Vice-Chancellor,
Esteemed Colleagues,
Ladies and Gentlemen,

De Casseres

In February 1929, less than a lifetime ago, Joël Meijer de Casseres introduced the Dutch term '*planologie*', equivalent to the English term 'urban planning', for the first time. (1) 'Planology' or the study of surfaces (*logicus planum*) was in fact the logical outcome of the transition which had already been effected from a mercantile to an industrial society: all the side-effects of industrialisation - growth, environmental overload, increasing traffic, a general assault on nature and the landscape - also called for a new, adapted response. The conception of urban development, the Dutch term for which had been introduced two decades earlier by Hendrik Pieter Berlage, as 'architecture on a large scale' was no longer enough. (2) In its place, or at least alongside the aesthetic concept of designing cities, more attention needed to be paid to politics, land ownership, production methods, traffic, culture, sociology and geography. What De Casseres contended was that urban development should undergo a scientific extension in order to be transformed into urban planning. (3) He was not alone in this. At around the same time, the concepts of *'Raumplanung'* and *'Raumordnung'* were being introduced in Germany by Gustav Langen (4). In England, Raymond Unwin, Patrick Abercrombie and Patrick Geddes had already been talking about 'town and country planning' for two decades. (5) In America too, the idea of a 'planned society' was born in the early 20th century with the City Beautiful movement. (6) In fact, all of these neologisms anticipated an awareness on the part of governments of an ever greater need for planned urban development. This was equally the case at this time in communist states such as the USSR, national-socialist or fascist countries such as Germany and Italy, and parts of the world with more liberal inclinations, such as the USA after Roosevelt's New Deal. In short, a wide-ranging, rationally based form of social planning was emerging. In an excellent book about the man's life and work, Koos Bosma shows that De Casseres, unlike many of his contemporaries, persisted in his efforts to organise the artistic as well as the plan-related aspects of the profession. (7) In his eyes, urban planning was the profession of the pencil and the pen. He regarded graphical and cartographic presentation as not just a means of popularisation but also an essential element of scientific research. It may be that this was what filled the Utrecht geographer L. Van Vuuren with such enthusiasm for urban planning. Through his intercession, De Casseres had by 1931 been nominated for an appointment as extraordinary professor of Urban Planning at the University of Utrecht. However, for various reasons, the appointment ultimately fell through, and De Casseres settled for an appointment as private teacher of geography. This was also made financially possible by his employer at that time, the municipality of Eindhoven. (8) Thus the University of Utrecht, as well as having a long, original and partly forgotten tradition in urban planning (9), can also boast extensive experience in attracting extraordinary urban planning talent at no cost.

The network society

Times have now changed, however. Back then, the compartmentalised, hidebound Netherlands was gathering momentum for the Dutch 'Great Leap Forwards', while simultaneously fearing the social consequences of such a move. That great leap forwards has now long since been taken, and today we find ourselves amid the fall-out from a subsequent structural change - the information, computer and telecommunications (ICT) revolution. Back then, De Casseres was worrying about

the 68,000 or so automobiles on the Dutch roads, which he believed would spell the death by unnatural means of the metropolis. Today, there are around a hundred times that number of vehicles using the roads in the Netherlands, and in 2003 these accounted for a combined total of some 91 billion vehicle kilometres and nearly 35,000 traffic jams stretching a total length of approximately 110,000 kilometres. (10) Back then, there were around 150,000 landline telephone connections in the Netherlands, whereas today there are close on 7 million, a total, incidentally, which has gradually fallen in recent years due to the advent of mobile communication. A good 13 million mobile phones are now also in use in this country, and the number of households which communicate exclusively using mobile technology doubled again last year to 8%. (11) Electronics manufacturer Philips used to be an international company of considerable stature, it is true, but it remained a family business, with its headquarters, workers' village, sports club, schools, bakery and brass band in Eindhoven. Today, it is a transnational corporation with a global workforce, changing location preferences and dynamic alliances, driven by global considerations of cost benefit, market penetration, image and so on. (12)

All these examples illustrate what is termed by some a 'network society'. And a network society is not a society like previous societies, except a little larger and more mobile. Rather, it is a society which is characterised by:
a) increasing worldwide interdependence of a paradoxical nature, in which we can communicate in a matter of split seconds with someone on the other side of the world, enabling us to do business or feel involved in major world disasters,
b) a blurring and redefining of borders, in which some international borders prove porous while others have become particularly intransigent (13), municipal boundary redefinition follows on the formation of regions and, in functional terms, we are increasingly starting to work at home, live in recreation areas and take recreation at work, and
c) a *de facto* liberation of a world of flows whereby, alongside the world of geography and morphology, a world of terminals, transfers and transport defines itself in its own individual network approaches, as for example at Schiphol, which derives its strength not so much or not merely from its location, but to a great extent from the position it occupies in global networks.

Plenty has already been written about this, and I do not intend to repeat it all. (14) Moreover, more specific characteristics of the network society also receive sufficient coverage in the argument I will present this afternoon. What I would like to emphasise here is that this society is certainly made possible (though not initiated or driven) by age-old processes, whereby our means of transport have become faster and faster (15), the cost of transport measured in constant prices has fallen drastically (16), and the size of technological tools has been minimised (17), so that we can now also communicate, do business, work, enjoy entertainment or take recreation while on the move. Yet I also believe that precisely as a result of the recent ICT revolution, not only have these age-old developments been taken a step further, but society (or at least parts and specific areas of it) has also been undergoing fundamental changes. Such historically unprecedented transformations are under way, affecting the economic, political and socio-cultural dimensions of our society alike, that the clear distinction between internal and external (domestic and foreign) affairs has now been blurred, as has the sharp dividing line between macro and micro (global and local), and as a result, fixed, geographically bound patterns from former times have ceased to be relevant. I shall return to this point in more detail this afternoon. In parallel, though, our perceptions of time and space have also changed, becoming more multifarious, complex and structurally open-minded. Urban planning as a specialist area which uses a cautious, multidisciplinary approach to come up with proposals for the use of urban space on the basis of a sharp and far-reaching view over time is outmoded. (18) Because such a view over time has been

and is less and less available to us in this world of flux. The same goes for an environmental planning approach which takes as its basis the best conceivable mutual interaction between space and society, in the interests of that society. (19) Because that society has itself become ever more mobile, in individual motion and networked in a manner which respects no boundaries.

