

The emergence and growth of dial-up Internet Service Providers (ISPs) as a means of access to the Internet in South Africa: a case study of M-Web and World Online.

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ABSTRACT

The desire amongst media scholars for the fulfilment of the ideal of a universally accessible public sphere by the media is such that virtually every new communications technology that has emerged over the past 100-odd years such as radio, television or the Internet has been welcomed with enthusiasm - by some – at the prospect of the newest communications innovation bringing about universal access to information. However, the history of communications media tells of the commercialisation of each new medium, from radio to television, and the imposition of barriers to access, based on cost. Access to communications media is open to those people who can afford to pay for them.

The emergence of the Internet spawned renewed hopes that the public sphere ideal would be realised. This new technology seemed more powerful than anything that had come before it.

The Internet offered the means whereby one could access a global repository of information, stored on a worldwide network of computer networks, and available 24 hours a day. With the Internet, it was also possible to communicate with people on the other side of the world within seconds, using electronic mail (e-mail). Here was a medium that permitted one to send text and pictures to colleagues and friends within a fraction of the time taken by traditional means such as fax, telephone or post. To enjoy the convenience of the Internet though, one had to have a means of access. In South Africa, access could be gained through a personal computer linked to the Internet either through a network in the workplace or an academic or research institution, or via a telephone link to an Internet Service Provider (ISP).

What were the names of the first ISPs to emerge in South Africa? When did they emerge and how did they develop? Did the number of ISPs grow or decline? What do ISPs give access to, at what cost and to whom? Do they provide universal access to information? This study addresses these questions by examining South Africa's leading providers of home dial-up Internet access, M-Web and World Online, and by exploring the histories of their emergence and development, within the context of current media trends of concentration, diversification and globalisation.

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CHAPTER 1 – Introduction

Mass media history deals with the interactive elements of technology; the political, social, economic and cultural situation of a society; a set of activities, functions or needs; and people – “especially as formed into groups, classes or interests” (McQuail, 1994: 12 – 13).

Communication history therefore is not merely a linear account of a series of evolutionary milestones in technological advancement; each met with excitement over new possibilities for reaching greater numbers of people than before. It is also a record of the communication media’s relationship with capital and power and the impact thereof on the activities of the media in relation to the societies in which they function.

1.1 What are the functions of the media?

Commercial communications media are worth scrutiny because of the varied functions they fulfil in modern societies. As a resource for power, media are a possible means of influence, control and innovation, especially because they provide the arena in which many “affairs of public life are played out, both nationally and internationally” (McQuail, 1997: 1). The communications media also provide us with definitions and images of social reality, and of what is normal. In addition, the media are a source of entertainment, which makes media consumption an important leisure activity (McQuail, 1997: 1).

In modern societies, where the workings of government and democracy are removed from the everyday experience of citizens, the communications media have an important role. We turn to the media to gain information on politics in the form of news, editorial opinion, broadcast debate and published criticism, for example. The provision of information is however hampered by the fact that the media provide information in a one-way process that does not allow for audience members to respond and participate in a multi-directional communication exchange. Ideally, information should be exchanged, discussed, debated and contemplated within a face-to-face forum where a two-way exchange that permits people to ask questions, confirm that they understand the message as intended and respond with comments or counter-arguments is possible.

Obtaining the information about the state and society, to which one is entitled, as a citizen is further compromised by the commercial nature of a large sector of the mass media.

Commercial imperatives powerfully influence what information the media make available to those who can pay for access to information or media. Sparks for example believes that the subject matter of the global commercial media – the future of markets, of intellectual and material property, resources and currencies – focuses on the things that the wealthy own (1998: 121). Therefore, the commercial media do not provide citizens with universal access to information, but offer restricted access that is based on class, geography and linguistic skills. Those who are poor are effectively excluded (Sparks, 1998: 122).

Despite the failure of the commercial media to serve citizens' need for accessible information from a wide number of sources and on a variety of subjects, we continue to hope that this ideal will be realised. Consequently, the emergence of virtually every new communication medium is met with hope and optimism that democracy and the needs of people as both citizens and as consumers will be fulfilled. The Internet and other new communication technologies have however repeated the patterns of emergence, development and commercialisation found in the media that preceded them.

The Internet is appealing because it permits one to transcend the barriers of distance, time zones and geographical isolation. It is the world's biggest repository of information, stored electronically on computer networks across the world. With the Internet, it is possible to communicate with friends, family and colleagues abroad, access networked computer databases across the globe, or to publish information using a global channel. Based on its technical characteristics, many people thought that the Internet held – and would fulfil – the promise of universal access to information.

Some enthusiasts referred to the Internet as the “most participatory form of mass speech yet developed” (Chalaby, 2000: 25) and predicted that the spread of information technology would result in the emergence of “new forms of participatory democracy” (Lyon, 1988: 86). Others spotted business opportunities in selling access to the new medium. Locally, Internet Service Providers (ISPs) identified and began exploiting such opportunities in the early 1990s by signing up subscribers and advertising in the commercial media in a bid for a share of the growing market of home dial-up Internet users.

However, for the Internet to extend and revitalise the public sphere where other media have fallen short, citizens must have equal access to this medium. If however the Internet is a sphere where participation is exclusive to those with the means (material wealth) of access, this medium succeeds merely in sustaining “the political economy of all previous communication technologies” (Golding, 1998: 144).

Looking back to 1994, the Internet as a means of mass communication was virtually unknown in South Africa to people outside the academic community. Before the medium was commercialised, the Internet was “an open secret shared by students and lecturers” (Goldstuck, 1996: 17). Universities, educational and research institutions in South Africa were linked to one another and later to the Internet through the Uninet, administered by the Foundation for Research Development (FRD), now the National Research Foundation (NRF).

When it became commercialised, the Internet emerged and grew steadily locally. In November 1993, The Internetworking Company of Southern Africa (Ticsa) provided the first commercial link from South Africa to the Internet. It aimed to provide “commercial organisations and other non-academic bodies” with access to the Internet, operating on “a voluntary, not for profit philosophy” (Goldstuck, 1996: 17). Today however, Ticsa is known as Internet Africa – a fully commercial enterprise. The Internet Solution is now a first-tier Internet Service Provider (ISP) with its own direct link to the Internet (Goldstuck, 1996: 17 – 18). First-tier ISPs such as Internet Africa and The Internet Solution (IS) sell access to “these expensive gateways” to smaller service providers who “operate their own hardware and software” (Goldstuck, 1996: 18).

By the end of the 1990s, e-mail and Internet access in the workplace were common for some people in South Africa. One could also access the Internet by visiting an Internet café, or from home, through an ISP offering dial-up access to the Internet. Having home access to the Internet appears to have drawn a good deal of interest in the years after its emergence in South Africa, judging by the sharp climb from 1994 onwards in the number of ISPs providing access. Initially, the number of local ISPs virtually doubled annually until 1998 when it started to drop (Goldstuck, e-mail interview).

Although initially increasing numbers of people began taking advantage of the convenience of having home dial-up access to the Internet, the local ISP market seems always to have been unstable. It has seen ongoing consolidation through mergers and acquisitions resulting in a drop in the number of ISPs operating in South Africa (Goldstuck, e-mail interview). What brought about this new trend? Perhaps the market for ISP subscriptions was a small one, unable to sustain a large number of players once it neared saturation. In South Africa, telephone access is “reported to be about 30%, translating into about 2,8 million homes with telephone services”⁽⁹⁾. There are probably “about 800 000 dial-up users in SA, giving a total user base of about 2,5 million” (Jensen, e-mail interview; ¹⁰). Corporate, government and academic networks lease the balance of lines ⁽⁷⁾. Therefore, Internet users make up a tiny section of the country’s population.

In South Africa, cost is a significant barrier to accessing the Internet. On a continent where “half the population survives on less than \$2 (R17) a day”⁽³⁴⁾, the number of people in South Africa who can afford to access the Internet from home is severely limited. To access the Internet requires a “reasonably state-of-the-art computer, a phone line and a modem” (Golding, 1998: 141). In South Africa, one can add to this the additional cost of electricity, the monthly cost of an ISP subscription and the need for one to be literate in English and computer literate.

Based on a general examination of the emergence and development of the Internet and the means of accessing it, it is apparent that the Internet does not offer universal access to information. The Internet has been commercialised and the people who have taken control of developing its infrastructure and access to it, have largely converted the Internet into a market where access is determined on the basis of price. In South Africa, instead of benefiting citizens and democracy by providing universal access to a public sphere of information and debate, the Internet has become the domain of the country’s socio-economic elite, thus increasing already gaping information inequalities between the wealthy and the poor. In this regard however, South Africa is no different from most other countries connected to the Internet. The widespread commercialisation of the Internet has resulted in comment that the “most significant change in the character of the WWW has been the irresistible rise of commercial sites” (Golding, 1998: 137).

The growing commercialisation of the Internet however threatens to close down Internet access to those without the means to pay for it and widen the growing gulf between the information rich and information poor. As a result, there have been warnings that failing to ensure equal access threatens to exacerbate an increasing 'digital divide' between "wealthy, educated Internet users and poor, disproportionately nonwhite nonusers" (Schiller, 1999: 141). Smith has described the digital divide in broader geographic terms as the

... growing disparity in the provision of information, and especially communications technologies, between the countries of the North and those of the developing South. Eighty-five percent of both hardware and software is the privilege of a tiny group of societies, who are themselves enjoying a continually increasing disparity. Information wealth grows by what it feeds upon (1999: 136).

Given that the digital divide extends to South Africa with its significant socio-economic disparities, problems of unemployment and illiteracy, how did M-Web and World Online grow to be the country's largest providers of dial-up access? Who do they provide with Internet access and what might their future strategies for business growth be? How do these companies' histories correspond with global media trends such as diversification, mergers and concentration?

1.2 The focus of this study

This study explores the emergence of the commercial media and the tension between the media's role as an information resource for citizens, and a source of entertainment and consumer information for consumers. The concepts of citizenship and capitalism are explored in relation to the commercial media before the general trends at the level of political economy of the media, and the emergence of the new communications technologies are explored. Does the new communication technology of the Internet provide universal access to information in a revived public sphere? This question is addressed by examining one means of accessing the Internet: from home via a dial-up Internet Service Provider (ISP).

As a history of the emergence and growth of ISPs in South Africa, this study examines the country's largest ISPs with a view to determining how these companies gained their dominance of the home dial-up market. The study offers insights into who these companies are, what their motives are, what they provide or offer, and to whom. Instead of fulfilling the promise of universal access, M-Web and World Online promise access to information and electronic consumer platforms to those who can afford to pay for this service.

For the citizens of South Africa to enjoy the “horizontal communications structure” (Golding, 1998: 141) that is the Internet, access has to be universal. Yet in South Africa the Internet has replicated “patterns of exclusion and differentiation apparent in earlier technologies” (Golding, 1998: 141) with the “emergence of division and exclusion” from access by pricing mechanisms. How this occurred will be explored by tracing the emergence and growth of two dominant commercial ISPs serving the home dial-up market in South Africa, M-Web and World Online.

CHAPTER 2 – Theoretical framework

2.0 Introduction

To appreciate the excitement that greeted the emergence of the Internet as a communication technology, it is necessary to review the emergence and development of the communications media within the context of social and political change over the past 400 years. A brief historical perspective provides an understanding of the factors that have shaped previous communication innovations and how some of the patterns in communications history are possibly being repeated in the development of the Internet in South Africa.

2.1 The emergence of the bourgeois public sphere

The accumulation of technical and scientific knowledge acquired during the Renaissance, Enlightenment, Industrial Revolution and successive periods in history was crucial to the development of what would become the mass media. During the period of transition from medieval Europe to the modern age known as the Renaissance (Johnson, 2000: 3), medieval Europe did not have access to abundant manpower. This was because feudalism – a complex political and economic system, “reinforced in time by statutory law, which forbade freedom of movement” (Johnson, 2000: 10) – had replaced slavery and made it difficult for people to move about freely or to constitute a labour market. The scarcity of labour worsened in the mid-1300s, when the Black Death killed a third of Western Europe’s population (Johnson, 2000: 11). Consequently, there were strong incentives to develop labour-saving devices and alternative sources of energy (Johnson, 2000: 13).

It was against this backdrop in the later Middle Ages that Europe entered a period of intermediate technology (Johnson, 2000: 13) with the invention and subsequent spread of printing by movable type. Printing brought “intellectual and cultural dynamism to northern Europe” (Sreberny-Mohammadi, 1990: 49) in dramatic fashion:

The speed at which printing spread, the quality and quantity of the production, and the extraordinary mechanical ingenuity displayed, together constituted a kind of industrial revolution (Johnson, 2000: 17).

In Britain, various texts were printed in Latin and, increasingly, in English. The simultaneous spread of literacy (Sreberny-Mohammadi, 1990: 49) would eventually lead to new interpretations of the Bible and challenges to the authority of the Roman Catholic Church. This eventually caused “priests, political elites, scholars and scribes to lose their monopoly on reading and writing” (De Fleur and Ball-Rokeach, 1989: 22 – 23) and their control of knowledge and interpretation (Sreberny-Mohammadi, 1990: 50).

Once printing technology was combined with the demand for information created by the “economics of increased cross-cultural contact through trade and travel” (Sreberny-Mohammadi 1990: 50), the emergence of the newspaper became inevitable. Its development was aided by the emergence during the 17th and 18th centuries of an audience of literate people with money to purchase and leisure time in which to read the newspaper. Middle class private individuals came together mainly in Paris and London’s coffee houses and salons to debate “among themselves and with state authorities” state and civil matters in a “unique constellation of public-private relations” known as the public sphere (Thompson, 1990: 110, 111).

