would prevent a simplification of the complexities involved in approaching globalisation, while permitting a flexible definition of contemporary globalisation.

It is evident that globalisation has not appeared out of the blue. By understanding the type of factors and events that shaped globalisation, we shall be able to gain a better understanding of the overall context of the contemporary discussions about globalisation. In this paper we therefore describe globalisation by identifying key landmarks of economic, political, technological, social-cultural, and environmental developments that have pushed the process of globalisation further over a relatively short time span in several societal domains. As such, we identify five different types of aspects that underlie, or interrelate to globalisation, namely: capitalism, technology, politics, social, and cultural life. We have restricted the number of key landmarks for the sake of clarity. This is not to say that other factors, events, processes and developments do not influence globalisation, or would not be appropriate key landmarks. The selection of key landmarks that underlie globalisation serves merely as an illustration of our multi-dimensional, pluralistic approach.

2. CAPITALISM AS A STARTING POINT OF GLOBALISATION

In current debates on globalisation, fierce controversies exist about the historical dating of the phenomenon [15]. Some globalisation sceptics argue that the Industrial Revolution was the breeding ground for globalisation, while others point at the period of European colonialism that started on 12th October 1492 when Columbus discovered America. This was the era when Vasco de Gama sailed around the Cape of Good Hope and the Spanish conquistadors conquered Latin America.

In contrast to the different views on the historical dating of globalisation, most historical (sceptical) analyses of globalisation, as well as hyperglobalist and transformationalist descriptions, acknowledge that globalisation is driven by economic incentives. As Michael Hardt and Antonio Negri point out in their book *Empire* [14] globalisation can be distinguished from previous periods because it is founded on capitalism rather than international trading.

Capitalism is concerned with the accumulation of capital through a production system in which labour adds surplus value to the product (Marx, 1912. *Capital: A Critical Analysis of Capitalist Production*. London). Only labour that adds a monetary value during the production process is considered to be productive, whereas other economic systems make no distinction between productive and non-productive labour. “Only labour that generates material or

nonmaterial use value is produced according to the content” [2]. Because labour adds value to the capital employed, it is possible to accumulate capital by using productive labour. Wage labour, *viz.*, receiving a monetary reward instead of goods or services, did not exist in previous economic systems on such a large scale.

Another characteristic that distinguishes capitalism from other economic systems is related to non-productive accumulation by reinvestment of capital [3]. Previous economic systems were not characterised by capital investment and insurance on such a large scale. Surplus money was usually saved or spent on prestigious buildings or works of art, such as churches, paintings and jewellery, rather than being reinvested.

If one takes the difference between capitalism and previous economic systems into account, it is improbable that globalisation could be dated back before the emergence of capitalism. For example, the establishment and expansion of the first global trade networks of the Dutch and English colonial trading companies would not have been possible without a system of capital reinvestment, private ownership, and commercial insurance. Following this line of argumentation, two historical (key) landmarks can be identified that eluded the predevelopment phase of globalisation (see Fig. 1). The first historical landmark is the discovery of America, which symbolises the inception of colonialism. As a second key landmark, the emergence of the first multinational could be identified as a symbol of the early establishment of capitalism as the world’s dominant economic system. This happened on 20th March 1602 when the Dutch United East Indies Company (VOC) was founded. This trade organisation not only operated internationally, it also consisted of more than a hundred trading vessels and employed thousands of people, working in various areas of the globe.

3. TECHNOLOGICAL INNOVATION AS A FORCE OF GLOBALISATION

Technological innovations – in particular innovations in transport and communications technology – form a second primary foundation of globalisation. According to Langhorne, the first juncture of globalisation can be dated back to the second stage of the Industrial Revolution, with James Watt’s invention of the steam engine in 1765. Langhorne distinguishes three phases of technological innovation that enforced the process of globalisation.