In the mean time, the original idea of the 'planned society' has therefore rightly ended up on the planning rubbish dump. (20) Equally, the adaptations which have since been made to that concept in the direction of process-based, procedural, advocacy-based, entrepreneurial variants and/or its recent development-based variants are in my view likewise too inside-out and/or territorial to play any role of significance. For example, take the economic spearheads in the area of Mainport, Greenport, Brainport, Energy, Food and Health Valley established in the Dutch government papers on 'Space' and 'Peaks in the Delta'. They bear witness to an internal, government-focused deal to place the local region properly on the national agenda, rather than to any fundamental positioning of the Dutch economy in a global network perspective. As regards De Casseres and all updates of the urban planning concept undertaken subsequently, I therefore believe that a more thoroughgoing reorientation is needed, so that we do not end up with a half-baked compromise approach, and so that the use of planning for the targeted facilitation of activities with a view to mutual added value retains its relevance. In other words, I am not calling for urban planning to be abandoned, or for it to simply undergo its next overhaul: rather, I am calling for a fundamental reflection about its underlying assumptions, with our emerging network society in mind.

This afternoon, I will let you in on my thoughts about the structural changes I am referring to here. They are to do with:
a) a changing conceptualisation of space and time,
b) key developments within the economy, politics and sociology and
c) initial ideas about a different, more multi-perspective urban planning approach which, in view of the current situation, may produce a better result.
I believe that these changes in fact point towards a structural paradigm shift in the urban planning profession. The profession will and must, in my view, undergo a radical transformation. But - and I will let out this much right now - I will be arguing for a new paradigm alongside the reuse of parts of our present-day urban planning approach. However, I will first take a look at the new conditions for urban planning, before returning to the subject of the change of direction I have in mind.

The conceptualisation of space and time

First, the conceptualisation of space and time. Compared with developments which have taken place within other sciences, it is striking that architecture, urban development and planning remain overwhelmingly dominated by an outmoded Cartesian concept of space and time. Evidently it is hard to convert Einstein's theory of relativity, Flusser's quantum mechanics or Deleuze's and Guattari's rhizomes into concrete, workable planning strategies. (21) Urban planning still largely operates within the traditional, universally respected concept of space and time, each consisting of three dimensions - length, width and height in the former case, and yesterday, today and tomorrow in the latter. As a result, the future of urban planning is still often presented as a logical continuation of the past, and urban planning maps ultimately talk about property rights or, at best, air rights, often for a single functional purpose in the places deemed most suitable for that purpose. This presentation of matters fails to do justice to our experiences of time and space in the context of the growth of mobility. Accessibility has changed, and with it our perception of the (urban) world. As I will emphasise later on in this lecture, the world as it is

experienced by you, me and everybody else represents a motley assemblage of multiple times and spatial realities. It therefore makes no sense whatsoever to deny this multiplicity by clinging on to the three dimensions of time and space, convenient though they may be, in urban planning. Yet this is still what happens, in direct continuation of insights which date back to the earliest days of the Renaissance. Thus a traditional, medieval concept of the city usually prevails even today, consisting of a centre, a periphery and, around it, the rural area, where peacefulness and spatiousness are apparently the predominant characteristics. In this context, even the network city is no more than the next scaling-up of the traditional conglomeration to what is now called the urban region. Supposedly unique functional or socio-cultural values remain of central importance here, borrowed from a concept of the '*genius loci*' (spirit of the place) and referring to common memories and a specific morphology. (22) Even recent talk about mobility aesthetics has remained trapped in these superannuated concepts of the geography of place and the collective memory. (23) Nevertheless, time and space have also acquired new significances for many people, precisely in combination with the development of mobility over the past century.

The compression of time and space

Take the development of the railways, for example. When, following the success of the first Stockton and Darlington Railway, this network began to boom from 1825 onwards, journeys which had previously taken several days were minimised to a few hours. As early as 1839, a commentator was hailing this enormous compression of time and space enthusiastically: 'Should the railways extend over the whole of England, the entire population will, in a manner of speaking, live two-thirds closer to one another and the whole country will in fact shrink down to a single mighty city'. (24) These same arguments are now being used again in connection with the development of the High Speed Lines, the only difference being that instead of around 50 kph as then, the speeds concerned are in the order of 300 kph, with networks such as UNICITY being developed, which now covers large parts of North-Western Europe within a journey time of 3 to 4 hours. (25)

Nevertheless, even then, the first critical voices of opposition could be heard. 'The railways have murdered space,' wrote the poet Heine on the opening of the first railway between Paris and Rouen. (26) He was referring not just to the fact that the space between departure and arrival would no longer be 'properly' experienced as a result of the enormously reduced journey time. He also meant that while the railways might be opening up new spaces, they were also undermining the uniqueness of those individual places. This had also resulted from the introduction of uniform timekeeping (Greenwich Mean Time), which had hitherto been determined very much on a local basis from the position of the sun. (27) But the criticism went further, also covering the internal constitution. In 1835 Bavarian doctors warned of a *'delirium furiosum'* which the rapid motion of the steam engine would induce in travellers. A year later, even the telegraph pioneer François Arago cautioned in all seriousness against the construction of tunnels because the change of temperatures could make passengers ill. (28) Fortunately we now know better, although it is still true that, in the current worldwide air travel network, this 'tunnel effect' has now acquired a new dimension. People fly from city to city via a tube known as an aeroplane, and are faced at the other end with an unpleasant biological ailment: jetlag. More fundamental, however, is the criticism raised by David Harvey, who describes the increasing time-space compression primarily as an essential characteristic of the capitalist mode of production (29). The very striving for a continual multiplication of capital gives rise, he argues, to an escalating race to cover distances in ever shorter times and hence contributes to increasing oppression and exclusion. The differences between the First and Third Worlds have in fact only increased over the past 150

years. (30) Yet the cultural philosopher Peter Peters also notes, referring to Hupkes and Proust, that time-space compression is largely a pointless, stress-promoting form of 'Albertine's Haste' (31) Over the past century we may all have become much faster, but this can scarcely be said to have saved us any time. On the contrary, over the past 25 years the time we have devoted to moving around has increased by an average of 27%, and the time we spend in the car by as much as 64%. In 2000, everyone - from babies to the old and infirm - spent an average of 8.5 hours per week on the move. (32)

Nevertheless, this development has made an enormous increase possible in our (daily) range and experience. Travel is now often seen as a form of self-development. After they had completed their education, people used to go on the Grand Tour, whereas now they go round the world. (33) For others, this world of transport routes and terminals has even acquired an attraction of its own. Thus Andy Warhol, though affected by a fear of flying, described the airport as his favourite space. 'They have my favourite kind of food service, my favourite kind of bathrooms, my favourite peppermint Life Savers, my favourite kinds of entertainment, my favourite loudspeaker......the best security checks, the best views, the best perfume shops, the best employees and the best optimism.' (34) Marc Augé in turn describes the metro as a phenomenon which enables one to experience the individual flavour of Paris better than on top of the Eiffel Tower. Here one can encounter the world of multi-ethnic urban France, here the Third and First Worlds meet and here one can experience an anthropological reflection of the age of globalisation and untramelled network development. (35) Be that as it may, there thus arises, free from old-fashioned Cartesian space, a separate, new, fascinating reality of nodes and lines, hubs and spokes, in which specific elements of an urban world are connected with one another, while others are not. The spatial field is no longer straightforward and determined by a single time-space reality, as all those beautiful landscape pictures and urban development and planning images would lead us to believe. Above all, it has become a selective, somewhat distorted world, in which some (but not all) parts of some major cities are getting closer and closer, while other are not: Manhattan being an example of the former, and the Bronx of the latter. And this is assuming increasingly pronounced forms. Because in accordance with the already somewhat outdated spatio-economic conceptions of Don Janelle, the distance in time measured between already important centres is usually reduced more by infrastructural improvements than the distance between other places. (36) Thus from 2007 my train trip from Rotterdam Centraal to Antwerp, where I live, will take 30 minutes, while the trip to my parents in Zoetermeer-Noord will take more than twice as long, even after the completion of Randstadrail.