The public sphere offered individuals a space independent of the state and business control where current issues, belief systems or ideologies could be debated (McChesney, 1997: 10), thus offering participants “coherent interpretations of social and political phenomena” that mobilised social movements and justified “the exercise of power” (Thompson, 1990: 79, 80). The public sphere was an important contributor to political change in the form of the rise and success of democratic revolutions and societies in the 18th and 19th centuries (McChesney, 1997: 10).

The bourgeois public sphere was however imperfect and short-lived. Participation in the bourgeois public sphere was restricted based on property ownership and education to “a limited section of the population” (Thompson, 1990: 110). Members were “male, educated and propertied, with the means and leisure to take part” (Thornton, 1996: 9).

The emergence of a middle class, the decline of feudalism, the rise of capitalism and of the nation state, which originally brought about the existence of the public sphere, also caused its decline. Habermas suggests that the “growth of the state and of large-scale commercial organisations in the domain of mass communication” transformed and eventually stifled the bourgeois public sphere (Thompson, 1990: 110). Garnham explains that the

... development of the capitalist economy in the direction of monopoly capitalism led to an uneven distribution of wealth, to rising entry costs to the public sphere and thus to unequal access to and control over that sphere. In particular the rise of advertising and public relations has embodied these trends since they represent direct control by private or State interests of the flow of public information in the interest, not of rational discourse, but of manipulation. At the same time, these developments in the economy led to related development by the State (1992: 107).

Nevertheless, the Habermasian concept of the public sphere ideal remains valuable for providing “a useful framework for democratic media activists” (McChesney, 1997: 10), because it draws attention to the importance of having a sphere of social communication that neither the state nor large commercial organisations control (Thompson, 1990: 119).

2.2 The media: serving citizens and consumers

According to Garmham, the exchange of meaning and symbolic forms through face-to-face contact and – in modern society – through mediated channels is a primary human need (1992: 8 – 9). Moreover, in mass democracies, mediated communication should serve people not only as consumers of cultural commodities, but also as citizens by providing a public sphere of rational debate and discourse.

2.2.1 A definition of citizenship

Before examining the ideal role of communication in relation to citizens and the democratic political system, the concept of citizenship should be explored. Murdock (1992: 20) argues that citizenship presupposes people having civil, political, social and cultural rights and exercising them freely. Civil liberties encompass freedom of speech, of movement, of association and of conscience. In capitalist societies, civil rights include the “freedom to own and dispose of personal property” (Murdock, 1992: 20). However, not everyone has equal access to owning and disposing of property. This inequality restricts other liberties, because the “unequal distribution of wealth and income under capitalism [has] played a crucial role in regulating access” to communication resources (Murdock, 1992: 20). Citizenship also includes the political right to participate in the “making and exercise of the laws by which one consents to be governed”, as well as the right to “full membership of a social and cultural formation” (Murdock, 1992: 20).

Consequently, citizenship entails the right to, among other things, being involved in the legislative process. To exercise these rights, citizens living in a modern society such as South Africa – where laws are drafted, tabled and passed in Parliament and where freedom of speech translates into voicing one’s opinion by means other than face-to-face debate and discussion – need to have access to mediated forms of communication. Citizens need to be able to express opinion in a public arena and hear or read about the opinion of others within the same public space. To fulfil this need, we have come to rely largely on newspapers, TV news and “actuality” programmes, radio news and discussion programmes, created by the media industries, to provide us with “frameworks for understanding” through which we make sense of our situation and formulate courses of action (Murdock, 1994: 6).

The democratic political system requires the active involvement of citizens, whose political participation depends upon them having access to as wide a variety of information and analysis, public opinion and debate (Murdock, 1990: 4) as possible. In modern societies therefore, the media should ideally address this need and serve citizens by providing a channel for information dissemination and discussion (Nordenstreng, 1998), and access to “politically relevant information in the form of news, ideas, discussions, policy debates” that originates from among the citizens themselves (Dahlgren, 1987: 27). However, the commercial media must also serve their shareholders by returning profits. The commercial imperative is a powerful determinant of media content, the price at which it is made available, and for whom it is intended to appeal.

2.3 The media: satisfying owners, managers and advertisers

The media operate within the economic system of capitalism, which is based on market competition. Under capitalism, the single owner of a company or the shareholders in a joint-stock company supply the capital, while employees supply labour in exchange for a wage or salary. In the capitalist system, individuals or corporations therefore “own the means of production, distribution and exchange” and receive any profit that the firm makes after wages and costs have been paid (Isaacs, 2000: 109). In a capitalist economy

... firms compete with one another to sell to customers in what is primarily a free market. In its most developed form, capitalism, which is based on the principle that economic decisions should be taken by private individuals, restricts the role of the state in economic policy to the minimum (Isaacs, 2000: 109).

2.3.1 The commercialisation of the newspaper

Historically, newspapers and subsequent media forms have not been isolated from social, political and economic influences. The commercialisation of the press – and of subsequent media forms – meant that profit rather than public enlightenment came to dominate the motives of media owners and producers (Sparks, 1998: 111). In the early days of the newspaper, it was possible for a proprietor-publisher to own a newspaper title, but the commercialisation of newspapers made it very expensive for an individual to become a newspaper owner. The resulting concentration of ownership in the hands of a few companies limited the diversity of opinion available in the media.

During the 1800s, technological progress pushed up printing costs and made media ownership accessible only to individuals or companies with sufficient capital to take over existing, possibly ailing, media. At the same time, increasing numbers of newspapers began to use the formula of “low price, extensive advertising and mass circulation,” with newspapers increasingly becoming

... large-scale commercial ventures which required relatively large quantities of capital to initiate and sustain in the face of increasingly intense competition (Thompson, 1990: 178).

By 1900, media ownership had shifted from printers and postmasters holding single titles to “chain ownership and ... press barons” (Murdock, 1990: 1) who owned chains of titles and were “free to use them for their own ends” (Murdock, 1994: 3). Newspapers were treating their readers increasingly as buyers of media and consumer products, with the latter providing essential advertising revenue for media organisations. The public sphere existed only as an ideal (Thompson, 1990: 112).

Today, the size and profile of its audience determines the ability of a newspaper, magazine, radio or television station to attract advertising revenue. However, this dependence conflicts with the other important role of the media: to serve citizens. The commercial media’s dependence on advertising makes it vulnerable to “editorial pressure from large advertisers”; leads to the media privileging “the speech of commerce” over other voices; and has encouraged the sensationalism of the media as a means of attracting mass audiences, resulting in public debate being deformed (Murdock, 1992: 23). And, with the emergence of global and regional media empires, the likelihood of the media providing a public sphere for rational debate and discussion seems poorer than ever, as

... they mobilise a proliferating array of communications technologies to deliver a plurality of cultural products across a widening range of geographical territories and social spaces, and are directed from the centre by proprietors who rule their domains with shifting mixtures of autocracy, paternalism and charisma (Murdock, 1994: 3).

The emergence of monopoly ownership of communications media has resulted in a growing contradiction between the idealized role of the press and other media as a “key resource of citizenship and its economic base in private ownership” (Murdock, 1990: 1).

2.3.2 The media are different to other industries

As commercial organisations that produce and distribute ideas in order to profit their shareholders, the media serve the interests of their owners and thus too the economic system of capitalism, where the owners of capital are free to dispose of it as they choose, normally for their own profit (Pallister and Isaacs, 1996: 84). Therefore, the media’s ideal role “as a key resource for citizenship” (Murdock, 1990: 1) conflicts with its relationship to capital and its concern with attracting consumers and satisfying their needs (Murdock, 1990: 4). The media’s secondary function is to report news, provide entertainment, information, education and other services, but the primary drive to make money and survive as income-generating entities underpins these activities. Consequently, today’s commercial media organisations – both locally and abroad – are typically part of conglomerates that hold interests in “communications industries often linked to other key economic sectors through shareholdings, joint ventures and interlocking directorships” (Murdock, 1990: 4).

There has been much “conflicting argument and evidence” over the role of media owners and controlling companies as structural determinants of the media, because it is “difficult to pin down the precise influence which individual owners and controlling companies” have on the commercial media (Masterman, 1985: 83). Nevertheless, as legitimate business ventures in which people and companies have invested money by purchasing shares, the existence, growth and survival of commercial media demands profitability. It is likely therefore that this powerful objective, despite the best intentions by owners to uphold editorial independence, must be part of the “complex mesh of influences” (Masterman, 1985: 83) on commercial media companies. It is conceivable that the likelihood of profitability is a powerful determinant in deciding, for example, what newspapers to launch or magazines to close down, what radio or television shows to produce, or what films to make.

2.4 The shortfall between the ideal and reality

One of the most powerful influences on the development of the commercial communications media has been the emergence of and relative dominance in the West of the system of capitalism. The media sustain and promote capitalism in various ways by virtue of them being commercial concerns. Recent trends in the communications industries illustrate the influence of capital on the emergence and development of the media. Garnham argues that the capitalist value system and set of social relations within which the commercial media operate has affected the means by which the public service and commercial media alike serve citizens. Past trends also point to the possible influence of capital on the recent development of the Internet, and the emergence and growth of dial-up Internet Service Providers (ISPs) in South Africa. This study aims to trace a history of the emergence and growth of dial-up ISPs as a means of access to the Internet in South Africa, specifically by exploring how M-Web and World Online came to be the largest dial-up ISPs operating in South Africa.

2.4.1 On political economy of the media and the commercialisation of the media

The political economy of the media entails analysis that links capitalism to: (i) the relationship between the mode of production and the material practices by which “symbolic forms are created, circulated and appropriated”; (ii) the relationship between capitalism “as a social system” and the ideas about the world that people within that system hold; and the (iii) “relations under capitalism between human ideas and human actions” (Garnham, 1992: 5).

Therefore, a political economy approach emphasises that

... all mediated forms of communication involve the use of scarce material resources and the mobilization of competences and dispositions which are themselves in important ways determined by the ways in which access to and control over those resources is structured (Garnham, 1992: 6).

Garnham adds that a political economic approach to the media examines the structure of social relations and social power within capitalism, where human relations are mediated through a money-based system of exchange, within which “material production is based upon a historically specific relation between capital and labour”. This, Garnham explains, means that

... because capital controls access to the physical means of production, the majority of people, no longer involved in a subsistence economy, are dependent, either directly or indirectly, first for their physical survival, and second for access to the resources required for the symbolic exchanges of cultural practice on wages and thus upon entering into a wage contract (1992: 7 – 8).

Although the exchange of meaning and symbolic forms through mediated channels is a basic need of people in modern societies, the commercialisation of mediated forms means that access to them is not open to everyone. The access that people living in a society with a capitalist economy and commercial media have to mediated forms of communication depends upon them having equal access to opportunities to earn equal wages in exchange for their labour. Though the marketplace might offer an array of media products imbued with meaning, it does not grant people the right to “participate in deciding the rules that govern either market transactions or the distribution of wealth and income” (Murdock: 1992: 19). Thus, people living within a capitalist society do not have equal access to the exchange of meaning and symbolic forms.

2.4.2 The commodification of culture – at what cost to citizens?

The price at which information is made available, one might argue, is both literal and figurative in that the commodification of culture and information has occurred at the expense of democratic ideals. In mass democracies, mediated communication should serve people not only as consumers of cultural commodities, but also as citizens by being a public sphere for rational debate and discourse. For Habermas (Garnham, 1992: 17), a free society should be based on the principles of general accessibility to information, the elimination of privilege, and the search for general norms. Therefore, communication is central to capitalism as already explained, but also to “political process and structure” (Garnham, 1992: 17).

It has also been argued that private ownership and market dynamics have prevented the commercial media industries from fulfilling their obligations as a major public institution “central to the functioning of a democratic system” (Murdock, 1992: 23 – 24). To some degree, this failure to serve the democratic system is because the

... market has produced conditions of oligopoly, which undercut the liberal ideal ... the site of the problem is the fundamental contradiction between the economic and the political at the level of their value systems and of the social relations which those value systems require and support (Garnham, 1992: 110).

Therefore, in the political context, the individual is regarded as a citizen “exercising public rights of debate, [and] voting” for the public good (Garnham, 1992: 110 – 111). However, in the economic context the individual is regarded as a producer and consumer “exercising private rights through purchasing power on the market in the pursuit of private interests” (Garnham, 1992: 110 – 111). Therefore, both the commercial media and people living in a democratic capitalist society may be conceptualised in the contradicting terms of the political public and the economic private spheres. These spheres influence each another: political objectives can “override the search for economic efficiency” while “the level of material productivity” can restrict political freedom (Garnham, 1992: 110 – 111). The media operate simultaneously across the two realms in an attempt to perform two incompatible functions (Garnham, 1992: 110 – 111).

2.4.3 Trends in the political economy of media industry

The changes in media industries, their products and their modes of production and diffusion – resulting in their integration into the empires of media moguls – are attributed to shifts at the levels of technology and of political economy (Murdock, 1994: 3; Thompson, 1990: 193). At political economy level, four trends have emerged in the media industries: increasing concentration, diversification, globalisation and a move towards deregulation, privatisation or liberalisation that has led to a decline in the scope of public sector media (McQuail, 1994: 83; Thompson, 1990: 193).

2.4.3.1 Concentration

In South Africa, as in many other countries with mixed capitalist economies, ownership of the productive resources of the media is concentrated in the hands of a small number of companies, among them National Media, Primedia and Johnnic. In the UK and USA for example, the media industries are characterised by

... a concentration of resources in the hands of a few large companies and, in some cases, by a concentration of shareholdings within these companies in the hands of a few key individuals, or in the hands of a few key corporations with communications interests (Thompson, 1990: 195).