The first phase is characterised by the application of the steam engine to land and sea transport, and the invention of the electric telegraph. Steamboats and steam locomotives decreased transportation time and increased transport volumes. The steamship was introduced in 1807, whereas the first successful test of a steam locomotive had to wait until 1825. The construction of railroads connected cities,

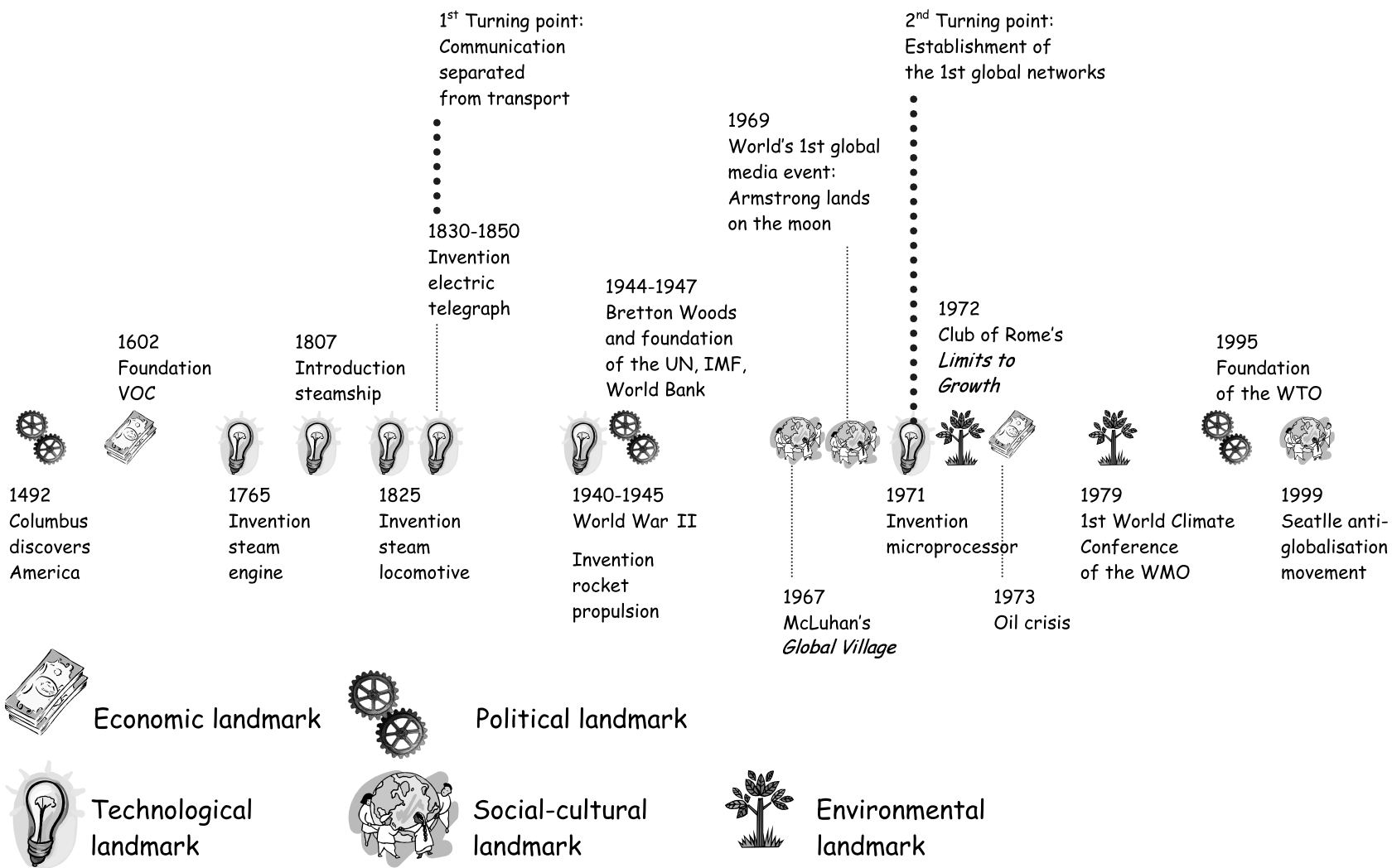


Fig. 1. The globalisation timeline (not exhaustive).

regions, nations and continents to each other, accelerating the pace of transportation. Additionally, it increased the scope of industrial activities, the geographical range and quantity of goods and people transported. It also made the distribution of information quicker and easier. The invention and improvement of the electric telegraph by Gauss, Weber, and Morse between 1830 and 1850 separated the speed of communication from transportation for the first time. This represents a historical turning point in the development of globalisation, since distances in space and time decreased significantly as a result of this invention. It enabled nation states to react and to learn more quickly from the events that occurred in their national territory, including remote areas. When the first transatlantic telegraph cable was laid in 1865, it also speeded up international communication. The invention of the telephone and automobile further increased this process by which the nation state increased its control over its territory [4]. This technological empowerment of the nation state led to a homogenisation between different regions within the nation's territory. Examples of this are the introduction of standardised clock times and national newspapers. Although this phase had its most profound impact on the nation state, it made international trade and contacts easier. As a consequence of the technological homogenisation processes, the nation states opened up trade to larger geographical units than before. In addition, international standards, such as Greenwich Mean Time, were introduced, which improved timetabling and communication for international activities [5].

The second phase began during the Second World War when German engineers working on the V2-project invented rocket propulsion. After the War, the fierce technological competition between the USSR and US led to an acceleration in the pace at which of rocket and satellite technology was developed. The technological ability to launch rockets into space made it possible to install orbiting satellites around the globe. When sufficient satellites were circling around the globe, a global, reliable communication system could be set up for the first time in human history. Although international telephone communication was possible before, the connections were usually of poor quality. The widespread use of the telephone was therefore mostly limited to national boundaries. The introduction of satellite communication improved international communication [4].

The last phase is the invention of the computer. Although the computer was invented as early as 1942, the capacities of the first computer hardly exceeded the ability of an ordinary calculator. However, the invention of the microchip in 1971 by Intel increased the speed, processing volume and efficiency of computers. Similar to the introduction of the electric telegraph, the invention of the microchip can be considered a major turning point in the development of globalisation. The microchip forms the core of contemporary information and communication technologies. The development of information and communication technolo-

gies has led to a similar revolution, reducing distances in space and time, as the electric telegraph did more than a century ago [6, 7]. Further innovations and applications of the microchip have led to the emergence and global use of the Internet and other computer communication systems. More importantly, the invention of computer technology and the microchip made it possible to construct global data networks that function as the hardware of the global financial capital market. According to Langhorne, the invention of the computer and its widespread application characterise the current phase of globalisation.

Other technological developments that should not be ignored are innovations in transport technology, such as container transport and passenger aircraft. Since the end of Second World War, the numbers of people and quantities of goods that move around the globe have increased dramatically. Although the rapid growth of international passenger flights and transport increased over a longer time span, a concentration of growth can be discerned in the 1970s. Coincidentally, this is also the same period as that when the microchip was introduced.

Although Langhorne provides us with a convincing analysis of the role of technology in the process of globalisation, his argument is rather technologically deterministic. By strongly stressing the role of technology, Langhorne underilluminates other factors and domains that also play a key role in the process.

4. POLITICAL DIMENSIONS OF GLOBALISATION

Although the interaction between the emergence of capitalism and technological innovation formed the foundation of globalisation, political dimensions cannot be ignored either. Globalisation is importantly a political process, since governments may shape or limit possibilities for private entrepreneurship. For example, by the mid-nineteenth century, Great Britain was the main political and economic power that adhered to *laissez-faire* and free trade politics. This political course led to an expansion of international economic activities. As a result, other countries, such as the Netherlands, also shifted towards free trade politics. This led to an increase not only of GDPs, but also of the Global Gross Domestic Product (GGDP). In addition international production chains and networks expanded, leading to the emergence of a world economy [8].

However, after the First World War, most national economies had to be rebuilt. Due to the War, most national governments had to focus on establishing strong national economies and decreasing economic dependency. Mines, railways, and power stations were nationalised, tariff barriers were raised to protect the national economy, and various restrictions were placed on financial transactions and speculations. In particular, this process of economic nationalisation took place after the Second World War when the Bretton

Woods agreement placed several restrictions on financial transactions and speculation, and the amount of national liquidity was coupled to the gold stocks held by national banks.

However, at the same time, many governments realised that international co-operation was necessary to prevent another World War. Although international organisations were not a new phenomenon (e.g., the International Telecommunication Union (1865), the International Telegraph Union and Universal Postal Union (1874)), many influential international and supranational organisations were founded shortly after the Second World War. The United Nations (UN) was founded in 1945. Just before the establishment of the UN, most industrialised countries had signed the Bretton Woods agreement of 1944. This agreement led to emergence of an international monetary political system.

In 1946 the International Monetary Fund (IMF) was founded, followed shortly thereafter by the establishment of the General Agreement on Tariffs and Trade (GATT) and the World Bank in 1947. In addition, the establishment of the European Economic Community (EEC) in 1957, the Organization of Petroleum Exporting Countries (OPEC) in 1960 and the Organisation of Economic Co-operation and Development (OECD) in 1961 also increased and intensified international and supranational political and economic co-operation.