Dwelling in space time

However, things seem different with the car. Whereas the railway, air travel and the metro force the traveller in a defined trajectory, the car, provided it is not held up by road congestion, in principle admits of any kind of peregrination and any kind of stopping place. When mass production techniques made the automobile available to a broader public at the start of the last century, it was precisely this aspect that was loudly acclaimed. 'The car,' stressed Paul Morand, 'has given us back the countryside, the roads, inns and adventure......... Delivered from points and rails, the horizon stretches out for the motorist, who becomes free and alone at the steering wheel.... the discoverer of a still virgin and unknown world.' (37) In fact this experience goes back to the first fantasies on the bicycle (the *velocyclette*) which was introduced from the mid-19th century. It is intimately connected with the bourgeoisie of this period, who were chafing at the galling bonds which held them. For the incumbent powers, bicycle and later automobile technology therefore had

something anarchical about them. Thus the Italian bishops initially forebade country pastors from using the bicycle, on the grounds that it would be counter to custom and tradition. (38)

Nevertheless, the use of bicycle and car, as we all know, has expanded dramatically since that time, including in spatial terms. It has not only (more than the railway) made possible an enormous suburbanisation process and a functionally discrete city of living, working and facilities. At the same time, it has also placed ever greater demands on space. Thus today, around a quarter of the surface area of Greater London and around half of the total surface area of the conglomeration of Los Angeles consists of so-called 'car-only environments'. (39) These are what Marc Augé once called non-places, places which, in his view - unlike the metro, apparently - cannot be defined in terms of identity, culture or history. (40) At the same time, the indirect claim on space via adjoining noise prevention zones, environmental nuisance, the assault on the landscape and the environment, is far greater, and the problem of daily traffic congestion has now actually become a factor in economic growth forecasts. The greater the number of traffic jams, the higher the social costs, or, to look at it another way, the better the economy must be doing. (41)

According to John Urry, though, this selfsame congestion has also ushered in a new mobile experiential world. 'The nature of "dwellingness" has changed,' he writes, 'from "dwelling-on-the-road" to "dwelling-within-the-car".' (42) He is referring to the fact that cars are being increasingly filled with high-fidelity stereo, cruise control, navigation systems, mobile phone, fax, voice recognition computers, DVD and LCD TV and are actually turning into a home-from-home: a place where you do business, relax, make love, look after yourself, conduct family life and communicate, remotely or otherwise. Some predict that with advancing automatic vehicle guidance systems and the introduction of hydrogen power, this is set to increase further. In this vision of the future, the car will become an integral, albeit mobile, element of one's permanent abode. (43) Others, however, perceive that the local environment is already responding to this alertly. Petrol stations have already more or less developed from newsagents into mini shopping malls, all kinds of residential, care and leisure boulevards are being intensively integrated with the motorway, and hotels and roadside restaurants are no longer exclusively places where you stop for a brief break. However, this has hence also become an extremely fragmented time-space reality, in which the objective scheduled service of the railways has been replaced with the postmodern, almost personified temporalities of various car-related lifestyles and the public domain has been replaced by the atrium, the shopping mall, the wellness centre or the safety of privatopia. (44)

Cocooning in interconnectivity

It was originally anticipated that this subjective, postmodern reality would be further reinforced with the introduction and unexpectedly fast adoption of the PC and telecommunication technologies. Thus in the early nineties the computer giant Apple introduced its 'click on a building city map', thereby expressing its view that individual buildings or businesses were now all that mattered, and not the spaces in between. (45) This was in line with the essay by Rem Koolhaas about the generic city which came out at about the same time. On the basis of a broad comparison of the world cities he had visited, Koolhaas came to the conclusion that what holds these cities together is not so much a self-assertive public domain (i.e. streets and squares), but rather the residue of just a few buildings: above all the airport, the hotel, the skyscraper and the leisure dome. In his eyes, this also meant the final death of urban planning. Not because these buildings would not be planned, but above all because planning would not in fact make any difference to them. (46)

At around the same time, Lieven De Cauter for his part rehabilitated the work of the Japanese Kisho Kurokawa on the genesis of a so-called 'capsular society'. (47) Unlike Kurokawa, however, De Cauter seemed not just to be referring to a reality in which we increasingly go about in capsules. He was also talking about the fact that, surrounded by walkman, mobile phone, laptop and (in short) video glasses, we end up becoming turned in on ourselves, we cut ourselves off from the immediate environment, although, paradoxically enough, we simultaneously remain in online contact with the rest of the world. (48) In a comparable sense, Michael Sorkin had described Guinness Book of Records entrant Walter Hudson as the most paradigmatic person of the 21st century, given that, though confined to bed by his immense obesity, he proved capable of using computer, internet, telephone and fax to manage a worldwide fashion business for overweight women. (49)

Nevertheless, this is merely a superficial account - at best half of the story. Because the introduction of computer, internet and wireless telecommunication has not simply led to deterritorialisation; in other words, to a situation in which one's precise place of residence does not particularly matter any more, so long as one is connected to the worldwide web. Nor has it led to a reduction of physical traffic, as originally anticipated. (50) On the contrary, more detailed research into teleworking and homeworking has in fact shown that people:
a) are starting to live further from their workplace, precisely as a result of this trend, and hence need to cover greater distances on those days when they do need to be physically present,
b) on the days when they are teleworking at home, make more smaller trips, which taken together equal or even exceed their original radius of action and
c) the space freed up during the rush hour is quickly taken up again by other road and rail users.
Telemobility thus does not imply decreasing physical mobility, as many have assumed, but rather a more far-reaching hypermobility. (51) In a comparable approach, Nigel Thrift also offers a new argument in favour of the need for mutual proximity, by claiming that worldwide telecommunications in certain service sectors also generate a need for instant information, which can still best be guaranteed in a face-to-face context. (52) For Thrift, however, this does not mean a return to the familiar geography of the place. Rather, he calls for a relational approach, in which places and human activities are thought of not so much in direct relation to their environment, but above all in relation to other connected places and activities, if necessary at a great distance. Again, it is in the age of telematics that the proximate starts to derive from the remote, accompanied by a corresponding displacement of the proximate. Instead of the nostalgic idea of the city or the urban region as a unit, this requires a rethinking of urbanism as a system of separate activities in open, meaningful global-local connectivity. (53)