One way in which firms increase market share is to merge with or acquire their competitors. It is an established strategy that dates back to the closing decades of the 1800s (Murdock, 1994: 4) and which was used by emerging ISPs in South Africa in the early years as a means of expanding market share.

2.4.3.2 Diversification

Diversification – whereby companies expand their activities in different domains or product lines by acquiring companies operating in those areas, or by investing capital in new developments – has increased in media industries recently (Thompson, 1990: 195).

Diversification into a related field enables companies to “control costs and benefit from different stages” of product development, whereas expansion into an unrelated field can become an alternate means of generating profit and a cushion “against the negative consequences of recession, unstable growth or long-term decline” (Thompson, 1990: 195 – 196).

Concentration and diversification in media industries have led to the emergence of communication conglomerates with major interests in various information and communication industries. Growing integration “into the higher levels of the banking and industrial sectors” as clients and subsidiaries because of “interlocking boards of directors” has accompanied the growth and diversification of the communication conglomerates (Thompson, 1990: 196 – 197). However, in addition to such service conglomerates – based on their core activities – there are also industrial and communications conglomerates involved in media ownership. Industrial conglomerates are companies that own “media facilities but whose major operations are centred on industrial sectors” (Murdock, 1990: 4). The service conglomerate centres on service industries such as “real estate, financial services, and retailing” (Murdock, 1990: 5). The major interests of the communications conglomerate typically “are centred mainly or wholly in the media and information industries” (Murdock, 1990: 4).

2.4.3.3 Globalisation

Owned by communication conglomerates whose operations reach beyond national boundaries, the activities of media industries are rapidly extending across the globe owing to several factors. Firstly, mergers and take-overs among the world’s big communication conglomerates have to some extent fuelled their “transnationalisation” (Thompson, 1990: 199). Secondly, the production and export of media goods such as books, television programmes and films for an international market have grown increasingly important in the media industries” (Thompson, 1990: 199). Finally, advances in satellite technology that enable the virtually immediate transmission of vast quantities of information globally have contributed significantly to the globalisation of media industries (Thompson, 1990: 202). Communication is increasingly becoming a commodity to be “exchanged and controlled in a global market” (Thompson, 1990: 203) that is growing beyond the reach of “voters and of the policymaking constraints of all but the largest national governments” (Menzies, 1998: 91).

2.4.3.4 Deregulation

Broadcasting in particular has seen a move by some western governments to deregulate the activities of media organisations as part of a greater, more general trend to promote industrial competitiveness and lighten legislative restrictions on “the pursuit of commercial interests” (Thompson, 1990: 204). Therefore, deregulation benefits communications industries in the form of changed corporate governance laws and more relaxed rules regarding concentration in the media marketplace (Murdock, 1990: 12 – 13). For this reason, deregulation is also criticised for potentially promoting concentration by enabling communication conglomerates to increase their dominance in the “new global economy of information and communication” (Thompson, 1990: 205).

2.4.3.5 Changes at the level of technology

Advances in communications technology are bringing about a major change in the nature of communications media. There have been advances in satellite technology and in the development of digital technology. Murdock identifies the digitisation of “written text, spoken words, music, moving images and statistical data” (1994: 3) as nothing less than revolutionary because of its potential to erase the boundaries between what have always been separate communication forms. Referred to as media convergence, this trend is

... providing a powerful new impetus towards greater concentration of media ownership as companies seek to position themselves to best advantage in the new multi-media landscape and to consolidate their hold over well-established areas of activity (Murdock, 1994: 4).

These trends at the levels of political economy and technology in the communications industries confirm Murdock’s assertion that the free market system has failed to guarantee diversity of representation, of expression and debate; “instead the commercial press has favoured the economic and ideological interests of capital” (1992: 21 – 23). Early critics of the commercial media expressed concern over threats posed by commercialisation to the diversity and openness of communication systems. Those limitations, says Murdock, are now more prominent in an environment where the strategy of the media moguls is to “re-sell material in as many markets as possible” (1992: 36). The political economy of the media hampers diverse cultural representation (Murdock, 1992: 36).



2.5 New communications technologies

Advances in the field of information technology have resulted in the emergence over the past decade of an array of new communications technologies, among them the Internet and World Wide Web. For people who have access to them, the new communications technologies such as the Internet, satellite television and cellular telephony promise to change modes of work and lifestyle. For example, people on different continents can hold satellite conferences with one another, while cellular telephones make it possible to make telephone calls, send short text messages or access the Internet from most places in South Africa. The Internet, which has captured popular imagination is however not a recent development in communications technology.

2.5.1 A history of the Internet's emergence

Although 1969 is generally accepted as the starting point of the Internet, refining it into its present form “took place, in stops and starts, over several decades”, with the precursor to the Internet emerging during the Cold War (Muller and Queneau, 2001: 15). After the Soviets launched the *Sputnik* satellite, US President Eisenhower established the Advanced Research Projects Agency (ARPA) in the Pentagon “to ensure that the United States would not again be taken by surprise by a military related technology” (Hafner and Lyon, quoted in Rogers and Malhotra, 2000: 12).

Had it not been for people with a vision of computers being used as communication devices, computing technology may have developed very differently to what it did (Rogers and Malhotra, 2000: 11). Computers have gone from being perceived as “number-crunching devices” to communication media, a shift that Rogers and Malhotra attribute to abundant funding, certain key institutions and several visionary individuals, among them Vannevar Bush, JCR Licklider, Robert W Taylor and Douglas C Engelbart (2000: 10 – 11).

Bush, an electrical engineer who became science adviser to President Roosevelt during World War II and main organiser of the Manhattan Project, is credited with shaping the conception of the National Science Foundation and ARPA (Zachary, 1995: 65). Licklider was an acoustical psychologist at MIT whose vision for computing was revolutionary for his time, but became the “dominant paradigm for the computing world” (Rogers and Malhotra, 2000: 11). He was “one of the first observers to envision digital democracy”, with communication as a “key element” in his long-term view of “computing and its role in a participatory democracy” (Rogers and Malhotra, 2000: 12). He became the head of the Pentagon’s research programme at ARPA’s Information Processing Techniques Office (IPTO) where, with generous US Department of Defense funding, he “implemented his vision of computers as communication tools” (Rogers and Malhotra, 2000: 11 – 12).

Fellow psychologist Taylor shared Licklider’s interest in the use of computers as a communication medium. Together, Licklider and Taylor – aided by Lawrence Roberts – established ARPANET, which would

... link computers at ARPA with its geographically dispersed contractors (mainly computer scientists at US universities). ARPANET allowed participants in a communication system to interact across large distances at minimal cost. ARPANET was the prototype for the present-day Internet (Rogers and Malhotra, 2000: 13).

Engelbart is credited with designing the computer mouse, a crucial computer interface technology. This device enabled one to “communicate commands to the computer”. Engelbart also created the ARPA Network Information Center (NIC), which in 1968 “began delivering the ARC oNLine System (NLS) over ARPANET”. NLS used a mouse and e-mail, and had a windows interface for connecting ARPA’s research and development workers at 30 sites in the US (Rogers and Malhotra, 2000: 15).

In 1970, the Xerox Palo Alto Research Centre (PARC) was established in the US. Taylor staffed Xerox PARC with “a critical mass of computer scientists”. By 1975, PARC had improved on Engelbart’s mouse and developed the world’s first personal computer, bit-mapped display, icons and pull-up menus, laser printing and Ethernet technology, which “linked computers into a local area network” (Rogers and Malhotra, 2000: 15 – 16). As early as 1972, the primary elements for computer networking had been created, although ARPANET was restricted to those who had developed it. The computing technologies developed at Xerox PARC would become “the basis for the widely selling Macintosh microcomputer” that would be launched in 1984 (Rogers and Malhotra, 2000: 17).

ARPANET was initially conceptualised as a resource-sharing system for ARPA contractors. However, users soon found that they could use it for transmitting personal messages and “e-mail became one of the most popular features of the network”. With e-mail – mostly humorous and highly personal – comprising three quarters of all traffic, Rogers and Malhotra note that “ARPANET became a publicly available means of electronic communication, provided gratis by the Pentagon” (Rogers and Malhotra, 2000: 18).

Gradually, other computer networks emerged. Bob Kahn began toying with the idea of linking the various networks into a network of networks. Hence, “by 1973, the Internetworking Project was established at ARPA” (Hafner and Lyons, quoted in Rogers and Malhotra, 2000: 18). Kahn’s collaboration with Vint Cerf, a computer scientist at UCLA (University of California at Los Angeles), resulted in them describing in 1974 a transmission control protocol (TCP) for routing messages between different networks. In 1978, Cerf, Postel and Cohen found that “breaking up the original TCP that dealt with routing packets, and forming a separate Internet Protocol or IP” would make it possible to

... build relatively inexpensive gateways that could read the computer message code, so as to route message packets toward the appropriate destination computer. Thus, TCP/IP became the standard for the Internet, and greatly assisted its expansion (Rogers and Malhotra, 2000: 19).

By the late 1970s, it had become necessary to create a network that would be more accessible than ARPANET, remark Rogers and Malhotra. Backed by the National Science Foundation (NSF), the forerunner of BITNET, the Computer Science Research Network (CSNET), was created. BITNET originated in 1981 at the City University of New York and Yale University (Rogers and Malhotra, 2000: 19). The two universities became connected through a leased telephone line, thus permitting users at the universities to exchange messages. Four more East Coast universities joined the network, each “leasing a telephone line to the nearest university that already belonged to BITNET” (Rogers and Malhotra, 2000: 19). When the University of California at Berkeley leased “an expensive long-distance telephone line to join” in 1982, the network became accessible to other West Coast universities (Rogers and Malhotra, 2000: 19). With universities sharing the cost of the “transcontinental connection”, BITNET grew in size every six months (Rogers and Malhotra, 2000: 20).

The Internet as we know it today emerged in 1985, when the NSF created a network between five NSF-funded supercomputers; each based at a different US university. The NSF offered “other computer networks access to this backbone network”, known as NSFNET (Rogers and Malhotra, 2000: 20). Gradually, this “connection of interconnected TCP/IP networks gradually came to be known as the Internet” (Rogers and Malhotra, 2000: 20). The prototype, ARPANET, was dismantled and its sites assigned places on the Internet (Rogers and Malhotra, 2000: 20).

Tim Berners-Lee’s creation of the World Wide Web in 1990, and the invention of the Mosaic “graphics program that made the Web easier to use” (Rogers and Malhotra, 2000: 21) boosted the widespread adoption of the Internet. In the first few years of existence, two million users per year (Rogers and Malhotra, 2000: 21) adopted Mosaic. These technologies “were essential in making the Internet more accessible and attractive to users, and helped set off the rapid increase in the rate of adoption of the Internet in the 1990s” (Rogers and Malhotra, 2000: 21). In turn, the Internet rapidly reached critical mass, the point at which enough people had adopted it for the rate of adoption to become self-sustaining. Reaching critical mass is significant for a new technology because after this point “an innovation’s rate of adoption proceeds rapidly” (Rogers and Malhotra, 2000: 21). The more people that adopt the Internet, the more people the user can communicate with; thus the greater the number of users, the greater the value of the Internet as a communication medium. Therefore, “once the Internet reached critical mass ... it spread at an ever-increasing pace” (Rogers and Malhotra, 2000: 21).

2.5.2 Technological advances fire hope for democratic renewal

The transmission of the first telegraph signal and virtually every other technological advance, such as radio, telephone or television, has prompted optimistic predictions for democratic renewal, the erosion of social fractures or the curing of economic ills (Regan, 2000: 15). Yet in each case “within one or two decades disillusion reigned” (Hacker and Van Dijk, 2000: 211), following the commercialisation of each new communication medium and the accompanying restriction on access by pricing. A political-economic history of the media functioning within a capitalist context reveals that the media have failed to serve citizens’ need for access to “the broadest range of information, interpretation and debate” on issues involving “public political choices” (Murdock, 1992: 23). Nevertheless, hope remains, as evidenced recently by the predictions for democratic renewal and the revitalisation of the public sphere that greeted the emergence of the Internet.

2.5.3 Optimistic predictions for the Internet

The Internet gives access to information stored in electronic format on a global network of computer servers. It is possible to access the huge, worldwide repository of data that is the Internet 24 hours a day from anywhere in the world – as long as one has the right computer hardware, software and telecommunications access. Theoretically, information on virtually anything is available on the Internet, which is why some saw the Internet as an “informational cornucopia” that offered a means of realising “the vision of easy access to information” (Schiller, 1999: 143). Some viewed it as a free paradigm that would enable citizens to originate news, ideas, discussions and policy debates, and gain access to “informational and educational resources” (Patelis, 2000: 85; Hirschkop, 1998: 208 – 210). The Internet would make information intermediaries such as journalists and politicians redundant by enabling citizens to “search, select and interpret political information” themselves (Hacker and Van Dijk, 2000: 213). It was predicted that the Internet would overcome the limitations of distance and geography, which are blamed for inequalities in access to information across the world. This new medium offered the opportunity to transform “citizens across the globe [into] active producers of online information” (Patelis, 2000: 85). Others point out that the Internet could be put to use in working for social change by rapidly disseminating information, organising international campaigns and helping to form global associations (Regan, 2000: 18).

2.5.4 Is information access sufficient for democratisation?

Hacker and Van Dijk (2000: 214) summarise the claims in favour of the Internet under three broad headings. They observe that strong advocates of digital democracy claim that digital democracy

improves political information retrieval and exchange between governments, public administrations ... and individual citizens; supports public debate ... and community formation and enhances citizens' participation in political decision making (2000: 214).

Yet the “greatest achievement of digital democracy” argue Hacker and Van Dijk is that it offers “better opportunities” for citizens who have access to new media – and the necessary skills – to retrieve politically relevant information (2000: 214). However, they doubt if having access to reliable and valid information – albeit important for democracy – is “a sufficient condition for democratization” (2000: 215). Information, they contend, has to be “processed” and “transformed” into decisions and political action (Hacker and Van Dijk, 2000: 215). Hence their call for more collective debate, which “offers better chances of being transformed into action and effects on decision making” (Hacker and Van Dijk, 2000: 215). Therefore, even if universal access to the Internet were the norm in South Africa, it would not be meaningful if access to diverse information was not translated into actions. Nevertheless, the view that access to information via a technological platform is a desirable goal in itself remains popular.

2.5.5 Technology as a quick-fix for democracy

One of the more famous proponents of digital communications technology was US Vice President Al Gore, who predicted in 1994 that the Global Information Infrastructure would “circle the globe with information superhighways” that would

... allow us to share information, to connect and to communicate as a global community. From these connections we will derive robust and sustainable economic progress, strong democracies, better solutions to global and local environmental challenges, improved health care, and – ultimately – a greater sense of shared stewardship of our small planet... [I]t will in fact promote the functioning of democracy by greatly enhancing participation of citizens in decision-making. And it will greatly promote the ability of nations to co-operate with each other. I see a new Athenian Age of democracy forged in the fora the GII will create (Regan, 2000: 15).

Gore, it appears, fell prey to one of the commonest misconceptions about technology: that it is neutral, autonomous, can be freely selected, and can be applied as a “technical fix to limits of time, place, information and access in the daily practices of democracy” (Hacker and Van Dijk, 2000: 209 – 210).

This view assumes that “the problems of democracy are primarily practical” (Hacker and Van Dijk, 2000: 210), and fails to take into account factors that technology cannot address, such as a lack of “political interest, time, effort and skills required” for full political participation (Hacker and Van Dijk, 2000: 210). Nor can technology overcome the social and material inequalities that appear to be factors in citizens’ “differences of participation” in politics (Hacker and Van Dijk, 2000: 210).

Calabrese and Borchert too have mentioned that “breathtaking” communication innovations do not “create a more deliberative, egalitarian and democratic society” (1996: 265). This is because such innovations are subject to the same forces that have moulded earlier communications media:

Knowledge carried through the Internet is no less shaped by social forces than it is elsewhere. [...] in fact, cyberspace itself is being rapidly colonised by the familiar workings of the market system. Across their breadth and depth, computer networks link with existing capitalism to broaden the effective reach of the marketplace. Indeed, the Internet comprises nothing less than the central production and control apparatus of an increasingly supranational market system (Schiller, 1999: xiv).

Gillespie and Robins (1989: 15) also argue that it is a common and problematic assumption that technological systems must be introduced for the sake of modernisation, which is seen as “the necessary panacea for social and economic inequalities”. Advocates of technology view new technological systems as “neutral instruments for overcoming and solving social and economic problems”, despite evidence to the contrary (Gillespie and Robins, 1989: 15). Technological determinism, argue Gillespie and Robins, underpins Utopian predictions that envisage technological progress facilitating

... the transcendence not only of inequalities between regions but of those between urban and rural areas. The constraints of space and time and the particularities of place diminish and disappear in this vision of a harmonious and egalitarian post-industrial society in which will be found ‘all information in all places at all times’ (1989: 8).

Therefore, a technologically determinist view of society is an idealised one in which that which is imperfect has been eliminated by that which technology has made possible; but technological determinism fails to predict the practical manner in which the chasm between current inequalities and future social harmony might be bridged with the aid of technology.

2.5.6 Technology must be contextualised

Gillespie and Robins reject as “wishful, misleading and irresponsible” such views because they “conceptualise technology and technological change outside of any social, economic, political or cultural context” (1989: 8). Utopian predictions are based upon what technology might bring about, but fail to acknowledge, as do Calabrese and Borchert, that technology is not neutral or independent of society (1989: 9). Indeed, “political, cultural, economic and social factors shape the forms and extents of political uses of computer technology” (Hagen, 2000: 55). In the United Kingdom, for example, digital technology is applied in a top-down model in politics, whereas in Germany its use is to “reinforce institutional politics” for the sake of having a more efficient “state and party system” (Hacker and Van Dijk, 2000: 212). However, in opposition to Utopian views on the Internet’s potential for enhancing democracy, political economists have argued that as products of corporate or state-military research and development, the Internet and associated technologies were never intended for “anything other than commercial and military uses” (Hirschkop, 1998: 210, 213).

In contrast to the Internet’s idealised role in revitalising the public sphere is the reality that computing research and development is very costly, as is establishing and maintaining network infrastructure. The “state” and “commercial sectors” are most likely to provide such funding (Hirschkop, 1998: 213), but at a cost to the democratic ideal of easy access to relevant, accurate political information, to forums of debate and channels for affecting political decision-making. The reality is that digital communications are associated increasingly with ever “more complex forms of corporate and organisational integration” with “competitive strategies” for global and local markets (Gillespie and Robins, 1989: 11).

The result of greater commodification of information is that many information sources are shifting “from public to private jurisdiction” in the forms of an emerging “global network marketplace” (Gillespie and Robins, 1989: 12). Digital communications networks are thus proving instrumental in creating new monopolies and empires (Gillespie and Robins, 1989: 12). The Internet was not intended for the greater good of society, it would seem. Commercial imperatives, argue Gillespie and Robins, are the motivation for advances in telecommunications and computing technologies, the convergence of which has

... opened up an array of innovatory possibilities that are being realised in the form of new products, commercial distribution systems, production processes, transaction processing systems, and management control and decision-making tools (1989: 11).

Regan adds to this argument, pointing out that as a result of the private sector taking the lead in designing and building the architecture and providing the services and content of the Global Information Infrastructure, communication and information have become merchandise. As such, it has to be “protected from users who will not, or cannot, pay up” (Regan, 2000:17). Furthermore, if the provision of information is entrusted increasingly to the market, then “access to that information becomes dependent on economic as well as political and technological constraints” (Murdock and Golding, 1989: 190). Information as merchandise is accessible only to those people who “have the disposable spending power to make discretionary decisions about purchasing information goods” (Murdock and Golding, 1989: 190). For those who cannot afford the costs, information becomes unattainable.

The commodification of information comes at a time when in the United Kingdom alone “the ability of different groups ... to dispose of their income on these goods is being markedly distinguished by widening gaps in income and wealth” (Murdock and Golding, 1989: 192). Because of information being commodified, citizenship is becoming an “individual, economic activity” rather than a collective, political one (Murdock and Golding, 1989: 192). Furthermore, in terms of the Internet promoting citizenship, the information highway has proved to be a toll road:

Most of its on-ramps are in a handful of countries; most of its travelers are privileged, English-speaking men; many of its ‘public spaces’ are invitation-only, or they require an additional fee, subscription, or for the user to trade personal information, and the vast majority of material accessible through the ‘highway’ comes from commercial, profit-oriented suppliers (Regan, 2000: 17).

Therefore, although the Internet is a powerful tool, it is of value only to those who can afford it, argues Regan, noting that just as the free press serves mainly elite interests, the Internet is “overwhelmingly” in the hands of “the planet’s elite” (2000: 18). Huge differences in financial means exist not only within the world’s wealthy nations, but also between the so-called developed and developing world. There is the prospect that countries in Africa for example that do not have the wealth to access increasingly commodified digital communications resources such as the Internet might never join the ranks of the developed world.

Instead of living up to optimistic predictions, the Internet appears to have gone the route of other media. Like the newspaper, radio and television, the commercialisation of the Internet appears to have been unavoidable. Schiller explains that although developed by the American “military-industrial complex”, the Internet’s “foundational technology lies in the public domain” (1999: 9). Initially, use of the Internet – which nobody owned – was freely available in the USA. However, with increasingly liberal network development in the US, the initial corporate sponsors of Internet technology were allowed to exploit its commercial applications. Schiller traces the emergence of “proprietary online subscription services” such as those provided by CompuServe (established in 1979), Prodigy (1982) and America Online (1985) to this time (Schiller, 1999: 11).

Today conglomerates in a handful of countries control both access to and the content of the Internet. Even when “500 or 700 million people are online ... they will principally be shopping or ‘surfing’” content that differs little from that in the “more traditional media” (Regan, 2000: 18). Within a relatively short time, add Hacker and Van Dijk (2000: 213), the Internet has changed from a mainly public into an e-commerce and entertainment medium. Internet sites are now being “rated and filtered”, attempts are being made at censorship and fees are charged for access to information. Thus, although opportunities for public and free communication and information continue to be available, the “Internet is becoming a ‘normal’ mass medium” (Hacker and Van Dijk, 2000: 213).

Ironically, the Internet would not have developed without generous funding from the American defence budget. The availability of millions of dollars in government funding, comment Rogers and Malhotra, meant that the ideas of university-based computer scientists creating new computing technologies “did not have to be justified in the marketplace” (2000: 25). The US government-funded research and development that resulted in the Internet is not unique in the history of technological advancement though.

Mosco explains that the United States military has been the primary driver behind the development of information and communication technology, with the Pentagon having “influenced the design, development and management of technology, particularly communication and information technologies” (1996: 39). Moreover, the US military “continues to sustain” the development of information technology. Few people comprehend “how deeply the military influences what are generally perceived to be civilian applications” – from dehydrated foods to nuclear power plants – that start out as military technologies eventually to be absorbed into the civilian economy (Mosco, 1996: 37 – 38).

2.5.7 Who uses the Internet?

Gaining a profile of the world's Internet users is challenging, as estimates vary vastly. Rogers and Malhotra claim that the Internet enjoyed an "extremely rapid rate of adoption", with the number of Internet users doubling annually during the 1990s, making it perhaps "one of the fastest rates of diffusion for any innovation". Rogers and Malhotra say that the number of users worldwide is "generally accepted" to be over 150 million, and over 70 million in the US (2000: 20). According to Muller and Queneau, Internet users are estimated at 200 million worldwide, which is just "three percent of a world population that has just passed the 6 billion mark" (2001: 21 – 22). Schnieders, however, puts the figure at 408 million Internet users worldwide, of which 40% are female, and 33% are online buyers (2001: 5). Muller and Queneau point out that exact figures are not available, because the "statistical definition of an Internet user is not universal" and fails to take into account frequency of online activity. Moreover, "ISPs are not always honest about their customer base" (Muller and Queneau, 2001: 21).

2.5.8 The Internet in South Africa

Over the past six years, a number of commercial ISPs have emerged in South Africa. Local ISPs provide some 800 000 users in South Africa with dial-up access to the Internet (Jensen, e-mail interview). ISPs are however not the only means of accessing the Internet in South Africa. Many companies obtain Internet access from ISPs at a cost to the company, and provide their employees with access to e-mail, or access to both e-mail and the World Wide Web. As a result, the total number of people in South Africa who have access to the Internet at work or home is estimated at some 2, 5 million people ⁽²⁹⁾. This figure does not take into account the number of people who use wireless application protocol (WAP) enabled cellular telephones, and Internet cafes, which are among the other public means of gaining access to the Internet.

Before the emergence of commercial access to the Internet provided by ISPs, the Internet was virtually unheard of in South Africa. However, members of the country's universities and research institutions, had access to the Internet thanks to the Uninet. This network, which was established, administered and managed by the Foundation for Research Development - now known as the National Research Foundation (NRF) - still exists today to enable scientists, researchers and students to communicate and collaborate with their peers across the world.

Since the first ISPs emerged in South Africa in 1993 (Goldstuck, 1996: 17), there have been several mergers and take-overs in the ISP industry, sometimes involving companies with other business, or media interests. The local ISP market is dominated by M-Web and World Online who as business ventures, along with their competitors, provide Internet access to their subscribers.

As with other communications media, ISPs are concerned with serving the needs of consumers and owners, and those citizens who can afford their fees. To explain this, the emergence and growth of dial-up ISPs in South Africa should be examined within the context of past trends of media ownership and patterns of concentration and the reasons that theorists have offered for these. This is likely to offer insights into the commercial forces that influenced the emergence and growth of dial-up ISPs in South Africa.

CHAPTER 3 – Research goals, methods and techniques

3.1 The research goals

This study aims to trace and document a history of the emergence and growth of dial-up ISPs in South Africa as a way of providing access to the Internet in South Africa. To understand the evolution since 1994 of the subscriber-driven ISP industry, the study attempts to analyse ownership of ISPs, and the move toward concentration of ownership through mergers and acquisitions within and relating to that industry between 1994 and 2000, to determine how M-Web and World Online came to be the largest dial-up ISPs in South Africa. The study also takes into account the impact of local fixed line telecommunications infrastructure during the period under review on local dial-up ISPs and, by implication, on the expansion of access to the Internet via dial-up ISPs for South African citizens.

This study regards dial-up ISPs as providing a service to consumers and citizens who can afford their fees, but also accepts that these are business ventures. This study seeks to explore how dial-up ISPs attract subscribers and to identify the terms and conditions of a subscription to one of the two leading dial-up ISPs in South Africa. The nature of the access that a dial-up ISP subscription secures is reviewed and, through an analysis of the aforementioned, the study draws conclusions about the profile of people to whom local dial-up ISPs provide access, and the rate at which home access to the Internet is growing in South Africa.

3.2 Methods/procedures and techniques followed

A combination of research methods was used to collect data on the history, emergence and development of commercial dial-up ISPs as a means of access to the Internet for people in South Africa. The study used document analysis, as a method for studying historical developments and the emergence of particular phenomena over time, in this examination of the documented recent emergence and growth in South Africa of dial-up ISPs (Hansen et al, 1998: 84 - 87).

The fairly recent emergence and development of ISPs in South Africa has been documented in company financial reports and brochures, on their Web sites, in local commercial magazines and newspapers, and on Internet-related Web sites. Such documents are inexpensive, easily accessible, and constitute a wide range of sources of information. As printed, publicly available documents, they contain data, which if quoted in this study, could be referenced and verified. Using documents that reside in the public domain, this study sought information on the business activities of local dial-up ISPs, M-Web, World Online, local developments in telecommunications policy and infrastructure development, the concept of the digital divide and how it might relate to South Africa. Socio-economic data on levels of employment, income, and literacy and on Internet access were also sought. The data thus collected were used to piece together a history of the emergence and development of ISPs in South Africa from 1994 onwards, and conclusions about the nature of dial-up ISPs at present as one means of access to the Internet in South Africa.

Data on the emergence of commercial ISPs was also gathered by conducting a semi-structured e-mail interview and a personal interview with the chief executive officer of World Online, Graeme Victor. E-mail interviews were conducted with researchers Arthur Goldstuck and Mike Jensen, as their “understanding of the subject matter was expected to prove helpful in interpreting events, documents and the like” (Hansen et al, 1998: 74 – 75). Initial enquiry found these experts willing to co-operate. The interviews specifically sought information about the companies’ business plans and strategies for growth, their subscribers (in terms of socio-economic categories), their pricing and services and long-term plans for attracting and retaining subscribers.

An interview guide – based on the objectives, issues and research questions – was used to help ensure that the semi-structured interviews would yield data that addressed the research questions, while permitting the respondents to volunteer additional information by articulating “their thoughts and opinions on their own terms rather than in response to preordained response structures” that result in richer data (Deacon et al, 1999: 68). Demographic subscriber data for World Online was obtained from the managing director of World Online. Demographic data for World Online and M-Web was also obtained from articles published from May 2000 to the end of January 2002 in the *Pretoria News*, *Cape Times*, *Mail & Guardian*, *Sunday Independent*, Internet archives, the *Financial Mail*, *Business Day*, *Business Report*, *Sunday Times Business Times*, *Sake Beeld*, *National Geographic*, *IT Web Brainstorm*, *Newsweek* and *The Economist*. An extensive collection of relevant clippings was compiled for this purpose.

Prior to commencing the study, preliminary investigation indicated that M-Web and World Online were South Africa's leading ISPs. This situation has since changed, with M-Web, Absa and World Online now placed as the leading dial-up ISPs, in that order. Before this change in rankings, it had been proposed that the emergence and development of M-Web and World Online be used as case studies. The annual financial statements and reports of these ISPs and their web sites were therefore analysed for information on company ownership, management, strategy, performance, numbers of dial-up subscribers, and financial results.

The process of document analysis also yielded a great deal of detail about the names and past achievements of the senior executives and board of directors; shares held in other companies; the names of subsidiaries, and the structure of ownership. This type of information is freely available in the public domain to potential and existing investors. It must be noted however that subsequent to the study being proposed, M-Web de-listed from the JSE Securities Exchange and became wholly owned by Naspers. World Online is not a listed company and until 1 January 2002 was jointly owned by Vodacom and World Online, in Holland. The company is now a wholly owned subsidiary of Tiscali, in Italy.

3.3 Analysis

Analysing research data involves reading it, sorting and classifying it into categories, as a process of "synthesising, summarising" and reducing an "unstructured mass of textual data to its 'essentials', key trends, and representative examples" (Deacon et al, 1999: 281). The data was therefore sorted in relation to the research goals and organised broadly in terms of the emergence and development of commercial ISPs, and sorted under further sub-headings as dictated by the data (Cooper, 1990). The aim of this undertaking was to present and interpret the data in a logical and systematic written report – contained in the next two chapters – on the emergence and growth of subscription-based ISPs as a means of Internet access in South Africa.

CHAPTER 4 – The emergence and growth of South Africa’s dial-up ISPs and rise to dominance of World Online and M-Web

4.0 Introduction

With the growth of the Internet during the 1990s, “when the lines of world communication were redrawn”, the prospect of a wired world seemed attainable ⁽²⁾. With its “potential to address imbalances of access to education, welfare, health and information” ⁽²⁾, it seemed that new technology such as the Internet could change the world by “fostering democracy, respect for human rights and cultural modernisation worldwide” ⁽¹⁾.

4.1 Levels of Internet access in Africa confirm the digital divide

Yet, despite the existence of technology with the potential for social upliftment, the divide between the information rich and information poor remains ⁽¹⁾. The so-called wired world appears to include mainly the nations of the First World, with patterns of information wealth paralleling polarities of economic wealth. On one side of the ‘digital divide’ are the 29 rich countries of the Organisation for Economic Cooperation and Development (OECD), representing 15% of the world population, who account for 60% of all telephone lines in the world ⁽³⁾. Unsurprisingly, more than 96 percent of all computers connected to the Internet are located in the world’s wealthiest nations (Allen, 2001: 80 – 81). On the other side of the divide is 62% of the world’s population, most of who have never made a telephone call ⁽³⁾.

Africa is on the wrong side of the digital divide: it has “the lowest telephone densities in the world, the least computers and the most expensive telecommunications charges” in addition to state telecommunications monopolies ^(4, 5). Bridging the divide poses a huge challenge in costs alone. World Bank analysts estimate that it would cost in excess of \$7 billion just to provide one telephone for every 100 people in Africa, while others claim that \$200 billion is needed to “achieve modest levels of access to telecommunication services in developing countries” ⁽¹⁾.

It seems that for the majority of people in Africa “poor infrastructure, rudimentary regulatory systems and low incomes”⁽²³⁾ mean that universal access to the Internet will remain unattainable. At 3,11 million, Africa accounts for less than 1% of the world’s Internet users^(6; 7). More than 10% of the world’s population lives in Africa, yet some countries have virtually no connectivity. In 2001, Internet users worldwide were estimated at 200 million with 200 countries connected to the Internet⁽¹⁾, however it was explained in Chapter 2 that others put the figure at twice this number of users (Schnieders, 2001: 5).

Although the number of Internet users has climbed, over the past decade, 75% of all new Internet users have been located in “a handful of countries: Argentina, Brazil, China, Columbia, Korea, Singapore and South Africa”⁽¹⁾. The average African country has under 15 000 Internet users, “who make up a small, in some cases minute, percentage of each state’s population”⁽⁷⁾. This is most likely because it is “prohibitively costly to access the Internet” in Africa, where the average cost of using an Internet account for five hours a month is “\$50, compared with about \$29 for 20 hours in the US”⁽⁴⁾.

Within the African context, South Africa has the greatest number of Internet users. However, South Africa’s number of Internet users is tiny, especially if compared with a country such as the US, where Nielsen NetRatings reports there are 104,8 million home Internet users (<http://www.nua.com/surveys>). This means that 36 percent of the US population of 287,5 million people (<http://www.whitehouse.gov/fsbr/demography.html>) have home Internet access. Moreover, according to TeleGeography Inc, the United States plays a central role in Internet infrastructure with over 80 percent of international Internet capacity in Asia, Africa and Latin America connecting to an American city (<http://www.nua.com/surveys>). Other hubs are developing, especially in Europe⁽³²⁾. The top ten of the 300-odd International Internet Service Providers (IISPs) control about 70 percent of international Internet bandwidth (http://www.telegeography.com/Whatsnew/hs00_press.html). Of the world’s Internet hosts – computers connected to the Internet – the US has 293 per 1 000 people. Finland has 102, Europe has 16, Japan 37 and Australia 84 Internet hosts per 1 000 people. On the other side of the digital divide is Africa with 0,3 and South Africa with four Internet hosts per 1 000 people⁽³²⁾. If the Internet is a superhighway between connected nations, then the route to Africa is a secondary road.

4.2 Barriers to Internet growth

Infrastructure is one factor in the slow growth of the Internet in Africa and South Africa. “For the Internet to achieve its full potential as a provider of data and education” South Africa has to obtain greater bandwidth, in other words digital telecommunications data-carrying capacity and infrastructure ⁽⁸⁾. This is the view of Alan Holloway, chief operating officer of Spescomm’s Communication Solutions. Without increased bandwidth, says Holloway, “the digital divide will only get worse” ⁽⁸⁾. Yet the ability to provide infrastructure exists; it is the cost thereof that represents a barrier. Tom Barry, Telkom’s chief operating officer, contends that although Telkom is ready and able to provide telephones

... there aren’t enough people who can afford to pay for the service. It’s the usual business consideration of the economies of scale against the economies of scope ⁽⁹⁾.

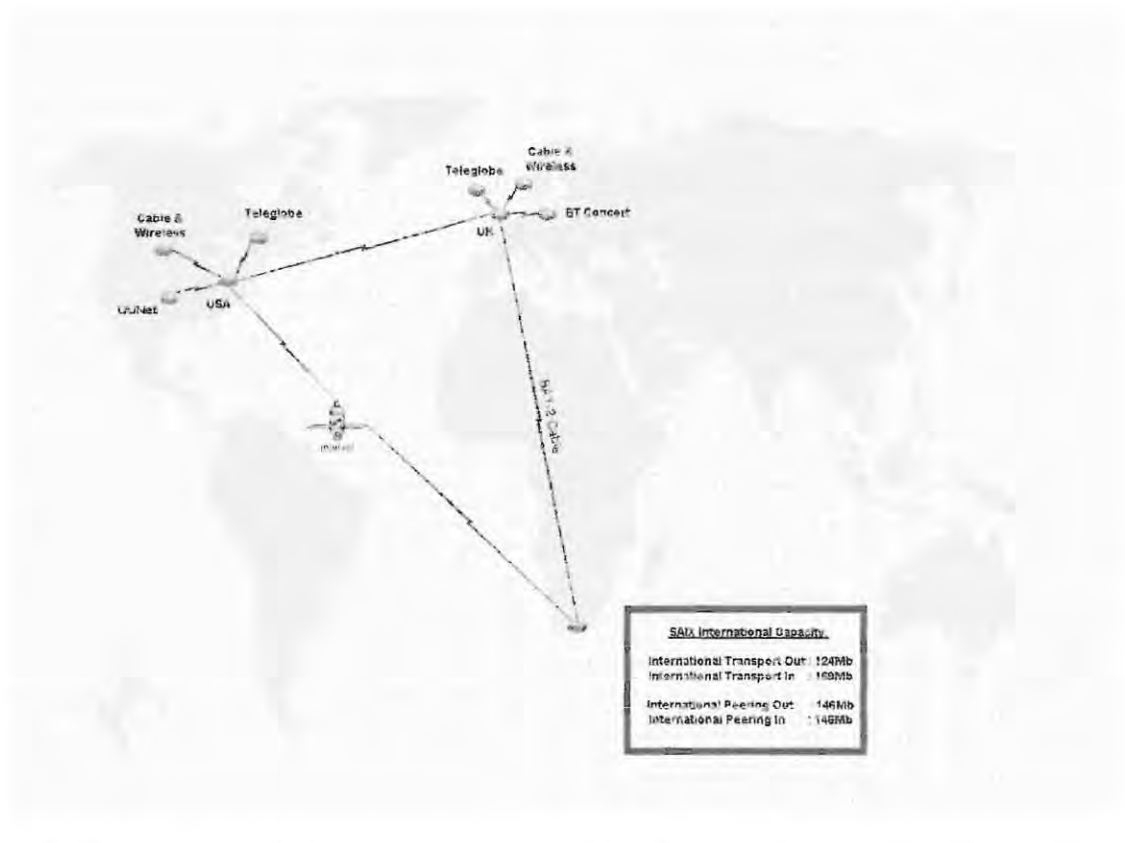
This adds credence to Holloway’s prediction that although more people in South Africa will gain access to telephones, costs will continue to hinder the country from achieving universal access, as

... connections to individual homes will hit an affordability ceiling in South Africa. As a result, disparities of information access will continue to separate the rich from the poor ⁽⁸⁾.

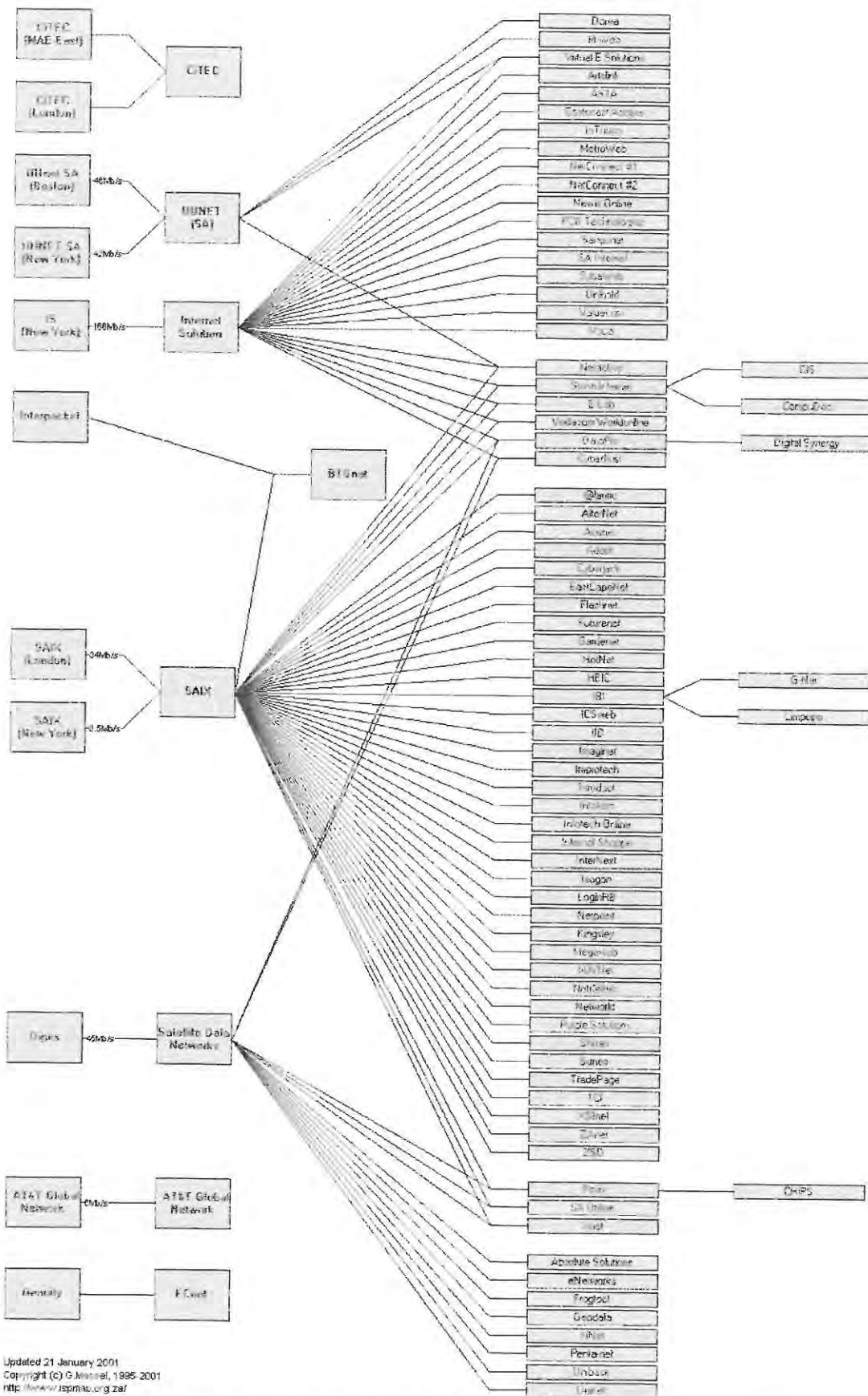
4.3 Accusations levelled against Telkom

It has however been argued that Telkom’s monopoly is one of the reasons for slow access and the slow growth of the Internet in South Africa ^(11; 24; 26a; 27; 26b). Telkom is accused of hampering Internet growth with its “exorbitant network access costs” and by charging users “ever-rising amounts the longer they stay connected” ⁽²⁵⁾. It is argued that Telkom’s “high costs, poor service and monopoly style price increases” make it unlikely “that South Africa can really loosen the shackles that keep growth back” ⁽³¹⁾. Telkom’s monopoly has meant “ISPs have had to pay more than they should for infrastructure” ^(26c). Elsewhere in the world, local calls are free or unmetered ^(26a), but in South Africa the standard charge for a local (0 – 50 km) call is 0,549 cents and calls are billed per second (price increase notice received from Telkom). According to Andrew Milne, M-Web’s chief operating officer, countries where local calls are unmetered “have seen a boom in Internet use” with research done in Europe indicating that “expensive local calls discourage Internet usage” ^(26c).

Moreover, in South Africa, Telkom controls the amount of bandwidth available and, by selling it to first- and second-tier ISPs, who gains access to it. Moreover, Telkom is important in providing users with “domestic telephone lines for dial-up usage” (Patelis, 2000: 94). Thus, Telkom joins the rest of the world’s telephone companies as “first gatekeepers of the on-line world” who, as providers of “telecommunications capacity and infrastructure determine Internet usage growth (thus access) and the network’s infrastructure” (Patelis, 2000: 94). World Online, Absa and Telkom’s Intekom are examples of second-tier ISPs (Graeme Victor, personal interview), whose services most often amount to offering “at least either dial-up access or leased line access” (http://www.ispa.org.za/faq_public.htm). Many ISPs also offer additional services such as web development, hosting and security solutions and Internet consulting and training (http://www.ispa.org.za/faq_public.htm). The SAIX infrastructure is illustrated in Figure 1, while the topology of southern African Internet Access Providers is illustrated in a map maintained by Internet architect Gregory Massel (Figure 2).



Above: Figure 1 SAIX International Connectivity Map illustrating the international links and bandwidth capacity of SAIX. Source: <http://www.saix.co.za/icons/network.gif>



Above: Figure 2 Topological map of southern African Internet Access Providers, as at 21 January 2001 (Massel, 2001).

Although some argue that “Telkom’s monopolistic behaviour will not bring better prices anytime soon”⁽³¹⁾, predictions that the number of Internet users in South Africa will increase after the deregulation of Telkom abound^(24, 26b). Deregulation is expected to open the local telephony market up to competition and result in cheaper options for consumers. For example, present regulation means that local ISPs cannot collect a share of the dial-up connection fee from Telkom, as do ISPs with telephone companies abroad:

In Europe ... when users connect to the Internet, they pay for the cost of the telephone call to the ISP. Since Internet use pushes up the frequency and duration of such calls, telephone companies grab the business and offer ISPs a cut to secure it. Telkom, which has no competitors, doesn’t need to do this⁽²⁸⁾.

Regulatory affairs director at M-Web and former co-chairman of the Internet Service Providers’ Association Myron Zlotnick argued in 2000 that

... market and regulatory conditions mean that ISPs battle with non-competitive infrastructure costs, Telkom service levels are under-regulated, consumers are burdened with call rates that discourage access to the Internet, foreign investors are cautious, e-commerce take-up is slow and those without access to the Internet remain unconnected⁽²⁷⁾.

In Zlotnick’s view, to help bridge the digital divide Telkom should change its dial-up tariff to

... a flat-rate system or voice charges must be distinguished from data charges – the latter being cheaper – to encourage Internet users to dial up⁽²⁷⁾.

Instead, Telkom increased its rates in January 2002 to such an extent that dial-up Internet users could pay almost 70% more than they have been for dialling up. Telephone charges for Internet use do however depend on where you call and how often, and how much time is spent online. According to “wholesale Internet provider Internet Solutions (IS)” this will affect users such as libraries, small businesses and remote workers⁽²⁶⁾. IS also provides remote access to more than 100 large South African companies that provide their employees with Internet access at some cost to those companies^(26c). Graeme Victor, managing director of leading ISP World Online, believes that Telkom has been increasing tariffs steeply for “the past few years” in order to “prepare for competition, leading to sharp increases in local call rates and lower rates for international calls”. This has “affected Internet use and hurt the development of the IT sector”^(26c).

Expensive telephony rates however are not the only barrier to Internet access in South Africa. Without telephones, argues Goldstuck, there can be no Internet access, pointing out that “universal access is meaningless if there is no telephone access”. Goldstuck believes that the responsibility “to make this happen” rests with the government and Telkom; and that “telephone centres and other parts of the private sector are failing to do this because Telkom is charging very high fees”⁽¹⁰⁾.

In South Africa – where telephone access is “reported to be about 30%, translating into about 2,8 million homes with telephone services”⁽⁹⁾ – there are probably “about 800 000 dial-up users in SA, giving a total user base of about 2,5 million” (Jensen, e-mail interview; ¹⁰). Corporate, government and academic networks lease the balance of lines⁽⁷⁾.

These estimates match the findings of Nielsen NetRatings, which recently analysed the Web traffic habits of South Africa’s Internet users for the first time. The Nielsen NetRatings report on the home surfing behaviour of the South African Internet community for June 2001 estimates that “just over 2,5 million people” have Internet access at work or home in South Africa (Jensen quoting Goldstuck, e-mail interview; ²⁹). This figure does not however include those who access the Web from “Internet cafes, WAP-enabled cell phones (wireless application protocol), and from academic institutions” (Jensen quoting Goldstuck, e-mail interview; ²⁹).

4.4 A profile of South African Internet users

The 2,5 million Internet users in South Africa represent just 5,8% of South Africa’s population of “43 million” people⁽¹¹⁾. Goldstuck explains that because of the large disparities in socio-economic levels in South Africa, Internet access is directly associated with economic access. “As such, most Internet users in South Africa are relatively well-educated and relatively affluent” (Jensen, e-mail interview). In contrast, on the wrong side of the digital divide, many South Africans do not have access to basic communications such as telephones and postal services, adequate transport and electricity, which make it difficult “to put them ‘online’”⁽³⁰⁾. Lightfoot and Bertoldi of local IT research house BMI-Tech-Knowledge too have cautioned that in South Africa – where “education, poverty and other grassroots issues” demand more urgent attention than Internet connectivity – Internet growth will also be inhibited by

... economic growth, the digital divide, cost of bandwidth and telecommunications infrastructure, business and consumer acceptance, the skills shortage and the lack of a dedicated legislative environment⁽²⁴⁾.

Of some 2,6 million Internet users measured by Media Africa,

... close to 1.4-million have dial-up access from the office, indicating that they are relatively well paid white-collar workers. More than 800 000 have dial-up accounts at home or at small businesses (with many of these accounts providing additional access (Jensen, e-mail interview).

Nielsen NetRatings found that men make up 60 percent of the 1,5 million South Africans who have home Internet access (<http://www.nua.com/surveys>). A survey by South African Internet research company Webcheck found however that women make up 51 percent of Internet users and not 40 percent as reported by Nielsen NetRatings. Webcheck also found that most users go online primarily for e-mail and are more likely to do so at work than at home.

Webcheck reports that English is the home language of 66 percent of Internet users in South Africa, that 56 percent of Internet users have completed tertiary education and that most users tend to have high incomes (<http://www.nua.com/surveys>). There is a pattern too, between race and having access to the Internet: "Seven percent of African youth have access, compared to 62 percent of white youth" ⁽¹²⁾. When the typical dial-up Internet user in South Africa goes onto the World Wide Web, the sites most likely to be visited are the MSN web sites, the M-Web portal, Yahoo sites, Absa Bank, Microsoft sites, Johnnic e-Ventures, AOL Time Warner sites, the Lycos network, Tiscali sites and iafrica.com (<http://www.nua.com/surveys>).

Based on the aforementioned reported statistics, the average Internet user in South Africa is therefore most likely to be a youthful white man in a well-paid office job and therefore a member of a socio-economic and racial minority group. The black majority is not enjoying the benefits – for example online debate polling and interaction with politicians; or online purchasing, banking or information access – to be had from having home Internet access.

Growth of Internet users in South Africa

Category	1998	1999	2000 (forecast)
Dial-up	366 000	560 000	782 000
Corporate	700 00	980 000	1 274 000
Academic	200 000	280 00	360 000
Total	1 266 000	1 820 000	2 416 000

Above: Figure 3 Growth of Internet users in South Africa (*Pretoria News*, 30 May 2000)

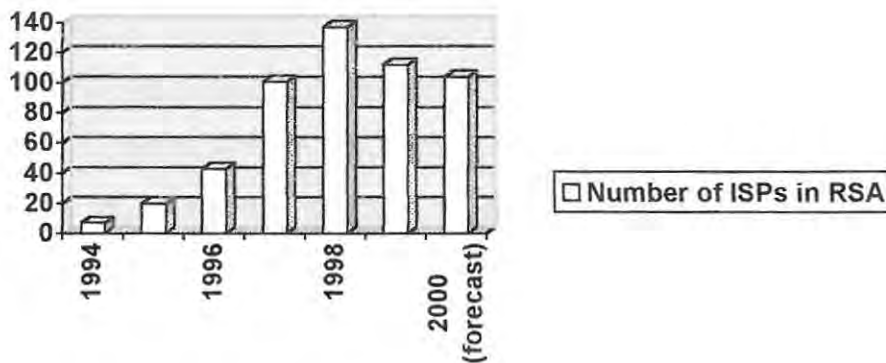
4.5 Emergence of dial-up ISPs in South Africa

The Internet existed long before the first commercial dial-up ISPs emerged in South Africa in the early 1990s. During the Cold War era, the United States Department of Defense decided to create a computer network that would allow the military to continue communicating uninterrupted in a nuclear attack. Consequently, the ARPANET (Advanced Research Projects Agency Network) was established. By the early 1970s, “50 computers were connected in what had become a broader experiment” (Goldstuck, 1996: 13 – 14) that led to the Internet being “up and running by the 1970s”. Numerous computer networks, electronic mail, and the World Wide Web (WWW) – which “would give information a place to persist” (Berners-Lee, 1999: 20 – 21) – would follow in the decades to come, as was explained in Chapter 2.

Before the first commercial dial-up ISPs appeared in South Africa, the existence of the Internet was virtually unknown outside niche groups, such as the academic community, where it was “an open secret shared by students and lecturers” at universities, educational and research institutions in South Africa (Goldstuck, 1996: 17). Members of South Africa’s academic community had been linked to one another, and later to the Internet through the Uninet. An offshoot of the Council for Scientific and Industrial Research (CSIR), the Foundation for Research Development (FRD) – now the National Research Foundation (NRF) – managed this academic network.

Locally, the Internet emerged in November 1993, when The Internetworking Company of Southern Africa (Ticsa) provided the first commercial link from South Africa to the Internet. It aimed to provide “commercial organisations and other non-academic bodies” with access to the Internet, operating on “a voluntary, not for profit philosophy” (Goldstuck, 1996: 17). However, Ticsa “split into Ticsa and the Internet Solution” (Goldstuck, e-mail interview). The Internet Solution “today is part of Didata but still operates as the leading corporate ISP” in South Africa. Ticsa became Internet Africa, which “then merged with UUNet SA and Pipex to form UUNet Internet Africa, which eventually sold its dial-up user-base to M-Web and its corporate services to Datatec, which eventually sold it back to UUNet SA” (Goldstuck, e-mail interview).

Following on the launch of Ticsa came a number of commercial dial-up ISPs: Pixie, Aztec, LeClub Internet Access, Global Internet Access, Worldnet Africa, Global One and Icon, the dial-up division of Internet Solution. However, mergers, buy-outs and consolidation rapidly changed the face of the ISP industry. M-Web bought Worldnet Africa from the CSIR, and took over Pixie. Aztec became part of Internet Africa “which at one stage was the largest dial-up ISP and was bought by M-Web to make it the largest”. Global One sold its dial-up service to UUNet Internet Africa. Club Internet (formerly LeClub Internet Access) was bought by Radiospoor, then by ITI, then by Storm. Global Internet Access was bought by Mustek, then by Usko, and then Vodacom, where it became part of YeboNet, and later, World Online, which also bought Icon, the dial-up division of Internet Solution (Goldstuck, e-mail interview).



Above: Figure 4 Growth in the number of ISPs in South Africa (Goldstuck, e-mail interview)

The number of ISPs in South Africa – as illustrated in Figure 4 – climbed sharply after the emergence of the first players, virtually doubling annually until 1998, when it started declining (Goldstuck, 2000). While a “voluntary, not for profit philosophy” (Goldstuck, 1996: 17) originally applied to Ticsa, this soon changed. To start up and run an ISP that does not disappoint its users with service interruptions or delays means that money has to be invested in technology, in telephony bandwidth, and help desk support staff, at the very least.

There is however a risk in entering a new, unproved market. Indeed, investors had no guarantees at the outset that an investment in starting a venture such as an ISP between 1994 and 2000 would pay off. Based on the history of mergers and acquisitions in the ISP industry, it would appear that in South Africa investors in ISP ventures failed to receive the anticipated returns on their investments. This could be explained by the fact that every ISP needed to draw a critical number of subscribers just to cover their monthly operating costs. If bank loans were used to finance the launch of new ISPs, these had to be repaid monthly. Therefore, all expenses had to be covered by income from subscriptions, unless ISPs had alternative sources of income. However, the dial-up ISPs market was always small, without infinite room for expansion. This is because the portion of the South African population with the means to afford dial-up access to the Internet was “too small to sustain a large number of players” (Graeme Victor, managing director of World Online, personal interview). The need for additional sources of income most likely led to some ISPs creating their own Web sites and attempting to sell space on those sites to advertisers. It is unlikely that this strategy helped improve cash flow though. The decline in the number of ISPs from 1998 onwards suggests that launching and operating a dial-up ISP in South Africa proved to be a costly endeavour with slim profit margins, if any at all. This most likely made many operators willing to sell their ISP ventures to their competitors.

According to World Online managing director Graeme Victor, there are two tiers of ISP in South Africa, with World Online being a second-tier ISP because the company does not have its own network. First-tier ISPs such as UUNet, Datapro, CiTEC, IS and Telkom’s SAIX (SA Internet Exchange) obtain bandwidth from Telkom – South Africa’s only licensed fixed telecommunications line provider. The significance of bandwidth is that without it there can be no distribution of content, yet this “private good” is “not allocated on an equal basis” (Patelis, 2000: 94). Variations in bandwidth mean that not everyone who has access to the Internet, has access to the “same distribution system” (Patelis, 2000: 94). Bandwidth is required to transmit content, but the higher the usage and the greater the volume of content to be distributed, the greater the demand for bandwidth. The Internet’s dependence on bandwidth means that this is not “an environment of abundance” (Patelis, 2000: 94).

Between them, M-Web – with 250 000 subscribers (14) – and World Online – with 150 000 dial-up subscribers and around 100 large corporate clients using leased lines (Graeme Victor, personal interview) – have the largest share of the estimated 800 000-strong dial-up subscriber market. Victor estimates that there are some 75 fair-sized dial-up ISPs in South Africa and several small ones. The other major second-tier ISPs are Absa, Xsinet and Telkom's Intekom⁽⁹⁾. Although Absa also has 250 000 dial-up clients, it is not included in this study as it is a bank acting as a virtual Internet service provider⁽¹⁵⁾. Moreover, although Absa offers free Internet access, early in 2002 this facility became limited to the 110 000 dial-up clients who are customers of the bank⁽¹⁶⁾. Moreover, Absa's service has never been truly "free":

Users ... need modems, pay phone charges and have to provide personal information when signing up. Technical support calls will be charged at cellphone rates⁽¹⁷⁾.

M-Web and World Online gained their dominant positions in the dial-up ISP market by acquiring their competitors. The strategy of ISPs operating before the "dot bomb" events of March 2000, was to acquire dial-up subscribers at any cost, as "subscribers were viewed as having value. ISPs lost a lot of money in the process" (Victor, personal interview). M-Web for example has yet to return a profit, but has spent some R460 million since it came into being⁽²²⁾. The strategy now is to become profitable rather than to pursue more subscribers, as "there is no longer a perceived value in subscribers" (Victor, personal interview).

From when it started operating in 1994 under the leadership of chief executive Antonie Roux, M-Web adopted an acquisition strategy. First it acquired the CSIR's World Net Africa user base, and the CSIR's CompuServe licence, and continued with this strategy

... eating up ISPS and their user bases at a rate equal to their organic subscriber growth. 'Our strategy was always first and foremost to grow our subscriber base,' says Roux. Dial-up subscribers that have joined ... M-Web ... include Gem, Pix, Interlink, Club Internet, Cyberhost and the biggest to date iafrica.com⁽¹⁵⁾.

Getting rid of your competitors by acquiring them is not cheap. It costs M-Web between R500 and R1 500 a head to purchase subscribers, whereas less aggressive “organic growth costs M-Web R250 per client through standard marketing, and around R400 when including below-the-line advertising”. Purchasing also includes hidden costs such as the labour required for a merger ⁽¹⁵⁾. However, M-Web and World Online – backed by their internationally powerful owners – apparently had vast sums of money available and an aggressive desire to capture the small dial-up ISP market.

4.6 History and ownership of World Online

World Online South Africa traces its origins to Internet Solution, “which started selling leased lines to corporate clients and dial-up access to subscribers through Icon”. When the dial-up subscriber base reached 30 000, Vodacom bought Icon in September 1999, explains Victor. Vodacom also bought out another ISP, Global Internet Access, from Usko, which had been first to buy out Global. “Early in 1999, someone working for Vodacom in Cape Town launched YeboNet.”

In September 1999, Nina Brink, chief executive officer of World Online in Holland, entered negotiations with Vodacom. Subsequently, World Online secured 50% of Vodacom’s merged Icon-Global-YeboNet ISP business. World Online South Africa was listed on the stock exchange in Holland in February 2000. However, another change in ownership would soon follow. In July that year, Italian ISP Tiscali bought World Online, and a further 10% of the local operation, giving the company a 60% share and Vodacom a 40% share in World Online South Africa (Graeme Victor, personal interview). However, in a deal based on a cash payment “reportedly in the region of R30 million” (<http://www.itweb.co.za>) and effective from 1 January 2002, sold its 40 percent share in World Online to Tiscali. Ownership of World Online South Africa is now entirely in foreign hands, but a condition of the sale is that Vodacom make World Online one of its service providers. This means that World Online may now sell Vodacom airtime and contracts. This will enable World Online to differentiate itself from “traditional service providers and its archrival M-Web, which describes itself as a media company”. World Online’s long-term goal is to “become a virtual operator on the Vodacom network” (<http://www.itweb.co.za>).

This means that World Online is shifting its role from that of a provider of dial-up access to the Internet to that of a retail platform for delivering consumer goods to World Online subscribers. World Online is set not only to provide access to the Internet, but also to use it to produce and distribute information, and commodities. As such, World Online most likely has no interest in people who cannot afford their monthly subscription of R115 nor whatever goods this ISP might offer for sale through its Web portal. The emphasis of this operator is possibly not on providing dial-up access to the Internet, but on providing such access in order to build a consumer base for the purpose of targeted, direct marketing of sophisticated products, such as cell phones and cell phone air time contracts. World Online is in an enviable position with regard to consumer intelligence: based on the Internet usage habits of its subscribers, and the data it collects when signing up new subscribers, it has a clear picture of the consumers who make up its subscriber base.

4.6.2 World Online service offering

At present, World Online provides Internet access and a variety of additional services such as online chat, SMS, WAP (wireless application protocol) and e-mail facilities, as well as media and business services “primarily on a subscription-fee basis for both corporate and individual clients” (World Online brochure). The company regards itself not as a media company, says Victor, but as a telecommunications access provider. World Online subscribers also receive a bi-weekly newsletter “that includes mention of the latest exclusive World Online services”. World Online’s corporate brochure points out that this ISP also offers “various fascinating channels like: News, Money, Education, Business, Health, HiTech, Travel, Motoring, Leisure, Music, Entertainment, Weather, Careers, and Games”. World Online also lays claim to an “impressive and growing number of agreements” with global publishers and broadcasters to “make their publications and programmes available to our users”. World Online has partnerships with AFP, SAPA, Reuters and Nedbank, among others (World Online brochure).

When one signs up with World Online for a trial period, the company informs the new subscriber by e-mail that in exchange for R115, the World Online dial-up subscriber now has monthly (90 days) access to:

An E-mail box plus 4 additional e-mail addresses;
10 Megabytes of personal Web space, for a personal home page;
WorldMail, which allows access to E-mail facilities via the Web site, from any Internet-linked PC;
World Traveler, allowing access to the Internet from anywhere in the world;
SpeechMail, which allows users to dial into their e-mail from any land-line, pay phone or cell phone;
One Number Countrywide when connecting to the Internet, so that clients never pay more than local call rates;
My World Online a secure web-based self-administration tool for managing the World Online Account;
Twenty-four-hour access to a help desk, 365 days a year.

The World Online subscriber's R115 is spent on network, administration, call centres and billing costs. What remains of the R115 is profit, says Victor, World Online's managing director. ISPs in the USA and Europe, such as Tiscali, however also share in the revenue earned by telephone line providers. For this reason, ISPs abroad have portals that aim to keep visitors online for as long as possible because of the profits to be gained from time spent on the telephone. Locally, the only revenue to be gained from a portal is through e-commerce and advertising. In South Africa, providing a portal is a huge overhead for an ISP, especially if e-mail is the main attraction that ISPs hold for subscribers (Victor, personal interview).

4.7 History and ownership of M-Web

MIH Limited (MIHHL)-owned Naspers, which has extensive Internet-related interests, owns more than 50% of M-Web. Established in 1915 with the daily newspaper De Burger as its first product, Naspers would grow into what it describes as "an integrated, multinational media group with a development focus on the electronic media, digital technology and the Internet" (<http://www.naspers.com>). Naspers has offices across South Africa, in Africa, Europe and Asia, and employs about 7 000 people in South Africa. Its holding company, MIHHL, employs some 3 400 people worldwide. M-Web has 500 employees.

This is truly a global media company: as "a multinational provider of entertainment, interactive and e-commerce services" MIHHL has services and entertainment operations in over 50 countries (<http://196.2.157.131/together.html>), is listed on both the NASDAQ and Amsterdam Stock Exchanges, and for the 2000/2001 financial year reported revenues of R5,7 billion (18: 6). MIHHL's business strategy is to exploit "advances in television, the Internet and wireless technologies" to "build value" by providing "online and interactive services to be delivered anywhere, anytime". Consequently, this company has opted to focus on "growing its digital subscriber platforms, interactive and online services, and delivering best-of-breed software solutions" (http://www.mih.net/fset_aboutmih.htm).

As part of a multinational enterprise comprising M-Web South Africa, M-Web Africa, M-Web Thailand, M-Web Indonesia and M-Web China, M-Web offers an example of an ISP that is tied to a transnational media conglomerate. It has adopted a strategy of integrating its e-businesses with its traditional media businesses, and cross-promoting content among the businesses, for example by using its

... pay-television channels in Africa to cross-promote [its] African M-Web Internet operations [to] expand ... Internet businesses in other target markets⁽¹⁸⁾.

M-Web entered the local ISP arena when it was listed on the JSE Securities Exchange in March 1997 as a linked unit with MIHHL that was later de-linked on 2 August 1999. Naspers de-listed M-Web from the JSE in July 2001, when Naspers bought out minority shareholders.

The reason for this, according to Roux, was that it would enable M-Web to “streamline its operations and build synergies with other divisions more effectively” than it could have done while operating partly independently of Naspers. According to Roux, the “time and money absorbed in being a listed company was simply not worth it for an Internet player” (20). Other reasons for de-listing were that some of the 9 000 minority shareholders had “lost their appetite for Internet stock”, and that M-Web would be free to integrate more closely with Naspers, which would enable M-Web to

... cut out duplicated services as it drew on the content and services housed within the company⁽²⁰⁾.

The de-listing of M-Web might also be attributed however to the company’s need for further funding which, in the face of M-Web’s heavy losses and inconsistent strategy, investors were unlikely to support (<http://www.mg.co.za/mg/za/archive/2001apr/07apr-business.html#naspers>). When Naspers moved into the Internet when it established M-Web four years ago it did not have a clear vision for the company, but went ahead anyway

... with the knowledge that the Internet was a channel that it couldn’t ignore, despite the cost. ‘At the time [we said] this is something that we want to, should and must get involved in, both from offensive and defensive point of view,’ comments Roux⁽¹⁵⁾.

The venture has yet to return a profit and acknowledges that “the landscape has changed dramatically” since M-Web was launched in February 1997”⁽²¹⁾. M-Web has spent some R460 million in pursuing an unclear strategy owing to “a lack of resolve”. This has seen the company embark on an “erratic strategy” that led to it experimenting with “every sub-trend in the industry ... never managing to fasten itself to one and follow through”⁽²²⁾. The result was “overspending” by M-Web on often over-priced acquisitions such as the Council for Scientific and Industrial Research’s connectivity business, iafrica.com, Pix, and the Daily Mail & Guardian (when Naspers was developing its own news site called 24.com)⁽²²⁾.

Although M-Web did have a business plan, it was revised many times. At first, M-Web “envisaged that a proportion of its revenue (but never more than 5% says Roux) would be generated by advertisers seeking exposure to an online audience”⁽²¹⁾. M-Web optimistically saw itself being able to “sell anything to anybody” with the additional income to be gained from offering e-mail accounts justifying “the investment in computers, servers, routers and highly paid staff.” The vision failed to materialise, prompting the cash-strapped company to retrench some 200 employees (including those at subsidiaries such as Computicket) and announce changes in strategy “in a move to redefine the Internet experience”⁽²¹⁾. M-Web became South Africa’s largest ISP through a strategy that included offering M-Web Radio, photo album storage and WAP (Wireless Application Protocol) technology that would allow access to the Internet from a cell phone⁽²¹⁾. Moreover, following a colourful redesign of the M-Web home page customers may personalise the M-Web home page display by selecting from a menu of content options. However, the strategy failed to make it profitable⁽²¹⁾. The R119 – recently increased to R134 – that customers pay for their monthly M-Web subscription “barely covers the R27 million of investors’ money that M-Web was ‘burning’ each month at its peak”⁽²¹⁾.

4.7.2 A new role for M-Web

M-Web South Africa now appears to have positioned itself as an “online service provider”⁽¹⁵⁾. It offers a free e-mail “Virus filtering Service, exclusive online member services, excellent technical support and a connection to a solid and dependable network”. M-Web claims to differentiate itself from other ISPs through the “exclusive content” (<http://www.mweb.co.za/home/join>), which it obtains from its sister companies, virtually all of which are content providers. Thanks to MIHHL’s established relationships with several studios, M-Web also has access to content creators such as Disney, Columbia, Tristar/Sony, Warner Brothers, Fox, MCA/Universal, MGM, Paramount and Dreamworks. These relationships position M-Web as a player in the global media system.

Disney and Sony rank among the nine or ten transnational corporations that dominate the global media market (McChesney, 1998b: 31). These firms all have “global distribution networks and have major interests in more than one – usually several – media sectors” (McChesney, 1998b: 31). In addition to these powerful media companies, there is a second tier of national or regional “powerhouses which have strong holds over niche markets”. Half of the second-tier firms are from North America, and the rest mainly from Western Europe and Japan. These 50 or 60 firms control most of the world’s media (McChesney, 1998b: 31).

There are economic advantages to “size and prudent conglomeration in the media market”, which is why companies expand through mergers and acquisitions – as did M-Web and World Online – or by “putting themselves in the position for acquisition at a premium” (McChesney, 1998b: 31). Therefore, national media and communication companies, such as South Africa’s M-Web and World Online, stand to gain economically from being linked to a first-tier global player such as Disney in M-Web’s case, or a second-tier company such as Tiscali in World Online’s case. In the context of a global media market, “small firms operating in one market simply cannot compete unless they are linked to a giant” (McChesney, 1998b: 31).

When Naspers announced that it would de-list M-Web, it said that “the initial global trend was for pure play Internet ventures to develop as independent units separated from traditional media businesses” but that events such as the merger between AOL and Time Warner had revealed that “greater economies of scale” could be achieved by integrating Internet businesses with traditional businesses. Roux pointed out at the time that better value could be unlocked by offering an integrated service and cited as an example the launch by BSkyB of its interactive television platform in the UK, for which “it invested heavily in building infrastructure to handle e-transactions” (<http://www.mg.co.za/mg/za/archive/2001apr/07apr-business.html#naspers>).

Another explanation is that M-Web did not find it as profitable to operate as a stand-alone ISP as might have been anticipated. The local market for business-to-consumer dial-up Internet access proved small; and once this elite group had been largely signed up, there was possibly slender scope for further growth and expansion. A solution would have been to expand abroad, or to link up with a bigger company. The unprofitable M-Web could have sought an international buyer, because to “compete in the global market, a firm needs the scale that comes with being a major player in Europe and, especially, in the USA” (McChesney, 1998b: 31).

Instead, M-Web's major shareholder bought out minority shareholders, and returned M-Web to the Naspers fold, where M-Web is being integrated with the purpose of building strong subscriber platforms (18: 4 – 5). With its "anytime, anywhere" philosophy of enabling subscribers to gain access to its content via television, the Internet or wireless technologies, Naspers has made it clear that in its new role, M-Web

will provide the transaction infrastructure that will enable MultiChoice Africa, the Group's pay-television business in Africa, to develop into an interactive platform (18: 4 – 5).

4.8 Conclusion

A subscription to a dial-up ISP in South Africa means that the user may access the Internet whenever he or she chooses, from the comfort of home. A dial-up subscription gains one access to an e-mail account at the very least. Having e-mail enables the subscriber to communicate with friends and family, enter competitions, and communicate quickly with the bank, medical aid administrator, and school principal for example. If the computer being used to dial-up to the Internet also has Netscape or Explorer software, the user has the choice of visiting Web sites located on computers anywhere in the world. If the user has trouble getting connected to the Internet, help can be obtained from the ISP help desk, which is a telephone call away.

As the largest dial-up ISPs in South Africa, M-Web and World Online provide subscribers with an e-mail account and the option of several aliases on that account, access to the World Wide Web, help desk support and free e-mail virus scanning, amongst other things. Being the country's largest ISPs also means that M-Web and World Online have considerable power to negotiate special offers for their subscribers. Standard Bank and World Online for example are offering full Internet access to Standard Bank clients for R80 a month, that is R39 less than the standard subscription fee. M-Web is offering subscribers free software downloads, up to 90 % discount on books through Naspers's online book retailer Kalahari.net, and 40 % on subscriptions to magazines in the Naspers stable, such as *FairLady*, *Mens' Health* and *SA Sports Illustrated*. M-Web's Icanonline promises to enable subscribers to "shop, bank, invest and insure - all from the same place. Consolidate your financial affairs and control your money through Icanonline, another" (promotional e-mail received from M-Web). M-Web learning promises school learners access to the Encyclopaedia Britannica, if they have access to M-Web.

However, access to these appealing offers comes at a cost that does not amount simply to the price of the monthly dial-up subscription. ISPs are one of five industries – telecommunications, software, search engines and online broadcasters – that “constitute the Internet experience” and it is the “interplay between these that structures and shapes the Internet experience” (Patelis, 2000: 99). These industries are part of a hierarchy of infrastructure and content. ISPs, search engines, navigation tools, software and server industries are part of the infrastructure component, whereas online content providers, Website designers advertisers and governments represent the content component. Therefore, the Internet has been commodified, with the exchange value of online communication lying in access; navigation tools and search engines, and advertising (Patelis, 2000: 91).

The significance of the commodification of the Internet for people in South Africa is that to gain access to the Internet you have to pay for it, by having access to electricity, purchasing a computer, Internet software, a modem, a telephone instrument, by leasing a Telkom telephone line, by purchasing a monthly subscription to an ISP and by paying for the cost of time spent online. Together these constitute significant cost barrier to accessing the Internet through a dial-up ISP and therefore represent a barrier to the growth of the Internet, through dial-up ISP, in South Africa.

Perhaps if more people in South Africa subscribed to dial-up ISPs the cost of such subscriptions would drop, but this is unlikely given the interaction between the other industries that comprise the Internet experience. For more people in South Africa to be in a position to gain access to the Internet through dial-up ISP, they would have to be offered cheaper local telephone call rates and access to cheaper computer hardware and software, the cost of which is determined by the value of the rand. If computers and Telkom costs became more affordable and more people were to subscribe to dial-up ISPs, the cost of ISP subscriptions in turn might drop. However, an increase in subscribers might signal an increase in traffic and demand for greater bandwidth, access to which is controlled by Telkom. Although the industries that make up the Internet experience operate in the free market, perhaps there is a need for some regulatory guidance in an effort to ensure that the needs and rights of citizens to easy and affordable access to diverse information is not subsumed by the dictates of the free market.

CHAPTER 5 – Conclusion

The Internet gives access to information stored in electronic format on a global network of computer servers. It is possible to access the huge, worldwide repository of data that is the Internet 24 hours a day from anywhere in the world – as long as one has the right computer hardware, software and telecommunications access. Theoretically, information on virtually anything is available on the Internet, which is why some saw the Internet as an “informational cornucopia” that offered a means of realising “the vision of easy access to information” (Schiller, 1999: 143).

Enthusiastic proponents of the Internet’s potential impact on democracy as a new form of public sphere are accused however of assuming “the problems of democracy are primarily practical” (Hacker and Van Dijk, 2000: 210). The Internet’s promoters have failed to take into account that technology cannot address such things as a lack of “political interest, time, effort and skills required” for full political participation (Hacker and Van Dijk, 2000: 210). Nor can technology overcome the social and material inequalities such as poverty and unemployment, illiteracy, lack of access to basic facilities such as water, electricity, transport and medical care that could account for citizens’ “differences of participation” in politics (Hacker and Van Dijk, 2000: 210).

Instead of living up to optimistic predictions, the Internet appears to have gone the route of other media. Like the newspaper, radio and television, the commercialisation of the Internet appears to have been unavoidable. The impact of this is that although the Internet is a powerful tool, it is of value only to those who can afford it. Commercialisation of the Internet means that access to the wealth of information available on it is becoming “dependent on economic as well as political and technological constraints” (Murdock and Golding, 1989: 190). Only those people whom “have the disposable spending power to make discretionary decisions about purchasing information goods” get to access information that has been commodified. For those who cannot afford the costs, information becomes unattainable (Murdock and Golding, 1989: 190).

Over the past six years, a number of commercial ISPs have come and gone in South Africa. When companies disappeared, it was largely because their wealthier competitors simply bought them out or merged with them to form new or bigger companies. The consolidation and concentration of ownership in the local dial-up ISP industry has resulted in a smaller number of players, with M-Web and World Online holding the greatest share of the market. Local ISPs do not provide universal access to information, nor do they represent new alternatives to existing commercial sources of information; they merely provide us with more of what is already available in the traditional media, on condition that we can afford to pay for it.

ISPs in South Africa are in it for the money, not for the sake of bridging any social or other divides. In charging for a dial-up link to the Internet, access to the Internet through an ISP is restricted to those in South Africa who can pay for access to this potential public sphere. A minority of people who are educated, employed and wealthy belong to this group. M-Web and World Online are making no discernible effort to make the Internet accessible to people other than those who can pay for the service. Poor people, it seems, are unwelcome online, where information is increasingly being restricted to subscribers or people willing to pay for it. Payment is by credit card – another facility that is unavailable to the disadvantaged.

South Africa's dial-up ISPs grew rapidly when they emerged, but their growth eventually had to – and did – become slower. This might be attributed to there being only a small number of people available with the interest in and inclination to use the Internet and with the disposable income to pay for access. Once growth in the number of subscribers being signed up every month started slowing down, ISPs had to find an income elsewhere, or sell out to their competitors.

South Africa's leading dial-up ISPs are not in the business of creating universal access to the Internet for South Africa, but are in the business of making money. The number of dial-up Internet users is small because of the high cost of having the luxury of dial-up access at home. The subscription to an ISP alone amounts to some R1 440 a year. To this must be added the cost of having a telephone connection, telephone call rates, electricity, as well as a computer and software. According to Statistics SA, in 1997 the average monthly salary or wage in South Africa was R1 486 (<http://www.statssa.gov.za>). This is roughly what a dial-up ISP subscription alone would cost a household every month. Although the average monthly wage has probably increased since 1997, it is likely that it has not risen enough for the average citizen to be able to afford dial-up ISP access in addition to food, shelter and education.

There are other factors as well. Using a computer and the Internet demands reading and writing skills and an absence of fear of technology. Much content on the Internet is in English, which puts English second-language users at a disadvantage. However, there are greater obstacles than this. South Africa is a country where almost half the adult population is illiterate (33) and 20 percent of men and 50 percent of women aged 20 and over are unemployed (<http://www.un.org/Depts/unsd/social/inc-eco.htm>).

Perhaps the demographic profile of the market – a socio-economic elite of middle-income men in the professional sector – and its potential for commercial exploitation in the form of cross-selling and cross-promotion was part of the appeal. Advertisers of consumer goods and services are interested in people who can afford to have dial-up Internet access from home because they evidently have a disposable income. When they dial up to the Internet, M-Web and World Online subscribers are automatically directed to their ISP's web site, where they are presented with on-screen advertising and special offers alongside news and other side-offerings. These ISPs view and treat their subscribers as consumers by offering them special offers online. An effort is made to extract the maximum profit from them before they head off into the ether to spend their time and money on other web sites. Judging from its M-Web Learning and other advertising campaigns, M-Web would like subscribers to dial up and stay at M-Web's web site, which offers everything from education to online shopping.

It is also evident that M-Web and World Online intend to become more than simply ISPs. M-Web is exploiting the business-to-business Internet industry, "doing over R200 million of trade a month and growing much faster than ... expected" (14). M-Web will also provide the transaction infrastructure required for MultiChoice Africa to become an interactive platform. World Online, on the other hand, says it is not becoming a cellular service provider but a "communications company that can offer both data and mobile solutions" to corporate clients which is "something nobody else can do right now" (<http://www.itweb.co.za>).

The emergence, growth and current activities of South Africa's leading dial-up ISPs as described in this study appear to confirm the prediction by Time Warner in the late 1990s that the Internet would "find its place in the food chain of communications" and that it would "not displace or replace anything" that already existed (McChesney, 1998: 40).

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