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Editorial comment

Action research or transdisciplinary research?

Is there indeed a difference between action research and transdisciplinary research? This was the subject under consideration in the closing panel discussion at the September 2010 conference of the Swiss Academies of Arts and Sciences on “Transdisciplinarity: implementation in inter- and transdisciplinary research practice and teaching” held in Geneva, Switzerland.

Researchers in all parts of the world have discussed the matter extensively in recent years, especially in the fields of biological science, technology, management studies and health sciences. In some quarters, there have been arguments to the effect that transdisciplinarity is merely another nuance of action research, which emerged for the first time in 1946 at the Massachusetts Institute of Technology where Kurt Lewin (1890-1947) coined the term in a study dealing with minority problems.¹

In view of the ongoing debate, it was an appropriate theme to take up at the international conference annually attended by some of the world’s top practitioners in the field of transdisciplinarity.

The keynote speaker of this session was Prof. Morten Levin,² who spoke on “Action research and transdisciplinarity – implementation as the knowledge creation process”. Levin, a specialist in the field with many years of practical research experience, was of the opinion that there is little difference between the two and that everything basically revolves around the issue of implementation. From that end, he explained, the real sense of knowledge emerges. This implies that there is the need to identify real life problems, devise appropriate action and find proactive solutions.

The core concepts of action research, he went on, involves: understanding the activity cycle and using social science techniques to determine the data and how to analyse it; establishing appropriate workforms by means of constructing arenas for problem solving and learning; and developing an action research strategy with the aim of solving the pertinent question or questions.

For him, the controversial aspect of transdisciplinarity is that real life problems (issues) are in fact multifaceted, contextual and holistic. At the same time science tends to be particular, specialised and compartmentalised into professions. This, he explained, presents major problems


². Department of Industrial Economics and Technology Management at the Norwegian University of Science and Technology.
for efficient research activity, whereas action research tends to face the real life problems and accordingly gives priority to relevance of knowledge and confronting rigour as the next challenge.

Apart from a lively conference audience who had many questions and comments, there was also a panel of prominent TD practitioners and research leaders, including Professors Aant Elzinga, Larissa Krainer, Carol Dépres and Roland Scholz, all of whom articulated their views on action research and transdisciplinarity.

On the whole, the panellists and members of the audience were favourably disposed towards action research – but only as a subsidiary form of transdisciplinarity. For most TD practitioners, a strong corpus of theoretical and methodological knowledge has been formulated on the approach since the 1970s. Academic and research managers in many countries have invested much of their time and effort in strengthening transdisciplinarity and have secured a significant reputation for the approach in the research and science environment. They also expressed some concern about the fact that Mode 1 research does not necessarily feature in action research. It tends to be more inclined towards Mode 2-type research. There seemed to be consensus in the audience that transdisciplinarity could pride itself on having made considerable inroads. It has gained both depth and identity, especially in diverse fields of philosophical discourse. This trend, it was argued, has been one of the major strengths of transdisciplinarity in recent years.

From the lively discussion and exchange of ideas it was evident that the jury is still out on this matter. On the whole, it would seem that there are a variety of routes to creating knowledge. The fact that action research and transdisciplinarity tend to overlap in some areas suggests that we find ourselves, at the dawn of the 21st century, in an invigorating era of scientific thinking where many elements of the whole of reality still need to be understood in comprehensible chunks of consciousness.

Of special interest

In this issue of *TD* we are privileged to stimulate the thinking of our readers in the fields of philosophy and management studies with contributions by Prof. Fanie de Beer of the University of Pretoria and Prof. Aant Elzinga of Sweden.

In terms of empirical research there are some interesting contributions in the fields of environmental studies, psychology, counselling, education and military studies.

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Meervoudige denke: Versmoor/vermoor instellings denke?

CS DE BEER*

Opsomming:

Denke is die mees uitsonderlike vermoë van mense. Vir mense om volwaardige mense te wees, is die volle ontwikkeling van hierdie vermoë noodsaaklik. Wanneer dit afgeskeep word, word mense tot minder as mense en alle verhoudinge waarby mense betrokke is ly op een of ander wyse skade. Hierdie skade kan mettertyd katastrofiêse afmetings aanneem. Dit kan samelewings in duie laat stort; dit kan selfs die ondergang van beskawings beteken.

Hierdie artikel besin oor die belangrikheid van meervoudige of komposisionele denke, as die ideale denkvorm, oor die wesenlike probleem dat denkontwikkeling verhinder word omdat daar eerder op enkelvoudige denke, as maklik aanleerbare denkvorm, klem gelê word en oor die moondlike armoedige gevolge hiervan vir individue en samelewings van sodanige strategieë, soos dit veral in institutionele verbande tot uitdrukking kom, verwesenlik word, selfs afgedwing word: onderwys, politiek, kultuur. Die versmoring/vermoording van denke word 'n werklkheid. Uiteindelik word enkelvoudige denke die houding van die hele samelewing.

Die ernstige afmetinge wat die verlies aan deeglike denke reeds aangeneem het, is van groot omvang. Dit raak skole, universiteite, wetenskapwerk, politieke instellings, administratiewe aktiwiteite oor 'n breë spektrum – eintlik alreeds die hele samelewing. Hiermee word ons voor groot uitdaginge gestel. Indien hierdie oorwoë argumente geldig is, soos baieinderdaad beweer, moet die situasie ten alle koste omgekeer word. Voorstelle word in hierdie verband gemaak.

Dit is allereers nodig om die gebrekkigheid van gebrekkige denke en die gevolge daarvan te bedink. Verder moet besef word dat gesindheid en ingesteldheid ten opsigte van armoedige denke moet verander, die armoede daarvan moet aanvaar word en ook dat ander denkweë moondlik is. Terselfdertyd behoort 'n besef lewendig gehou te word dat die kompleksiteit van die werklkheid, menswerklikheid en natuurwerklikheid, groot en meervoudig in omvang is. Geen enkelvoudige, lineêre en dus reduktiewe denke, sou afdoende antwoordde op hierdie uitdagings van so 'n werklkheid kon verskaf nie. Slegs enkele die bereid is om die volle rykdom van die werklklike te aanvaar en dienooreenkomstig aan die dink te raak, kan hoop op sinverwesenliking en mens-en werklkheidsverryking bewerkstellig.

Trefwoorde: lineêre denke; protesterende denke; meervoudige denke; komposisionele denke; meervoudige werklkheid.

Dissipline: Interdissipline

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Abstract

Multiple thinking: do institutions smother/kill thought?

Thought is the most distinct ability of humans. For humans to be fully developed beings the full development of this ability is required. When this is neglected humans become less human and all relationships humans are involved with will be damaged. This damage can with time assume catastrophic proportions. It can cause the collapse of societies and even the downfall of civilisations.

This article reflects on the importance of multiple or compositional thinking as the ideal mode of thinking, on the essential problem that thought development is hindered by the preferable emphasis on simplified thinking, as the easily adoptable mode of thinking, and on the possible impoverishing consequences for individuals and societies of such strategies as it finds expression, comes to fruition and are enforced in institutional contexts: education, politics, culture. The smothering/killing of multiple thinking takes effect. Eventually simplified thinking becomes the general attitude in society as a whole.

The alarming proportions already assumed due to the loss of thorough thinking are immense. It affects schools, universities, scientific work, political institutions, and administrative activities over a broad spectrum – as a matter of fact already the whole of society. We are confronted hereby with enormous challenges. In case these considered arguments are valid, as many would suggest, the situation has urgently to be reversed. Some proposals in this regard are made.

It is first of all required to ponder the limitations of limited thought and its consequences. Additional to this it is necessary to realise that attitudes regarding poor thinking should be changed, that the poverty thereof be accepted, and that alternative thought routes are available. At the same time an awareness of the complexity of reality, human reality as well as natural reality, in its multiplicity and scope, should be kept vividly alive. No simplified, linear, and hence reductive thinking can offer adequate answers to the challenges of such a reality. Only a thought, willing to accept this and to think accordingly, will have a hope of the fulfilment of meaning and the enrichment of humans and reality.

Keywords: linear thinking; protest thinking; multiple thinking; compositional thinking; multiple reality.

Discipline: Interdiscipline

Inleiding

Die leser behoort uit die tema af te lei dat menslike denke baie belangrik is. Dit mag klink na ‘n vanselfsprekendheid. Alle mense dink immers. Daarteen stry niemand en ‘n mens sal selfs verbaas wees oor hoeveel mense, selfs diegene van wie dit nie verwag word nie, wel dink. In hierdie artikel word die feit eger beklemtoon dat mense tot die maksimum behoort te dink, heelhartig moet dink, so goed as moontlik behoort te dink (Pascal). Enersyds het dit met selfverweseliking te doen, met die volle ontblooiing van die self, met die omvattendste en indringendste moontlike ingebredheid in die werklikheid, midde in dit wat is. Dit is die enigste manier hoe mense by ‘n eie plek in hierdie geheel kan uitkom en sin daarvan kan maak. Dit gaan eger ook om die samelewing en wat van ‘n samelewing sonder oortuigde denkers word – en onthou: hier word nie in die eerste plek, of selfs slegs van filosowe gepraat nie. Samelewings kan sonder professionele filosowe wees, maar gewis nie sonder denkende mense nie. Daarsonder gaan hulle onder, verloor hulle die sin van die lewe, want hulle verloor alle perspektief en veral ’n uitsig op die toekoms.
Daarom: Om so goed moontlik te dink, is ‘n soort roeping wat met menswees gegee is, in ons menswees ingebou is. Hoe meer en beter daar gedink word, hoe meer en beter is die soort mense wat ons word. Die strewe moet altyd bly: die ontwikkeling van volle humaniteit; dit beteken ook vervulde humaniteit. Dit is geen vanselfsprekende saak nie. Denke die baie vyande, dikwels selfs uit onverwagse oorde.

Deur die eeu het baie al gewaarsku teen die fataliteit van denk-afwesigheid. Socrates se besoek aan die markplein in Athene, Griekeland, was om die volk aan die dink te kry, mense vrae te laat vra oor hulle doel in die lewe. Pascal (1963:116) maak die punt:

_Heel onze waardigheid is dus in het denken gelegen. . . . Laten wij dus ons bes doen goed te denken; dat is het beginsel der moraal._

Nietzsche spreek sy beswaardheid uit oor die feit dat skole nalaat om kinders te leer dink! Heidegger, die filosoof oor wie die meeste in die wêreld geskrywe is, merk met weemoed op dat sy pragtige boek _Was heisst Denken_ (Wat beteken dit om te dink?) (1971) een van sy mins geese boeke is. Jacques Lacan maak ‘n groot saak uit oor “die wil tot onkunde”, wat direk te doen het met ‘n doelbewuste onwilligheid om te dink, wat byna wesenlik tot menswees behoort, ongeag die vermoë daartoe waaroor mense beskik.

On-kundigheid en denk-loosheid, is onlosmaklik verbind, is karperde wat ons – indiwidue, groepe, samelewings, kulture, beskawings -- oor die afgronde voer. Enige studie van enige sulke entiteite bring ons telkens by hierdie gedagte uit. Dit lei mense tot domheid, onnoselheid en afstomping. Daar is in die jongste tyd nogal heelwat hieroor geskrywe: George Steiner (1999) met sy _Barbarisme van onkunde, _Avital Ronel (2003) met haar _Stupidity_ en die bekende _Le Magazine Littéraire_ (2007) met ‘n spesiale uitgaw oor _La bêtise_ (domheid) is maar drie voorbeelde. Die grootste onguns, of selfs minagting, wat aan mense bewys kan word, is om hulle die reg tot optimale denke te ontsê. Dit maak van mense minder mense, gebrekkige mense; dit is soos iemand wat sonder ‘n ledemaat oor die weg moet kom. Die verskil is egter: in hierdie geval is die ledemaat wel daar maar doelbewus onderontwikkel en as gevolg van die onderbenutting gaan dit natuurlik agteruit en verloor uiteindelik sy funksie. Dit maak van mense wesens wat op twee in plaas van vier silinders loop. Vitaliteit en energie is weg. Die ergste is dat hierdie aftakeling van menswees dikwels onder die voorwendsel van goeie of selfs die beste bedoelinge geskied in die naam van vaardigheidsontwikkeling en die daarmee gepaardgaande berekening bevordering van resepmatigheid.

Die versmoring/vermoording van denke

Die mate waartoe ons tot volle, denkende, reflektrende mense ontwikkel hang baie van onsself af, maar het ook baie te doen met die omgewings, samelewings, kulture waarin ons ons bevind, die kwaliteite, inspirasies en geestelike gehalte daarvan en ook van die instellings wat binne hierdie kontekste beslag kry en invloed uitoefen. Veral vier groepe instellings is hier van belang: die onderwys, navorsing, korporatiewe en politieke instellings. **Die kernvraag hier is of instellings meervoudige denke versmoor/vermoor?** Die hoofklem, vir ons doeleindes, sal op die onderwys as instelling val, veral hoër onderwys en veral ook die mate waartoe dit met navorsing en wetenskap verband hou. Wat my aan die dink gesit het oor hierdie spesifieke tema is veral die onlangse boek van Mary Evans: _Killing thinking: the death of the universities_ (2004) en saam hiermee behoort die boek van Frank Furedi: _Where have all the intellectuals gone?_ (2006) ook aandag te geniet.
Haar gedagtes het op vrugbare grond geval, want as ‘n mense vir jare aan universiteite en navorsingsinstellings betrokke was en dit enigsins op ‘n deurdagte wyse probeer doen het, ontdenk jy gou hoe ‘n groot vyand van volle denke hierdie sogenaamde “denk”-instellings eintlik is. Hulle werk almal onder die voorwendsel van denkbevordering in die oortreffende trap sonder dat daar besef word dat dit eintlik maar herhalende, lineêre en reproduktiewe denke is wat hulle strewe om te bevorder. Michel Serres (1997:93) skrywe byvoorbeeld:

_All my life I marvelled at the hatred of intelligence that makes up the tacit social contract of so-called intellectual establishments._

Dit laat my dink aan ‘n ervaring van ‘n aantal jaar gelede toe ek vir ‘n navorsingsprogram van die destydse Wetenskaplike Adviesraad, wat oor die implementering en benutting van navorsingsbevindinge gehandel het, verantwoordelik was en ek voorgestel het dat ‘n bepaalde filosoof (Radnitzky), wat geheel en al in die kraal van hierdie mense en hulle program gepraat en geskrywe het, uitgenooi word om insette tot die program te maak. Die aansoek was onsuksesvol. Op ‘n dag ontvang ek ’n lêer van die president van een navorsingsraad wat dokumentasie oor vergaderings wat gehou is, bevat het en ontdek toe in die lêer ‘n nota (wat tydens een van die vergaderings gestuur was) van die president van ‘n ander navorsingsraad met die woorde:

_Kan ons dit werkelik bekostig om mense van dié aard by ons program betrokke te kry?

Die verklaring vir die mislukte aansoek lê voor die hand. “Mense van dié aard” (maw. Professionele denkers, dws mense wat denke in ‘n omvattende sin wil bevorder) is nie bekostigbaar vir navorsingsrade nie, selfs al praat hulle in dieselfde idioom en bevorder hulle wêreldwyd dieselfde saak. “The hatred of intelligence” waaroor Serres skrywe, oorheers dikwels die besluite wat in institusies geneem word.

Ons moet ook onthou dat instellings woeker met mag en dus heul met maghebbers om hulle aan hulle kant te kry, want daar kry hulle hulle geld vandaan, behalwe die wat hulle self moet genereer, maar meesal onnadenkend doen. Maghebbers floreer natuurlik op hierdie impak wat hulle weet hulle nodig het. Niemand in die magstrukture mag ooit in die verleenheid gestel word nie. Om denkende mense verleë te maak, is natuurlik eerder ‘n deug en selfs ‘n stokperdjie, maar nooit ‘n skande nie. De onlangs “waterreferaat-episode” (2008) is een baie onttrekkende voorbeeld hiervan. Instellings kan eerder ‘n hele bevolking se besmetting bevorder, of ongereg daaroor wees, as om toe te laat dat een denkende navorser ‘n patetiese regering, wat die minimum aan dienste verskaf, deur dringende en tydige waarskuwings in die verleenheid plaas. Die ergste van alles, so word deur die betrokke direkteur-generaal berig, is dat min of meer dieselfde referaat juis ‘n maand of wat tevore by die Departement Waterwese gelever is met omvattende debatvoering daaroor en sonder probleme. Mag het nog altyd en sal ook altyd ware denke kortkies, aan bande lê, versmoor en selfs vermoor. Natuurlik sal almal beweer dat denke bevorder word, maar dan ‘n baie duidelik verskraalde en presies gedefinieerde denke. In hierdie nuwe wêreld van geleertheid het ons ‘n nagmerrie van ‘n ander aard, skrywe Evans (2004:52): “the horrors of force, violence, physical coercion and hardship are replaced by the slow suffocation of the spirit, the intellect and the capacity to resist.” Soos in die Engeland waaroor sy skrywe, het ons in Suid-Afrika ook hewige porsies van alles hiervan. Mense word fisies vermoor en geestelik versmoor en vermoor.
Om verder terug te keer na Evans. Intellektuele vitaliteit en kreatiwiteit moet plek maak vir ouditering, assessering, meting en regulering. Die verskuiwing wat hier ter sprake is, word so deur haar verwoord:

[It] is a shift from a collective world in which independent and critical thought was valued, to a collective world in which universities are expected to fulfil not these values but those of the marketplace and the economy. This discussion is not derived from a nostalgia for the past, but a fear for the future. In particular the concern which inspires these pages is that of the evolution of the universities into institutions which only serve a very small-minded master: the rational bureaucratic state of the twenty-first century. (Evans 2004:3).

In hierdie instellings is denke ‘n hoogs-toevallige en oorbodige verskynsel en besmet met ideë-blindheid. In sulke situasies gee die berekenbare, voorspelbare en beheerbare – en veral ook die voorstelbare - die toon aan. Standaardisering in lyn met die laagste gemene deler is die doelwit al word dit internasionaal genoem. Die ‘slaap van die rede’ (Evans 2004:128) het finaal ingetree.

Hierdie verskuiwing geskied boonop onder die vaandel van die hoog-edele demokratiese ideal en die nog edeler transformasieproses. Sosiale geregtigheid, volgens ‘n bepaalde definisie en ekonomiese noodsaaklikheid, ook volgens ‘n sekere begrip daarvan, is twee van die belangrikste pilare wat nuwe mense moet voortbring uit die nuwe doelgerigte, uitkomsgerigte, SAQA-gesertifiseerde, leerplanne. Wat die verwikkelinge werklik meebring is ‘n kwasie-demokratiese ethos van instemming met die waardes van die mark-ekonomie waarbinne denke onbekostigbaar geword het.

Under the umbrella of the principle that recipients of public money should be accountable to public scrutiny was included an explicit commitment to a particular form of public – a public which wholeheartedly endorsed the market (Evans 2004:23).

Vir hierdie engeestige meester, die rasioneel-burokratiese staat “only battery farming for the mind promises that reason will never escape to serve anything except the most avaricious and limited keeper”. (Evans 2004:27).

Sy gaan egter nog verder en baie meer op die punt af wanneer sy die fokus van navorsingsinstellings ook binne universiteite karakteriseer. Sy skrywe:

But the skills necessary for technical competence are not the same as those necessary, indeed essential, for intellectual creativity or understanding. Moreover, it is a basic misunderstanding of science and technology to assume that learning in these subjects necessarily follows a mechanistic pattern. The sad truth is that the authors of assessment want the world, and indeed everything we might possibly know about it, to be organized into the bite size portions of mass catering. The standard potato chip becomes the standard idea, it has measurements and it has contours and nobody will be given one that is a peculiar shape or made of different materials. Given that mass catering also depends upon ‘portion control’ we can also expect that no one will receive more (or less) ‘knowledge’ than anyone else. (Evans 2004:71-72).
Mag en die haat vir intelligensie seëvier hier.

Terwyl die devaluasie van die sosiale en intellektuele waarde van ‘n graad een van die belangrike prestasies van hierdie verskuiwing is, is ‘n vermoorsing van menselewens’ waarvan Eliot in *Middelmarc* skrywe (Evans 2004:40), waarskynlik die grootste, maar ook hartseerste uitkoms van uitkomsgerigte onderwys en portuurge-evalueerde navorsing. Aangesien die hele aangeleentheid van hierdie betoog handel oor die impak van instellings op individue en gemeenskappe se denke en lewens, moet enige alternatief, maar veral die komposisionele denke, intens met mense en hulle maksimale vermoeëns rekening hou en ook met die werklike ontnemelikende aspecte van die impak. Soos geargumenteer is: die lineêre, enkelvoudige, representatiewe denke maak van ons minder volwaardige mense wat ook afskuur op mense-verhoudinge en institutionele opsette. Die mensvervullende, meervoudige of komposisionele denke moet sterk inspeel op die verwesenkliking hiervan in alle kontekste anders raak die lewens vermors. Hiervoor is die etiek van Levinas besonder waardevol en veral ook in die lig van Judith Butler se interpretasie daarvan vir institutionele opsette, veral opsette waarbinne fel aanslae teen die menswetenskappe en veral die humaniora (deesdae so algemeen) geloods word. Individuele kwaliteite, institutionele foki, samelewingsgehalte verrys uit ‘n etiese ingesteldheid en keer telkens daарheen terug. (Kyk Butler, 2006: 128-151). Hierby kan Pascal weer in herinnering geroep word: Om goed te dink is die beginsel van die moraal.

Michèle Lamont (2009) bevestig in haar onlangs studie, wat onder die titel *How professors think: inside the curious world of academic judgment* gepubliseer is, tot watter mate die algemeen aanvaarde navorsingsprosesse akademici dwing om in die rigting van eenduidige, lineêre denke te dink teenoor en ten koste van meervoudige denke. Die hele oefening van portuurevaluasie is, al is dit onbedoeld, gemik op die versmoring van denke. Dit is ‘n samevoeging van navorsingsmatige, bestuursmatige en ekonomiese magte om navorsers te manipuleer en veral om navorsers deur ander misbruikte navorsers gemanipuleer te kry om op sekere maniere te dink. Die oefening is verder grootliks gebaseer op empiristiese en positivistiese strategieë van meting, berekening en kontrole. Die bibliometriese meting van aangehaalde werke, as een voorbeeld van baie, gee ‘n indruk of skep ‘n vermoede van impak en kwaliteit, maar laat net te veel buite rekening om hoogenaamd werklike geldigheid te geniet. Studente het wel die aandag daarop gevestig dat daar gelukkig enkele dosente, navorsingsbestuurders en redakteurs is wat wel deur hul gewetes en met geëinspireerde geestelijke verantwoordelikheid, dikwels onder moeilike omstandighede van institutionele beperkinge, wonderlike werk verrig in terme van meervoudige denke.

Dit is teen hierdie agtergrond dat die pas vrygestel boek van Gumedé en Dikeni (2009) oor ‘die armoede aan idees’ in die kol is en die auteurs deelnemers is aan die oproep tot protesdenke. Die politieke implikasies van verskraalde denke is die verreikende gevolge wat moeilik in situasies van denkloosheid raakgesien word. Die armoede aan idees het alles te doen met hoe daar gedink word of nie gedink word nie. Die grootste enkele oorsaak van ideê-armoede is denkarmoede. Tensy daar dringend op ‘n omvattend en indringende skaal werk gemaak word van meervoudige denke, soos wat hier voorgestel word, kan ons in ons land slegs afwaarts en agteruit beweeg soos wat tans al sterker die geval is en duidelik in hierdie publikasie aangetoon word. Die huidige situasie vra vir protes.

**Protesterende denke**

Hierteenoor behoort ons baie sterker stelling in te neem as om in teekamergesprekke ons onvergenoegdheid uit te spreek. Ons is meesal so verward en verdwaasd oor die taktieke,
Versmoor/vermoor instellings denke?

strategieë en politiekerye waartoe instellings in staat is dat ons nie eintlik weet wat om te sê nie. Boonop is dit nie politieek korrekt om iets te sê nie. Mag, politiek en strategie neutraliseer ons. Tog moet ons weet dat ons ‘n saak het. Die kosbaarste en mees unieke van ons menswees, waaronder ons nie in die volwaardige sin mense is, of kan wees nie, is op die spel: ons denkvernuif. Op grond van ‘n oortuigte entoesiasme moet daar luid aangekondig en geprotesteer word oor ‘n paar kernaansake. In haar skerp ontleding van die gees van ons tyd as “‘n tyd van katastrofes” beklemtoon Isabelle Stengers (2009) die belangrikheid daarvan om weerstand te bied “teen die barbaarsheid wat aan die kom is”. Die protes teen enkelvoudige denke van hierdie artikel geskied in volle vereenelwiging met Stengers se oproep.

1 Die grense van die akademie strek veel wyer en verder as die ekonomie en die mark en is dus werf om verdedig te word, veral in die lig van die neweverskynsels van so ‘n eenvoudige fokus soos tot hiertoe beklemtoon is. Wat kan verdedig word van die akademiese instellings?

[T]hey constitute a set of standards and aspirations that are democratically available and can generally inform the social world about the possibilities of the intellect. Going to university to learn how to process received, bowdlerized knowledge … is not about learning to think or consider. It is about learning how to organize pre-packaged information. (Evans 2004:44).

Dit is en bly volledig onvoldoende.

2 Verder, idees moet oorweeg word, nie alleen vir sover hulle veranderinge in die wêreld bewerkstellig nie, maar veral in terme van die verskil wat idees aan ander idees maak. Die verhouding tussen idees, die waardering en evaluasie van idees, die woeker daarmee, die besef waartoe Edgar Morin (1991) ons bring met sy ontwikkeling van gedagtes oor ‘n ideësfeer of noësfeer en dat daar ‘n noëlogie nodig is vir die hantering, waardering, ontginning, en invensie van idees, is aangeleenthede waaronder samelewings en individue in doodloopstrate beland. Met sy aksent op die nous (gees) bring Morin die lewe van die gees na vore, teenoor die meganiserings, industrialisering en instrumentalisering wat ons lewens en instellings oorgeneem het. Pierre Lévy (1994:231-240) skaar hom heelhartig en welgearticuleerd met sy klem op die noëtie se by hierdie gedagtes van Morin.

3 Die herontdekking van taal, teenoor die erodering daarvan, moet geproklameer word. Kyk maar na die gereelde berigte oor nie soseer eksamenflaters nie, maar oor die flaters in en met eksamenvraestelle om te verstaan hoe taal geminag word. Ons het traak -my-nie-agtig geraak oor taal. Met verwysing na Orwell se 1984 wys Evans (2004:50) daarop

that to lose the meaning of language we also lose our personal and social history; those living in a world without history have no mechanisms for the evaluation of truth and certainty.

En later

Above all else, this world depends upon literacy and an ability to use and understand language (Op.cit. 107).

Nog meer: die nie-materiële van ons menswees, die geestelike krag van sinvolle lewens hou direkte verband met taal. Taalverlies is sinverlies is lewensverlies is toekomsloos. Steiner (2001:5) is eksplisiet hieroor:
The future tense … looks to be specific to homo sapiens. As does the use of subjunctive and of counter-factual modes which are themselves kindred, as it were, to future tenses. … It seems to me that this fantastic, formally incommensurable ‘grammatology’ of verb futures, of subjunctives and optatives, proved indispensable to the survival, to the evolution of the ‘language animal’ ….

Nóg die mark, nóg ekonomiese groei, nóg tegno-wetenskaplike ambisies en prestasies is bevoeg om alleen en op sigself die sin van ons lewens en die toekoms te beredder.

4 In plaas daarvan om toe te laat dat graadsertifikate bloot bewyse van bywoning is, moet betrokkenheid by kennisinhoud in die breedste en volste moontlike sin en by alle verwante literaturadringend by studente in ere herstel word. Uit hierdie betrokkenheid kan probleemoplossings van ‘n algehele nuwe aard van stapel gestuur word, soos later na aanleiding van Deleuze en Guattari se werk aangetoon sal word wat ons weeg van al die skynoplossings verduister deur die aktiwiteite om die skyn te verwesenlik. Die dimensie van eenduidige denke (en die gevolglike miskyk van meervoudige denke), wat meesal oorheers in die wetenskap- en professionele werkgebied van die inligtingkundige en wat ook weerklang vind in informatiseringsprosesse, in die aktiwiteite van kennis- en inligtingbestuur, in kennisorganisasie en in die normale inligtingaktiwiteite, bring ook ‘n verskering in kwaliteit oor ‘n wye linie van wetenskap-, navorsing- en onderrigwerk in die algemeen mee. Wat hier gebeur, naamlik die vereenvoudiging van die denke, herinner ‘n mens aan die waarskuwing van Heidegger (1971:19) in sy opmerking: “Wat beteken denke? Bewaar ons van die blinde drif wat op hierdie vraag ‘n honende antwoord in die vorm van ‘n formule gee.” (My vertaling). Die kompleksiteit van denke word deur ‘n spottende blindheid afgetakel tot die enkelvoudigheid van maklik begrypbare en selfs grypbare formules. Heidegger se protesterende versugting is dat ons hiervan (die verlies van ‘n goeie begrip van denke!) bewaar moet word. Dit vergelyk goed met Avital Ronel (1989: 26-27, 419-420, vn25) se waardevolle bespreking van Heidegger al doen sy dit met ‘n ander aksent. Sy parafraseer hierdie sin soos volg:

…the question of what is called thinking or what does call for thinking must renounce access to an urge, an urge for blindness. This form of blindness would permit us to ‘snatch at a quick answer in the form of a formula’ – a quick answer that would be graspable by the right kind of dialing system. All of this must be given up if we are to stay with the question that asks, ‘Was heisst denken?’ (Ronel 1989:26-27).

5 Fundamentele kennisontginning en goed opgevoede studente, opgevoed tot volle denkontplooiing, eerder as die fokus op blote fynsionale fragmente van kennis en op halfopgeleide studente, is wat ons land en die wêreld dringend nodig het om vrede, voorspoed en geluk te verwesenlik en katastrofes en barbaarsheid te vermy. Die universiteit bly in hierdie verband ‘n sentrale instelling. Oudemodies en uitgedien, middeleeus, sal baie wel sê, want binne ‘n sogenaamde “kennisekonomie” behoort universiteitë die Mark en slegs die Mark te help verheerlik. Hierdie eensydigheid kan nie sonder protes gelaat word nie, want dit sal nie straffeloos tot in ewigheid kan voortwoeker nie. Ons almal sal uiteindelik die slagoffers wees.

Om hierdie protesgedagtes saam te vat, maar ook verder te voer, vereis ‘n veskuiwing in ons opvatting oor denke. Vir hierdie doel word hier voorgestel dat die term meervoudige denke of ook komposisionele denke gebruik word.
Meervoudige of komposisionele denke

Die betekenis van beide hierdie denkmodi behoort gaandeweg duideliker te word. Die werklike voldoening hieraan kan die bogenoemde probleme van die vermoordings en versmoring van denke deur allerlei instellings die hoof bied en ons selfs sinvol die toekoms inneem.


Om uitdrukking aan hierdie meervoudigheid te gee, gebruik Edgar Morin ‘komplekse denke’, Badiou ‘oneindige denke’, Nancy ‘eindige denke’ en Serres die term ‘verbandleggende intellectio’, maar wat om dit dan met die verskillende benoemings te sê? Miskien juis om die soeke na meervoudigheid te beklemtoon, om presies uit te kom by die filosofiese vermoë om verbande te soek en te lê, oorskrydings van grense te pleeg, en iets nuuts te inventeer. Let ook op Deleuze (1988:83-84) se gedagte van “die denke van die buitekant” in sy boekie oor Foucault waarin hy die meervoudigheid sterk beklemtoon, veral waar hy na Foucault se filosofie as ‘n “pragmatiek van die meervoudigheid” verwys.

Waar kom ‘n mens uit met die gepraat oor meervoudige denke?

Dit is allereers ‘n denke wat in voeling is met die syn of die werklikheid in die meervoudigheid daarvan, met dit wat in die volheid daarvan, om daarop te antwoord deur ons wyse van dink, ons lewenswyse, ons wyse van verhoudinge te voer en ons wyse van kennis te beoefen. Syns-ongevolgie, of on-syn-igheid, ongevoeligheid vir alles wat is, onvergogenicheid met dit wat is, afwydheid van dit wat is, die toppunt van on-sin-nigheid of nihilisme (die verabsolutering van of sinloosheid of letterlik niksheid), is ons voorland in die afwesigheid van meervoudige denke. Stiegler (2001) verwys hierna as “die siekte van ons tyd”.

In sy Syn as gebeurtenis het Badiou (2007) mooi geskets hoe onmoontlik dit is om die syn in enkelvoudige terme en in ‘n eenduidige sin te bedink. Kyk veral na die eerste deel van hierdie boek (Badiou 2007:23-120): “Being: multiple and void” vir sy bespreking oor meervoudigheid en hoe denke daarop moet respondeer, alhoewel die res van die boek deurspek is met besinnings oor die meervoudigheid, byvoorbeeld ‘natuurlike meervoudighede’ in hoofstuk 12 en 14; ‘die vorm-mevrouwige van intervensie’ in hoofstuk 22; ‘die natuurlike kwantitatiewe korrelaat van ‘n meervoudige’ in hoofstuk 26, om slegs enkele spesifieke voorbeelde te noem. Hy het die gedagte van meervoudigheid in ‘n onlangse publikasie weer opnuut treffend uiteengesit (Badiou 2009:53-75).

Synsbetrokkenheid is ‘n meervoudige betrokkenheid wat op ‘n veelvoud van vlakke manifesteer en ontmoet word. Deleuze en Guattari (1987) se Dusend plateaus en Michel Serres (1982) se Genesis (wordering of aanvange), wat aan meervoudigheid gewy is, ondersteun hierdie gedagte heelhartig. Om net vir ‘n oomblik by Serres stil te staan. Aandag aan almal sou baie tyd vra. ‘n Nuwe tema of objek word deur Serres vir die filosofie voorgestel: meervoudigheid. Hierdie “nuwe objek” vir die filosofie is isomorf aan die nuwe geometrie van die wiskundige Benoit
Mandelbrot. Fraktale geometrie konstrueer modelle wat vorme wat in die natuur voorkom simuleer, maar vorme wat so kompleks is dat die Euklidiese geometrie dit nie toereikend kan voorstel (representeer) nie. Meervoudigheid is die metaforiese voertuig wat Serres kies om hierdie fraktale, ook die chaotiese en die stochastiese, of onvoorspelbare, voor te stel. Die objek van die boek is nuut maar ook bekend.

*Oral ken ons dit; oral wil die rede dit ignoreer (Serres 1982:20)… Om meervoudigheid vir enkelvoudigheid te verlaat, verlaat die rede ‘n prooi vir ‘n skaduwee. (Op. cit. :17).*

Ons is so min verseker van die meervoudige as van die Een.

*Ons veronderstel altyd dat ons nie weet nie of dat ons alles weet, ja of nee. Nou, ons weet gemeenskaplik ‘n bietjie, middelmatiglik, genoeg, baie, dit fluktuëer op verskeidenheid maniere, selfs in die duursaamste en mees gevorderde wetenskappe. Ons bevind ons voor of binne die meervoudigheid, vir meer as driekwart van ons kennis en ons handelinge. … Meervoudigheid as sodanig, rof gelaat, op skaars maniere verenig, is nie ‘n epistemologiese monster nie, maar dit is intendeel die gewone van situasies, verstaan as situasies van die gewone wetenskaplike, die gebruiklike kennis, die alledaagse werk, kortliks, ons gemeenskaplike objek. (Serres 1982:19-20)… Meervoudigheid word gedink, miskien, maar nooit werklik verstaan nie.” (Op. cit. :23).* (Die aanhalings uit Serres is my vertalings).

Die meervoudigheid wat so voorgesteld word as ‘n diskursiewe model moet bevry word van die fenomenologiese, positivistiese, empiristiese bande indien ons by ‘n nuwe epistemologie wil uitkom wat nie langer deel vorm van gewelddadige uitsluitinge nie. Ons moet sover moontlik alles in ag neem. Serres stel dat vir die tradisioneel aanvaarde metodologieë afgewys moet word indien ons by hierdie “nuwe objek” wil uitkom waarmee ‘n nuwe filosofie [van meervoudigheid] haar wil bemoei. Die nuwe metode, teenoor die rasionele, binêr-logiese denke, is die meervoudige denke wat spelend binne die meervoudige geheel van dit wat is weer beweeg. