# CHAPTER EIGHT

# CONCLUSION AND RECOMMENDATIONS

## Introduction

This chapter deliberates on the framework of technology in a democratic society. The study drew closely on relevant literature review with emphasis on and relevance to the South African democratic political system, as well as on the experience of other countries, with specific lessons to be learned.

In the final analysis, it is necessary to return to the initial research problem and research objectives as formulated. The aim of the study was to evaluate the plausibility, viability and feasibility of technology as an approach to enhance democracy. This aim underpinned three research objectives, namely (1) to review the technology policy as an approach to a democratic political system by contextualising it within the framework of other approaches to democratic politics of technology, (2) tracing the theoretical origins of the democratic itself, and (3) outlining it as a phenomenon in world politics. Secondly, it aimed to examine the claim that technology enhances democracy in a political system. Thirdly, it endeavoured to assess claims, by authors of technology and democracy texts, that there are causal relations between technology and democracy and between democracy and political stability, applying deductive logic to reach a conclusion about the correlation between technology and democracy. Fourthly, the study aimed to recommend ways in which technology should be employed to harness the political stability and direct it towards concretising democracy in South Africa. The latter objective is normative in nature inasmuch as it goes beyond an examination of what is likely to occur in the technological advancements in order to prescribe concrete steps that would enhance the probability of sustainable democracy.

The study adopted the working definition of technology as the systematic application of knowledge to resources to produce goods or services. (Stilwell, 1994).

Since the first democratic elections in 1994, South Africa has simultaneously been faced with a number of challenges and opportunities. South Africa undertook the transformation of a divided society and opened the economy to global competition. The rapidly unfolding global agenda has provided opportunities for direct foreign investment and technology transfer; it has at the same time introduced challenges coupled with open markets and trade barriers. Advanced microelectronics-based information and communication technologies (ICTs) are at the centre of current social and economic transformation in South Africa. The costs of the ICTs are continuing to fall. As their capabilities increase, they are being applied throughout all sectors of the economy and society. The increasing spread of ICT opens up new opportunities for South Africa to harness these technologies and services to serve their development goals. In addition to its current transformation, South Africa also has to face a transition from an industrial society to one that is knowledge-based.

During the industrial revolution, technological developments and industries emerged. The main elements of these technology developments included energy, chemicals, manufacturing and communications. The impact of these technologies in shaping the South African socio-economy is such that doubts have been articulated with regard to the notion of “digital divide”, that is the comparison between the “wired” and “non-wired” communities and the comparison between the poor who may not afford technology at all and the affluent communities. It is possible that an echelon of highly mobile knowledge workers who share a global work ethic and perhaps even “global” values will overlay large numbers of marginalised working class. However, technology does not stand still and many rural communities may be able to seize the opportunities that these technologies present and be able to “leapfrog” into the future.

As far as technology is concerned, any definitive claim whether it is utopian or a Luddite when it comes to democracy, can only succumb to technological determinism. Based on the evaluation of the relationship between technology and democracy, though, there is reason to believe that advances in technology provide favourable opportunities for democracy. There are two sides to this argument. Firstly, social movements and groups devoted to progressive issues and social change use technology to improve democracy. Technology does not only divide the haves

and the have-nots, but also is important to facilitate democratic transitions by creating a more open political culture. Furthermore, technology is increasingly in use to overcome the crisis in socio-economic development in South Africa, primarily as a result of a lack of infrastructure. Creating public spheres where citizens can deliberate on public issues and communicate with their political representatives and make inputs directly to parliament does this. The phenomenon of public spheres is replicated at a national level where the civil society engages in deliberation and acts to influence the outcome of national issues.

The other side of the argument is that new advances in technology can be distinguished from the media that preceded it as it is relatively cheap, easy to use, difficult to control and interactive. For example, the Internet user can be both a sender and receiver of information; the information era provides unprecedented opportunities for participatory media forms and democratic uses of IT. The threats posed by state and corporate control and use of IT are duly noted as challenges to democracy in the information era. However, there have been substantial societal movements to expose and counter this. The Internet also provides unique ways to inform and mobilise civil society, which should be of some consolation for political economists concerned about the expansion of global capitalism in the information era. Another challenge to democracy in the information era is the extent to which the digital divide in and between countries can be closed. This is one of the key concerns for striking a balance between state, market and societal control of IT, where the state and society emphasise equality of access, while the market emphasises efficient development of technology and production.

The way in which IT impacts on democracy has a direct and important bearing on the research problem of the study, inasmuch as the second postulate of the propositional logical deductive model states that the information revolution is likely to enhance democracy. Establishing the probability that IT will provide favourable opportunities for democratisation, the quality of democracy and the globalisation of democracy, is thus an essential step in inferring that the democratic peace is more likely to exist in the information era. But, the research problem also probes a normative objective, namely to propose ways in which IT should be employed to enhance world peace. In this respect the challenges for democracy in the information era as identified here, should be key concerns if the democratic peace is to be a plausible, viable and feasible approach to world peace in the information era.

Technology is ubiquitous within South Africa's democratic political system. It has both benefits and disadvantages, and this poses a difficult choice for society and government in policy approach. The social dichotomy of this nature raises the need for further inquiry as to the reasoning and application to technology as the systematic application of knowledge to resources in addressing democratic imperatives.

The review of the literature demonstrated that technology could influence a democratic political system. It is evident that technology can shape challenges in the political, social, military and economic environment of the political system. The review of the literature further made it clear that technology as a systematic application of knowledge to resources can provide a good tool for sustaining democracy in South Africa.

It addressed the important question of whether technologies are substantively democratic, and whether technology policy decisions are compatible with perpetuating a democratic political system. The review investigated and appraised democratic theories and analysed approaches and challenges of technology in democratic politics, which could be applied in South Africa. Specifically the focus examined the character and crisis in technology and considered what theoretical and practical resources were available for democratisation in South Africa.

In essence, if democracy is impacted by technology by way of a systematic application of knowledge to resources to produce goods and services, it will enhance stability and equality. Therefore, it can shape challenges in the environment of a democratic political system by maintaining stability and order. It will also deliver material prosperity, and foster democratic rule.
It is evident that the South African technology approach departs from the premise that knowledge and development of capacity in technology are central to promoting social, environmental and economic well-being in a democratic political system. The vision, the role and contribution of science and technology in achieving SA's national democratic objectives remain priorities. (DACTS, 1996). The White Paper highlighted some practical values for government and society to consider when they invest in technology to meet basic needs, develop human resources, build the economy and democratise the state and society. The broad technology policy

approach, as outlined, presents a new vision for the twenty-first century. Given the imperatives of the White Paper and in order to achieve any objective in the approach, it is imperative that South Africa should ensure that democratic values are prevalent and that citizens have access to technology with a view to the provision, availability and accessibility of basic services such as health, education, water, and housing. Through technology the availability and accessibility of these basic services will give South Africa a basic ground to consolidate its democracy, as it is a process preconditioned by stability and equality. It is a process that will improve the stability of democracy through the creation of capabilities by the systematic application of knowledge to resources in order to produce goods and services.

The arguments presented in the preceding sections suggest that a number of issues require extensive research conducted on national security and information technology. The main purpose of further study and debate would be to provide policy makers with analytical perspectives and empirical data that create a better match between technological potential and preferred futures. It is assumed that these futures should be both sustainable and democratic.

The first area could be concerned with the design of democratic and pro-active policies and programmes that make it possible to realise the socio-economic development potential of information technologies. This mainly entails studying the roles that public and private sectors should play in the design and execution of these policies and programmes; the forms of public intervention that are conducive to shaping technological change in accordance with desirable social goals, and the establishment of new and more democratic relations between producers and consumers of ICTs, so that technological progress becomes much more responsive to social needs.

A second area of concern is centred around the definition of those social and institutional changes that are required to maximise the social benefits and to minimise the social risks associated with the adoption and deployment of information technologies. This entails considering various ways of adjusting the organisational structures that are relevant for economic productivity, political participation and cultural diversity in line with preferred social scenarios; and the cultural

appropriateness of educational methods and training materials required for the realisation of the technological potential. Again, it is important to discuss the design and adoption of information technologies that strengthen sustainable national security. This involves creating information technologies that reduce the threat and vulnerabilities and encourage environmentally sustainable applications of IT.

The future of information technology and national security is compounded by uncertainty - no one knows how the technological advancement will continue to unfold. The goal for the future will be to somehow bridge the theoretical possibilities with technological capability. Research focused on the goal of ubiquitous information technology will be concerned with a number of important technological obstacles, such as how society could enjoy the benefits of information technology without nation states being too worried about its impact on national security, and society that is ready for a pervasive system that surrounds its communities and monitors their day-to-day activities as there is a worry that ubiquitous networks will present new and emerging challenges to personal privacy, which may destabilise security.

It has been suggested by some scientists like Bill Joy (2000) that the most powerful 21st century technologies could threaten to make humans an endangered species. He predicts that as technology advances, humans will increasingly delegate responsibility to intelligent machines able to make their own decisions and, referring to the writings of Theodore Kaczynski, known as the Unibomber, he wonders whether these same machines might not reduce humans to "the status of domestic animals". (Joy, 2000).

Information technology is shaping the strategic environment in which a conflict may take place, where it would be driven by mostly the political, economic, social and ethical dimensions of the information technology. The fact that IT has contributed increasingly to the interconnectedness of people and states around the world is an indication that there should be leadership in government policy that encourages and supports equity, development initiatives and sufficient funding to finance such initiatives. The major problem, especially in deep rural areas without basic electrical and telecommunications infrastructure programmes and universal service initiatives by government, is that information and communication technology companies will have little incentive to develop new products to meet the needs of people who cannot

use or afford their existing services. And government policies will become useless without ground-level programmes to take advantage of them.

Finally, technology could in future greatly benefit society if its advancement is harmonious with national democratic imperatives and if it is intended to serve the needs of the people.