It was not only economic and political power-related issues that enforced the process of global politics. The foundation of the United Nations Educational, Scientific and Cultural Organization (UNESCO) in 1945, and the United Nations International Children's Emergency Fund (UNICEF) in 1946 (permanent status in 1952), as well as the emergence of various international NGOs, such as Amnesty International in 1961 and Greenpeace in 1970, drew international attention to social, cultural and environmental issues, such as human rights and global climate change. The establishment of these international and supranational organisations are important factors underlying the emergence of global social, cultural and environmental politics, such as the Rio Conference on Global Environmental Change in 1992.

The political dimensions of globalisation should not be overestimated, though. Nowadays, many national governments are more or less forced to adapt their policies to the neoliberal ideologies that collide with the dynamics of global capitalism. At an individual level, nation-states have considerably less influence on globalisation than other factors may have. One should thus be cautious about laying too much emphasis on the political dimensions of globalisation.

5. THE SOCIAL AND CULTURAL ASPECTS OF GLOBALISATION

So far we have mainly discussed economic, political and technological factors as the driving forces of globalisation.

However, the late 1960s also witnessed remarkable social-cultural changes. The emerge of the flower-power generation, anti-Vietnam protests, the sexual revolution, the movements for the emancipation of women, blacks, gays, and minorities represent only the tip of the iceberg. In addition, the emergence of pop art marked the change to a post-modern culture [7]. Moreover, the publication of Marshall McLuhan's *The Medium is the Massage* in 1967 in which he described the world as becoming a 'global village,' is one of the first social-cultural landmarks that points at the existence of globalisation. Taking these aspects into account it is not possible to consider globalisation as purely an economic, political or technological process.

The increased influence of the media in our daily life has not only changed our way of perceiving the world and our consumption, it has also affected local cultures to a considerable degree. In the view of the cultural pessimists, America and in particular Hollywood have established a global culture at the cost of traditional ones [9]. However, youth all over the world especially embraces this culture, emphasising the freedom of choice that this global culture advocates.

The introduction of the television in the 1950s, for example, has had a profound impact on people's daily lives. But the invention of information and communication technologies has also influenced a lot of people's lives with the introduction of e-mail and chat boxes. As long as the technological facilities are available, personal communication between individuals is possible, regardless of the distance separating them. Although distances in time and space have decreased, the world has not only become smaller – new spaces, such as Internet, have simultaneously shaped new dimension in our life-world. It is no coincidence that Castells refers to our era as the information age [6]. The emerge of international and global media networks, such as BCC World, CNN or Al-Jazirah, but also national and local media connected to global media networks, provide us daily with news from all over the globe [10]. The world is increasingly becoming a global village because people's lives – despite their location in one place – are connected with other parts of the world through the media. The news of oppressed Afghan women in burkas does not leave us unaffected, whereas sixty years ago many of us would not even have known that Afghanistan existed.

At the local level, globalisation has not led just to an 'Americanisation' of traditional cultures, because globalisation has also increased interpersonal international cultural exchanges via migration, tourism or exchange studentship. Many homogeneous societies have turned into multicultural communities in which people from different cultural backgrounds live together.

However, the development towards a multicultural society is not without its problems. The current waxing of extreme right political parties, the segregation of cultures and even ethnic riots, illustrate the problematic side of

social-cultural integration at a local level. In a world in which financial capital and many goods can be moved freely from one country to another, the tightening of immigration laws rather seems to be a 'de-globalisation.' Social-cultural factors therefore not only change as a result of globalisation, they can be causes, as well as obstacles in the process of globalisation.

However, in finding explanations for increasing social, cultural, and ethnic tensions between various groups, one easily risks analysing such developments from a culturally deterministic viewpoint. In many cases, social economic factors also play a crucial role: consider unemployment, the emergence of ghettos, and many other factors.

6. GLOBALISATION AND THE ENVIRONMENT

Globalisation as a whole does not by definition have a negative effect on the environment. However, previous and current facets that constitute globalisation, such as the expansion and intensification of air traffic, car, truck and sea transport, waste, increased consumption of water and fossil energy, caused by the production and consumption of commodities, have profound impacts on our natural environment. These processes affect the environment on various scales, ranging from the local to the global. For instance, the demand for hardwood in developed countries, such as Japan and the Netherlands, is leading to deforestation, soil impoverishment and a loss of local biodiversity in other parts of the world, such as Brazil and Indonesia. The effect of local deforestation does not always remain local, but can also have regional, or even global effects (e.g., global climate change). Although global disasters have not yet occurred, major changes in the natural environment, caused by the polluting side effects of (global) economic processes and consumerism, are affecting our world. On the local and regional level this becomes apparent through soil impoverishment, desertification, water and air pollution. The United Nations High Commissioner for Refugees (UNHCR) is already speaking of refugees who have fled from their homes because of environmental disasters [11].

Since the publication of Meadows' *The Limits to Growth* for the Club of Rome in 1972, there has been a growing awareness of the exhaustion of the natural environment through human activities on local, regional and global levels. In addition, from the late 1970s on, global warming became an environmental problem of global political and scientific concern [12]. As historical marks, the publication of *The Limits to Growth*, the first World Climate Conference organised by the World Meteorological Organisation (WMO), and the UN Conference on Environment and Development in Rio de Janeiro in 1992 symbolise the growing concern about the devastation of the global environment, driven by the processes of globalisation described in the previous sections.

Although environmental factors should not be ignored when analysing globalisation, they do differ from the other dimensions of globalisation. In contrast to the other dimensions, environmental factors usually appear to be the consequence of globalisation, rather than a driving force. However, many environmental factors, such as global climate change, might become driving forces in the future. Consider, for example, an increase in the numbers of ecological refugees.

7. GLOBALISATION FRAMED BY ITS TIMELINE

Looking at the various historical landmarks of globalisation, we see a clustering in time of various developments (see Fig. 1). These clusters might point us to processes in which various factors enforce each other and consequently push the process of globalisation further. Thus, identifying these clusters can help us to identify different phases of the globalisation process. This is not to say that globalisation is an evolutionary process, evolving according to a fixed pattern. However, taking the extensiveness, intensity, velocity and the impact of contemporary globalisation into account, it is legitimate to assume that the processes underlying it have the potential to change over time, in a nonlinear way, characterised by periods of progress, stabilisation, and temporary decline.

The thick dotted lines in Figure 1 illustrate new phases, or major turning points in the globalisation process. Note that the time span between the historical landmarks is relatively small in the late 1960s and early 1970s. The second turning point illustrates the change towards contemporary globalisation, because this period was also characterised by a high concentration of social, cultural and environmental developments that also became important factors that co-shaped globalisation.

Taking this into account, two definitions of globalisation are possible. If we approach globalisation by reconstructing and identifying historical landmarks before the second turning point, we see that the landmarks are predominantly economic, political or technological in character. Hence, from a historical point of view, globalisation is intrinsically an economic, political and technological process. However, this definition refers to the emergence of globalisation and not to its current state.

From the 1960s on, social-cultural developments have become similar key factors in the constitution of globalisation. Therefore, the historical definition of globalisation would be incomplete in contemporary contexts. Consequently, we propose a contemporary definition of globalisation that accurately describes its current state. The difference between the historical process of globalisation and its current state is too complex to be reduced to a single definition. The use of a historical and contemporary definition thus prevents a simplification of the complexities

involved in approaching globalisation. Above all, the historical development of globalisation is not the same as the actual phenomenon in its current phase, just as the introduction of the steam engine is not the same as the introduction of the steam locomotive.

The second definition of globalisation thus refers to this process in its current state, including social, cultural and environmental factors. Hence, we define contemporary globalisation as an intensification of cross-national cultural, economic, political, social and technological interactions that lead to the establishment of transnational structures and the global integration of cultural, economic, environmental, political and social processes on global, supranational, national, regional and local levels.

8. DISCUSSION

Describing globalisation remains a complex task; it is the interactive co-evolution of millions of technological, cultural, economic, social and environmental trends at all conceivable spatio-temporal scales. Despite the controversies about the exact forces and the historical path that led to globalisation, we have shown that the major forces at stake are economic, political and technological. This does not imply that social, cultural and environmental factors are not important, but they are not always clearly distinguishable.

Furthermore, the boundaries between the various dimensions – which may better be referred to as domains – are not fixed. Rather, they are interconnected and interrelated, affecting each other in various ways. In Figure 2 we present a multi-domain model that illustrates the interrelations and interactions between various domains/dimensions of globalisation. In this model, technology occupies a mediating role, since the application, functioning and innovative impulses

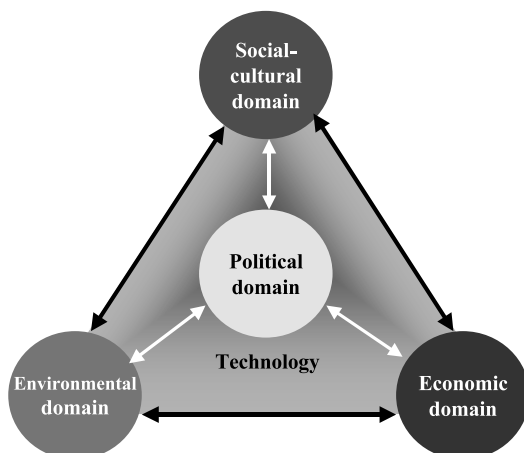


Fig. 2. A pluralistic approach to globalisation.

of technological developments are always an integrated part of economic, environmental, political and social-cultural practices. The widespread application of the Internet is a good example of this. While the Internet had its roots in the U.S. military, it became commercially attractive and as such changed into a mass medium.

This multi-domain, plural approach enables us to perceive globalisation as a phenomenon, or an overarching process in which many different processes simultaneously take place in many domains. Consequently, we view the term globalisation as a collective label, instead as one giant process in itself [13]. After all, not all factors that underlie or shape globalisation, nor all the consequences of this process have yet been identified. Acknowledging the pluralistic character of the forces that drive globalisation and its consequences seems to be an essential step in describing this phenomenon.

Given this complexity, any attempt to define globalisation satisfactorily would be doomed to failure. Rather, it makes sense to adopt a pluralistic approach, analysing past and current processes taking place in multiple domains. Using the globalisation timeline and the multi-domain model prevents a simplification of the complexities involved in approaching globalisation, while permitting a flexible definition of contemporary globalisation.

ACKNOWLEDGEMENTS

We would like to thank all colleagues at the International Centre for Integrative Studies (ICIS) at Maastricht University for the fruitful discussions leading to this paper. This work is carried out within the Fulbright New Century Scholar Program 'Challenges of Health in a Borderless World,' and is partially financially supported by the Dutch National Institute of Public Health and the Environment (RIVM) within the project 'Globalisation, Environmental Change and Public Health'.

REFERENCES

1. Held, D., McGrew, A., Goldblatt, D. and Perraton, J.: *Global Transformations: Politics, Economics and Culture*. Stanford University Press, Stanford, 1999.
2. Dierckxsens, W.: *The Limits of Capitalism: An Approach to Globalization Without Neoliberalism*. Zed Books, London, 2000.
3. Giddens, A.: *Runaway World: How Globalization is Reshaping our Lives*. Routledge, New York, 2000.
4. Langhorne, R.: *The Coming of Globalization: Its Evolution and Contemporary Consequences*. Palgrave, New York, 2001.
5. Mackenzie, D. and Wajcman, J.: *The Social Shaping of Technology*. Open University Press, Buckingham [etc.], 1999.
6. Castells, M.: *The Power of Identity*. Blackwell, Malden, MA [etc.], 1997.
7. Harvey, D.: *The Condition of Postmodernity: An Enquiry into the Origins of Cultural Change*. Basil Blackwell Ltd., Oxford, 1989.

8. Bergesen, A. (ed.): *Studies of the Modern World System, Studies in Social Discontinuity*. Academic Press Inc., New York, 1980.
9. Bourdieu, P.: *Acts of Resistance: Against the New Myths of Our Time*. Polity Press, Cambridge, 1998.
10. Kellner, D.: *Media Culture: Cultural Studies, Identity and Politics Between the Modern and the Postmodern*. Routledge, London, 1995.
11. UNHCR: *The State of the World's Refugees: A Humanitarian Agenda*. Oxford University Press, New York, 1997.
12. Martens, P. and Rotmans, J. (eds.): *Climate Change: An Integrated Perspective. Advances in Global Change Research*. Kluwer Publishers, Dordrecht, 1999.
13. Martens, P. and Rotmans, J. (eds.): *Transitions in a Globalising World*. Swets & Zeitlinger, Linne, 2002.
14. Hardt, M. and Negri, A.: *Empire*. Harvard University Press, Cambridge, 2000.
15. Sassen, S.: *Globalization and Its Discontents*. The New Press, New York, 1998.