The layered time-space reality

In short, instead of a virtually medieval conception of the urban district, the region or the network city, instead of the simplistic picture of continuing time-space compression into a global village, there arises a picture of a layered urbanism, in which some parts are close to one another and others are not, and personified temporalities of distinct lifestyles emerge, along with introverted activities in continual contact with the rest of the world. We thus increasingly live in a world of a multiplicity of times, and also of a multiplicity of all kinds of different spatial realities, which move at different speeds and in different directions. In other words, and put more formally, the clear and unambiguous Cartesian reality which previously largely determined our understanding of spatial development and planning has increasingly disintegrated into varying perceptions of time and space, related at times to the sort of nostalgic reality of Geert Mak (54), at times with the reality of nodes and lines and the daily

dwelling-within-the-car, and at times with the worldwide internet. If you experience increasing uglification, continual inconstancy and growing complexity on your daily drive from work to home, this has less to do with the failure of planning to check unbridled urban growth: rather, it is due to our inability to cope with this layered time-space reality. (55) In fact it is precisely because urban planning repeatedly resorts to a nostalgic geomorphological understanding of landscape, place and society that it fails to adequately grasp the versatile dynamism and boundarylessness of these other areas, or to take account of them properly in the long term. The question, therefore, is not how urban space can look as good as possible, but rather how one can gain insight into the dynamic in this layered time/space reality and what means can be employed to channel these variable patterns towards general well-being and local interaction.

New developments in society

To answer this question, I first need to take a slightly more profound look with you at what all these time-space perceptions actually mean for current developments and how the ICT revolution actually affects society. Two buzzwords repeatedly crop up here in varying quantity and intensity. The first is **'globalisation'**, a term used to refer to the fact that we increasingly live in a boundaryless world, in which, supposedly, national and regional frontiers are less and less relevant and the time-space compression mentioned earlier has led to the 'death of distance', foot-loose settlement patterns or even the 'end of geography'. (56) The second is **'fragmentation'**, which refers to the fact that the new networks only open up access to specific places and population groups (and not others) and hence lead to an increasing fragmentation and cordoning-off of regions, in which some are physically fenced off from the world around them with video cameras and digital technology. (57) Quite apart from the fact that I have always found these two concepts far too coarse and generalised, in my view they fail to even cover half the problem. Because alongside an increasing 'de-territorialisation' there is also a process of 're-territorialisation' under way. Alongside ongoing fragmentation, reclustering also takes places around new motivationss for interacting, living together and being together. (58) Even more markedly, the processes of 're-territorialisation' and reclustering are far more important than those of globalisation and fragmentation, because it is precisely through them that the new urbanism arises; and incidentally it is an urbanism which - I would like to re-emphasise - diverges completely from what is traditionally understood by the term. This is equally true on the economic, socio-cultural and political fronts. And it is precisely this which will also need to be the focus for more detailed and targeted research.

Economic

For example, take the spatial economy. Under the influence of the new possibilities offered by ICT, as well as because of an ongoing and virtually cut-throat global competition, the economy has seen a trend towards businesses falling back on their so-called 'core competencies' - meaning what they are good at and/or earn most money from - and outsourcing other activities to subsidiaries or specialist businesses. This is sometimes quite far-reaching. Thus IBM recently sold its Personal Computer Unit to the Chinese Lenovo Group, and even Philips is increasingly outsourcing consumer electronics to the Asians, so the headline news ran in *De Volkskrant* recently. (59) At the same time, businesses are also splitting down the remaining core activities into the smallest possible subunits (in the case of IBM Business Consulting, Industry Solutions, IT Services, Servers, Storage, Financing etc.) and relocating them where, for reasons of cost, product optimisation, distribution or market access etc., they will do best (insourcing). Finally - in order to spread risks or

to be able to afford enormous research and development costs - they are also initiating varying forms of collaboration, sometimes even with (former) competitors, such as equity investments, joint ventures, mutual licensing or mergers in specific market sectors. (60) This latter strategy could also be described by the term 'cosourcing'.

Thus in both physical and organisational terms, new clusters arise of independent businesses and affiliated enterprises. These clusters are sometimes closely organised, but are also always flexible. Because each participating business or enterprise is also itself tied to its own much larger organisational, financial and/or market-economical structures. More and more of the global economy is thus composed of intrinsically connected local clusters of economic activity in varying forms of (inter)sectoral networks which are in principle boundaryless. Incidentally, these also differ greatly in terms of their geographical extent and degree of specialisation. Thus the substantial textile and clothing industry is structured according to a global division of labour, in which design and marketing remain strongly concentrated in the highly developed Western nations and the stitching and garment assembly work largely takes place in the low-wage or developing nations such as Mexico, the Caribbean islands, China, South-East Asia and Sri Lanka. The Japanese and American car industry, by contrast, is seeking to set up autonomous, integrated production systems in the three great trading blocks (NAFTA, EU, ASEAN), while the semi-conductor industry consists of just a few big consortia, with globally distributed sites for research, production and specific applications which are closely related to one another. Financial services in turn are also narrowly concentrated in (highly specific districts of) London and New York, and at the second level Tokyo, Frankfurt, Zürich, Paris and Amsterdam, although here too there are a number of new, upcoming regional centres (such as Beijing and Charlotte, North Carolina) and numerous offshore financial centres in the niches and fictitious circuits of the world capital. (61)

Clusters *in* specific business networks (instead of networks of clusters) thus pattern the current economic landscape. (62) The so-called 'leader firms' are at the cutting edge in this. (63) These are businesses which deploy financial and strategic resources and hence have the will to invest in projects with positive outcomes for other businesses in a chain, network or cluster. Leader firms are not just focused on their own business, but realise that their success depends on the performances of the chains, networks and clusters to which they belong. They are capable of coordinating the various production networks across the various borders, to gain advantage from differing geographical production conditions, and where necessary or desirable, to relocate their own activities accordingly. This business trend has major consequences for the economic side of urban planning. Because this involves a noticeable paradigm shift from the time-honoured location factor approach (which primarily emphasised fiscal conditions, wage costs, good accessibility, broad development possibilities and other such factors) to an actor approach. Alongside the traditional focus on firstly the small and medium-sized enterprises, often coupled with the local or regional economy, and secondly the transnational corporations, often associated with the global economy, the 'leader firms' now tend to occupy centre stage. Not that the time-honoured location factors are no longer relevant. But they have been incorporated into a much broader, more dynamic perspective of regional or local embeddedness, in which it is above all the precise individual and structural relations at spatio-economic, social and organisational level which are on the agenda. (64)

This viewpoint also has significant policy implications. Thus the traditional spatio-economic policy in the Netherlands places great emphasis firstly on 'strong autonomous regions' and secondly on the country as the 'Gateway to Europe'. Yet

precious little is heard about what leader firms the Netherlands numbers in its midst, and what economic planning conditions those businesses set. Let alone the fact that such businesses are to some extent involved in setting such conditions. A sampling of the 'leader firms' in question might give a completely new turn to policy discussions about the Lisbon or Göthenborg agenda, in which the European Commission wishes to be the best in the world in the field of knowledge, by 2010. Not that this is such a terrible or misconceived objective: rather, the question here is how best we can link up our (European) knowledge with that of others. This also applies to policy with regard to autonomous regions, and conversely the concept of territorial cohesion, in which the lot of weak regions is supposed if necessary to be thrown in with that of the strong ones. Because the reality of strong and weak is much more differentiated, since centre has turned into periphery and periphery into centre. (65) So the point then is not to come up with yet another benchmark for determining the strength of a region. In every case, the question is where exactly do the region's strengths lie, and who exactly in the region - the government, the leader firms, innovative employees, a particular urban district, an element, etc.? (66)

Socio-cultural

A more nuanced actor-based approach of this kind, one which is relational rather than location- or enterprise-oriented, has also emerged on the socio-cultural front. By the end of the last century, various researchers of differing stripes were already stressing that under the influence of growing mobility, globalisation and the accompanying unilateral rise in Western prosperity, there was a growing individualisation and immigration. At the same time, this did not also mean that society was becoming infinitely lawless and foot-lose, or that it was being progressively 'atomised' into purely asocial and egotistical individuals. (67) Rather, the developing network society and the associated upscaling and freedom of choice implied a complex system of all kinds of new forms of collectivity, in which individual autonomy and common involvement were again being balanced out, but that this was now occurring in a shifting fashion, via changing networks. Christien Brinkgreve recently termed this the 'home-grown networks' phenomenon. (68) She argues that a certain kind of community is indeed being lost, for example that of the family, the faith community and/or the local neighbourhood, as symptomised among other ways by the drastic decline since 1975 in the average number of hours people spend talking with other members of their household or their neighbours. (69) Instead, though, all kinds of personal networks are arising, built up around various friends, soulmates, colleagues, the sports club, the voluntary association, action groupings and so on.

Thus what is disappearing in this case is not so much communal life itself, but rather a simple form of communal life, in a single location and in clear relationships. In socio-geographical terms, what is disappearing in this case is above all the situation where social settings such as work, the local neighbourhood, convictions, leisure, care, culture etc. largely overlap with one another in space. Instead all these social settings, in response to growing mobility, are diverging from one another and are increasingly being practised in varying locations and changing contexts, often depending on which generation one belongs to. (70) Conversely, under the influence of increased mobility and new computer and telecommunication tools, it is also increasingly possible to set one's own priorities. One can seek contact and identify with like-minded folk, if necessary over great distances, and completely ignore other people. For Manuel Castells, modern communities are therefore becoming more and more structured around the bipolar opposition between the Network and the Individual. As stated, social movements are not vanishing in the process, but tend to exhibit fragmentation, an orientation towards a single interest, subcultures and/or an ephemeral media symbol. (71)

Thus instead of the family or the household, the concept of lifestyle has been in vogue in recent decades. This means a consistent set of preferences in various aspects of life such as work, consumption, leisure and home. At the same time, however, it is also starting to be recognised that these lifestyles overlap with one another, and different ones may be exemplified in a single individual, either simultaneously or successively (good citizen during the day, wild party animal by night). (72) Whereas originally there were assumed to be just a few, simple lifestyles - such as locals and cosmopolitans (Robert Merton 1957) or family people, career-makers and hedonists (W. Bell 1958) - a multiplicity of differing lifestyles are now distinguished. (73)

This approach has now also found its way into planning policy. In the government paper on living in the 21st century ('Mensen Wensen Wonen') it is acknowledged that people can less and less be classified into traditional categories such as rich/poor, old/young, family/one or two person household, but that there is a rising demand for a made-to-measure product, which 'fits' and can fulfil multiple functions: a house, work and study place and base from which you can engage in various different activities. The paper thus rightly opts in principle for quality rather than quantity, and for living rather than accommodation. (74) Unfortunately, it then rapidly falls back on a distinction based on a location-specific residential setting typology (centre-urban, out-of-centre, green-urban, centre-village and rural-village) and the practical arrangements all too soon relate to the quantitative classification of the building programme (H'meer-Almere), combatting low incomes as far as possible (Rotterdam) or building cheap new homes for starters, in, of all places, the inaccessible (Zuidplas)polder (De Zeeuw). (75)

Just as in the spatio-economic sphere, here too varied clusters *in* networks are increasingly determining the socio-cultural landscape. Moreover, just as in the economy, these clusters consist of independent lifestyles or subcultures which in term belong to their own larger network. This implies that residential settings cannot be looked at per se, but should always be considered in relation to possible activities and lifestyle chains at a greater distance. In other words, it is not just the dwelling itself or the immediate residential environment that is relevant, but also these regional or even supra-regional networks. More than the aforementioned residential setting typology, the concept of the Outer City fits here, defined as urbanism at a distance, a residential cluster for varied lifestyles from which one can engage in all kinds of activity within a relatively short radius. (76) I have often wondered why a network typology of this kind could not also be applied to other spatial lifestyles and residential choices. It would fit far better with the 'split household' discerned as far back as 1986 by sociologist Ulrich Beck, i.e. the 'household which has several bases from which it functions and several orientation points, which if necessary in a single day need to be connected to one another in a particular way. (77) I also believe that it may fit in with the growing body of sociological thought of Henk Flap and others, which distinguishes strong and weak links within the increasingly networked communities. (78) Finally, I also believe that it fits in with the new research focus of political geographer Peter Taylor, what he calls a type of global network cosmopolitanism. He suggests that so-called 'imagined communities' are arising, organised around the new ICT technology, with representatives and members in all kinds of cosmopolitan cities, e.g. a Jewish community in New York, Tel Aviv, Amsterdam, Antwerp and Brussels, a German community in various Eastern European cities, various Moslem communities in the capitals of the original gastarbeiter countries, etc. (79) Precisely this should form the focus of more detailed residential typology research, above all because such conceptions, besides forming the essence of our changing social structure, also touch on the issue of multiculturalism and the need for an adapted democracy, more network- than location-oriented.

Political

This finally brings us to policy, especially government policy, as the government has hitherto been the main patron and client of urban planning. Policy too has witnessed an obvious fragmentation of state activities inwards, upwards and downwards, together with a simultaneous relocation of planning decision-making to bodies outside government. The time-honoured Westphalian state model (so-called after the Treaty of Westphalia of 1648 after the Thirty Years' War), together with the subsequent Dutch version devised in 1848 by Dr. Johan Rudolf Thorbecke (with mutually complementary national, provincial and local governments) turn out under this harsh spotlight to have had their day. (80) Because real changes are afoot on the basis of more complex and dynamic multi-level and multi-actor approaches.

In a clearly written book about *'New State Spaces: Urban Governance and the Rescaling of Statehood'*, Neil Brenner describes the ongoing 'state rescaling' and simultaneous 'state rebordering' of past decades, depending on the changing state of the economy, socio-cultural circumstances, settlement patterns and political opportunity. (81) Thus from the Sixties of last century, all kinds of regional public bodies arose, which were supposed to coincide more closely with the emergent network reality of the urban economy, housing market, social life and transport market of large-scale metropolises. Examples include the Greater London Council (1963), the Commission de Planeamiento y Coordination del Area Metropolitana de Madrid (1963), the Openbaar Lichaam Rijnmond (1964), the Communautés Urbaines of Bordeaux, Lille, Lyon and Strasbourg (1966), the Regionalverband Stuttgart (1972), the Greater Kopenhagen Council (1974), the Umlandverband Frankfurt (1974) and the Kommunalverband Ruhr (1975). (82) However, all these public bodies were abolished in the early eighties as quickly as they had been set up. They merely added an extra bureaucratic link to the decision-making process extending from local neighbourhood to region. They were no more effective than other governments at providing a response to the ever-changing network dynamic.

Nevertheless, when the economy started to improve again in the mid-Nineties, virtually all of them were replaced by other, apparently more flexible and entrepreneurial organisations, such as the Metropolitan City Agreement of Bologna (1994), the Stuttgart Regional Agency (1994), the Stadsregio Rotterdam, the urban regions of Amsterdam, Den Haag, Utrecht and other network cities (1996), the Greater London Authority (2000), the Hannover Regional County (2001), Greater Copenhagen Authority (2001), the Metropolitana Frankfurt/Rhein Main (2001) etc. (83) By this time, however, these regional organisations were also supplemented with others, which also operated at subsequent levels, such as, in the Netherlands, the borough councils, the Bestuurlijk Overleg Randstad (BOR), those of the Randstad's North and South Wings, the Delta metropolis or the regional consultation body. Additionally, decision-making and legislation also functions at European level as a hidden power (84), and the still expanding European Union has also acquired a growing number of continental counterparts, such as EFTA (1960), ASEAN (1967), CARICOM (1973), CCC (1981), ACC (1989), AMU (1989), ANCOM (1990), MERCOSUR (1991) and NAFTA (1994). And as if all this were not enough, all kinds of bilateral international governmental organisations (IGOs) have also arisen around, e.g., the oil-producing nations (such as OPEC), a defence structure (NATO), world trade (G8) or specific forms of collaboration between Europe and South-East Asia or around the Pacific (APEC). The number of such IGOs worldwide is now around 260. (85) Administrative density has gradually become so great that urban planning is increasingly seen as a game of chess played simultaneously at various levels. (86)

Intricate and time-consuming though all this may be, much decision-making now also occurs outside these government bodies. In fact, it takes less and less notice of the

government, or operates in parallel with it. Here I am referring in the first instance to the public itself, which, using computer, internet and telecommunications, is also starting to organise itself around specific issues and concrete interests. Thus the number of international non-governmental organisations (INGOs), such as Greenpeace, Amnesty International, the World Wildlife Fund etc., has increased over the past century from 176 to the present total of nearly 5,500. (87) Secondly, I am referring to the fact that the internal administrative processes via the various layers and departments are found to be so viscous by private stakeholders that they bring to bear their own networks and strategic alliances, cutting right across the various layers and boundaries. This also happens because the government often still operates inside-out instead of outside-in. (88) At the instigation of the outside world, the concept of governance is now also emerging strongly. This is a repositioning of both formal and informal structures into workable relations between key players such as the government, the market, the public, leader firms and associations, in order to carry out concrete and specific business efficiently. (89) Governance may relate to a direct interaction between market and state, at the initiative of non- or quasi-governmental organisations themselves, or to the social and local embeddedness of the more globally operating economic systems. In a fine summary of practices of metropolitan governance in Europe, Salet, Thornley and Kreukels find that recent practices are highly diverse, that the metropolitan arena is occupied by diverse public and private parties at many levels and that they are active in all sectors of urban policy. (90) This in turn adds strength to calls for a new coordinatory mechanism, a network supervisory authority, or a unifying choice of course in space and time.

Some see a new role for the urban planner here as a crucial linch-pin, lending support to forces which are too weak to mobilise themselves, mediating between crucial stake-holders and ensuring in the process that powerful, decisive parties do not make common cause. (91) Others prefer to take an 'agonistic pluralism' or radical democracy as their starting-point. In doing so, they express the multiplicity of viewpoints in present-day society and the fact that sound political preferences can only emerge in this multiplicity. (92) Geert Teisman's concept of coopetition seems to me to also fall into this category. (93) This does not detract from the point that governance can also (perhaps precisely as a result) lead to completely new insights and planning innovations, for example in terms of

- *scale,* such as with an extended mainport concept, in which both a global network (Skyteam), and an airport (Schiphol) and spatio-economic environment (SADC/Regio Amsterdam) are thought of in direct association with one another (94);
- *planning differentiation*, such as with the South Dutch Stedenbaan (City Line) initiative, in which urban restructuring is brought into relation with the repositioning and improved used of an existing infrastructure (95) or
- *surprising alliances*, such as in the TouriSME project by LIOF and the province of Limburg looking at new product-market combinations, serving the landscape, the tourism sector and private parties in the local environment (96).

These planning innovations remain hidden from view within the concept of develement planning recently put forward by the Minister of Spatial Planning, Housing and the Environment (VROM). Because the support team which has been set up for the purpose is not only an extended version of yet another government advisory body, but one with a strongly internal, inside-out orientation towards supporting the province in the joint territorial development of a certain area with various interests and parties. (97) The problem in this case lies in precisely how the assignment will be carried out. A **territorial approach** in combination with the three traditional dimensions of time and space I have mentioned is doomed to failure, because a more fluid interaction of scales, boundaries and innovative players cannot be expected in this context. And that is a shame. Because development planning

could in my view become a meaningful factor in the new network society, alongside the time-honoured permission-granting planning approach.

From Urban Planning to Fluviology

To recapitulate, under the influence of ever faster and cheaper means of transport, computers and telecommunications, a number of fundamental changes have now occurred. An increasing time-space compression is under way, which marks a break with the geomorphological and socio-cultural uniqueness of place. From now on, society is also literally and figuratively in motion, with people travelling with increasing frequency and over greater distances, moving house, changing jobs and hence (because everyone is doing the same thing) also stuck in traffic jams more often, producing a new sort of living-along-the-road. Finally, the computer and telecommunications have led to a revaluation of the places which are special to you (re-territorialisation), but always in an individual and specific way, in relation to other places and in relation to a progressive hypermobility. I predict that this process is far from over. Computer and telecommunications will in the near future lead to even greater complexity (i.e. unpredictability, pressure and flexibility) in the use of space and multi-dimensionality. A *genius loci* approach, which has in past decades been interpreted in an over-restrictive, geographical and deterministic fashion, on the basis of subsoil, place and history, and which has hence failed to take account of this boundaryless complexity, thus misses the point time and time again. I refer to the examples cited earlier in this lecture.

However, the current locational behaviour of internationally operating businesses also suggests that increasingly, such traditional viewpoints are becoming a thing of the past. Because traditional locational factors such as good accessibility, sufficient development space or attractive scenery have long since ceased to be decisive, as have wage costs, tax climate and so on. Alongside them, internal business-organisation considerations of deterritorialisation and reclustering have also emerged, as a means of keeping one's head above water in cut-throat global competition with shifting market advantages.
So too, the freedom of choice for households has increased enormously, and their settlement patterns, alongside availability and budgetary considerations, are also increasingly informed by internal organisational considerations and associated chain relocations in time and place. As a result, it is now possible to identify a multiplicity of lifestyles (by definition not place- or location-specific), with fleeting, staccato contacts at a distance where necessary and an entwining of interests around specific, highly concrete subjects, convictions or cultural behaviour.
And finally, this has not escaped the notice of policymakers and the government. Here too, the increasing need is arising to get beyond the continual repairs to the Thorbecke approach that have been undertaken in the past and achieve a thorough reorganisation based on what Brenner calls 'scalar multiplicity' and 'administrative customisation'.

The significance of a place has not so much disappeared as greatly changed. In the network society, the place has become more of a landing-point in open relation with a (world)wide environment than a growth biotope on the basis of geomorphological substratum and/or socio-cultural history. The same goes for the approach to and planning of these spaces, which will need to become increasingly actor-oriented and relational, rather than setting contextual and geographical conditions. For this type of issue, the concept of urban planning as introduced by Joël de Casseres in 1929 and since then regularly adapted in the light of changing circumstances or insights is no longer of much use to me. Above all, the simple concept of (Cartesian) space it embodies, its territorial zone-based approach, landscape design and allocation of activities or so-called key projects or spheres to specific places, no matter how multifunctionally, procedurally or strategically they are chosen, fail in my view to do justice to the issues I have been discussing. There is a need for a new *Grand Projet Transmoderne*. (98)

This insight might be dismissed as a plea for urban planning dressed up in new garb. A contemporary form of planning which adheres to multiple time divisions, which dispenses with simplistic limitations but is simultaneously based on various land-use patterns. But I believe that the developments I have described are fundamental ones, and I wish to investigate them and incorporate them into practice. I therefore prefer a new name for this specialisation, and would argue in favour of the development of something like **'fluviology'**, i.e. the knowledge and study of boundaryless flows, of developing physical, virtual and organisational networks and above all their underlying driving forces, leading to a new relational management and the use of urban space in dynamic clusters of changing activities.

Where urban planning primarily approaches the city as *Urbs*, fluviology does so primarily as *Civitas*, (99) i.e. as a socio-cultural and economic-political practice of a multiplicity of actors. It is not oriented from the inside out, but mainly from the outside in, and it is primarily focused on interests, players and developments outside the government. Where urban planning is predominantly based on a layer approach to various departmental interests and levels from global to local, fluviology is based on the presence of all these layers and levels everywhere and simultaneously. Where planning (originally) took as its basis the survey before plan, in fluviology the survey itself has also become a planning activity. Cartography is thus not used in fluviology in order to map something specific: rather it has become an essential element of researching and planning itself.
Just as planning is primarily territorial, so fluviology is essentially project- or subject-specific. It is not multidisciplinary but transdisciplinary, continually in search of surprising alliances and connections. Planning is about government, whereas fluviology is about governance. Whereas planning is still based mainly around methods and techniques, fluviology is primarily concerned with experiments, strategies and tactics. It is nimble rather than durable; about mobile assets rather than static property, and primarily demand-oriented rather than supply-oriented. (100)

This is as much as to say that I am not calling for urban planning to be completely abandoned, but rather for the reuse of those elements which guarantee a number of incorporated important democratic values which are not covered by fluviology. Just as Manuel Castells introduced his 'space of flows' alongside rather than instead of the 'space of places', so I am here introducing fluviology alongside urban planning. I regard fluviology as boundary-breaking and agenda-setting, and planning as condition-setting and focused on jurisprudence. But I intend to dedicate my extraordinary professorship primarily to the further elaboration and fleshing out of this concept of fluviology, precisely because the knowledge and study of it within our profession is still extremely under-developed.

I intend to primarily focus my own research on the processes, mentioned earlier, of reterritorialisation and reclustering around new patterns of interaction, cohabitation and alliance-forming - and especially around the referred to sample of leader firms, network-oriented residential typologies and an adapted planning policy - because it is there that the new network urbanism is coming into being and there that the new focal points for our specialisation lie. For this reason, I wish to embark on doctoral research in conjunction with a number of stakeholders and leader firms from the network society, such as Schiphol, the Rotterdam Port Authority and Cisco Systems, in order to detect their underlying motivations and the considerations that drive them, and to find out how fluviology, approached broadly, can be of help in the process.
I shall orient teaching around the factors behind and reason for the fluviological approach, as well as setting it up as a planning activity. I shall aim to teach topics which can be simultaneously used to renew the practice of the profession itself. My concern here is to close the gap between theory and practice, innovation and

empirical consideration in a close mutual interaction. I believe that the reintroduction of an innovative multi-level/-actor cartography is also called for here, together a couple of research trips, on which I wish to deploy international fieldwork into exemplary practices elsewhere for research into their feasibility here.

And finally, I will be seeking to promote both of these things on my side through cross-disciplinary collaboration with other fields of knowledge and universities in the Netherlands and abroad, where necessary or desirable in surprising, uncustomary alliances with logistics, the spatial economy, political geography, critical philosophy, anthropology, etc., because it is precisely this extension that is so necessary for the intended paradigm shift, and fluviology is too important to be left to over-restricted projections.

Finally, on the basis of my experiences and the knowledge I gather, I intend to publish a book within the next four years, which will provide a sketch of a possible scientific programme for fluviology at the university in the light of its direct applicability by governments, stakeholders, leader firms and other actors in spatial network practice.

Acknowledgements

This can be regarded as a homage to the municipality of Eindhoven and the Faculty of Letters at the University of Utrecht, which once gave Joël De Casseres the opportunity to set out in detail the concept of city planning. Along these lines, I would therefore like to express my sincere gratitude to the Ministry of VROM and the staff of the Faculty of Earth Sciences at the University of Utrecht for the confidence they have placed in me to now work out in further detail the concept of fluviology presented here. From an historical viewpoint, I am in the right network for such an innovative undertaking. I would also like to express my more specific thanks to both my parents for their love and the opportunity they gave me to study, to Rita Kirstan and Wies Sanders, my current mate and indescribable help and stay in arms. Thanks too to Arie Graafland who, possibly without suspecting it, gave me the impetus to pursue the academic path, to Franziska Bollerey, to Lolle Nauta and above all to Ton Kreukels, who expertly took on the baton. I also wish to thank Ton Kreukels, Tejo Spit, Wies Sanders and Oedzge Atzema for their expert comments and contributions to this lecture, as well as to Leo van Bemmel, Wouter de Herder, Hans Draaisma, Maurits Schaafsma and all others with whom I have had interesting discussions about intermediate stages over the past decades, and again to Gerlach Cerfontaine, Joop Krul, Henk de Bruin, my scientific colleagues and others with whom I hope to share such pleasures in the coming years. And finally, although they are not here today, my thanks to Jürgen Habermas and Manuel Castells for their inspiring insights. Without them, I would not be standing here today.

Thank you.

Prof.dr.ir. Luuk Boelens

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Notes

1. Cf. De Casseres, Joël Meijer: Grondslagen der planologie, in: De Gids April 1929, pp. 367-394
2. Cf. Berlage, Hendrik Pieter: Stedenbouw, published in: De Beweging, deel 2
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4. vgl. Kegler, Harald: Von der Überlandplanung zum Innovativen Milieu - Regionalplanung zwischen Genese und Welt-Konferenz der Regionen; in Magazin der Region 2/2000; pp. 58-61
5. vgl. o.a. Unwin, Raymond: Town planning in practice - An introduction to the Art of Designing Cities and Suburbs, reprint; Princeton Architectural Press 1994
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6. vgl. Schaffer, Kirsten: Burnham, Daniel H. - Visionary Architect and Planner; Rizzoli, New York 2003
7. Bosma, Koos loc. cit. p. 33
8. Bosma, Koos, loc. cit. p. 47
9. How many city planning graduates can still draw nowadays?
10. Statline, www.cbs.nl
    The Ministry of Transport and Public Works recently reported that last year the extent of traffic jams (expressed as length times duration) again rose by 11% (ANP 30 December 2004).
11. Ministerie van Economische Zaken: Netwerken in cijfers 2004, Den Haag 2004
12. Cf. Wennekes, Wim: De Aartsvaders, Atlas, Amsterdam 1993
    See also www.philips.com
13. Because an open (i.e. economical) society requires (i.e. for migrants) closed borders, according to cultural historian Thomas von der Dunk, discussing the approaching accession of Turkey in De Volkskrant, 4 January 2005 sic!
14. Cf. Castells, Manuel: The Rise of the Network Society, Blackwell Publishers Ltd Oxford, Cambridge Massachusetts 1996
    Cf. Boelens, Luuk (ed.): Nederland Networksland, Een inventarisatie van de nieuwe condities van planologie en stedebouw, NAI-uitgevers , Rotterdam 2000
15. In June 1616, Dutch sea captain Joris van Spilbergen set a record by sailing round the world in 21 months and 24 days. In 1938 the pioneer of flight Howard R. Hughes Jr. achieved the same thing in 3 days, 19 hours and 17 minutes, while it is now possible for anyone to reach the other side of the world in split seconds via the world wide web (Zischka, Anton: Het wereldverkeer door alle eeuwen, Nederlands boekenhuis, Tilburg 1951, p.10)
16. Since 1930, the average cost expressed in constant 1990 prices for transporting one tonne of sea freight has fallen by more than half, that for one air-mile has become over five times cheaper, and that for a one-minute transatlantic telephone call has been reduced more than 80 times.
17. Finally, technological tools have shrunk in size enormously, and so become more mobile. AT&T's first mobile telephone in 1924 was the size of an entire Ford Model T, whereas it now fits into your breast pocket; similarly, your laptop is now around 1,000 times more powerful, yet 40 times lighter than the first IBM personal computer in 1981. With these tools, we are now able to undertake more and more activities wirelessly, staying in contact with the whole world here and/or there, while at a standstill and/or in motion. It seems not to matter so much where you are any more (cf. Rifkin, Jeremy: The Age of Access, Penguin Books 2000, p.31)
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    see also Boelens, Luuk: La citta muovere; in: In Transit, NAi-uitgevers, Rotterdam 2003
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26. Heinrich Heine, quoted in: Hellemans, F.: De boodschap van de media; een geschiedenis, Acco Leuven 1996
27. Cf. Urry, John: Sociology beyond societies; mobilities for the twenty-first century; Routledge, London/New York 2000 p. 111
28. Cf. Zischka, Anton loc. cit. p. 211
29. Harvey, David: The Condition of postmodernity; An Enquiry into the origins of cultural change, Blackwell, Cambridge, Oxford 1990
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33. Cf. Urry, John & Rojek, Chris (ed.): Touring Cultures; Transformations of travel and theory, Routledge, London 1997
34. Warhol, Andy: From A to B, London 1976, quoted in: Pascoe, David: Airspaces, Reaktion Books, London 2001, p. 15

35. Cf. Augé, Marc: In the metro, University of Minesota Press, Minneapolis/London 2002
36. Cf. Janelle, Don: Central place development in a time space framework; gepubliceerd in: Professional Geographer 20, 1968; pp. 5-10
37. Morand, Paul: Le Retour, quoted in: Lambrichs, Anne: De gevleugelde eeuw, in: Dynamic City, Fondation pour l'Architecture, Brussels 2000, p. 135
38. Cf. Bertho-Lavenir, Catherine: Fantasieën op de fiets - Fiets en anarchie; in Dynamic City loc. cit., pp.60-61
39. Urry, John: Sociology beyond societies loc. cit., p. 193
40. Augé, Marc: Non-places; Introduction to an anthropology of supermodernity, Verso, London/New York 1995
41. In this connection, Mayor Opstelten of Rotterdam on his appointment on one occasion purported to provide a nuanced position by claiming that the mounting queues around Rotterdam were extremely relative. While he was in his previous position as Mayor of Delfzijl, he and the Aldermen rejoiced when there was a traffic jam on the motorway to the port, on the grounds that this was a sign that the economy was doing well there.
42. Urry, John: Sociology beyond societies loc. cit., p. 191
43. Cf. inter al. Rifkin, Jeremy: De waterstofeconomie - schone en duurzame energie voor iedereen; Lemniscaat, Rotterdam 2004
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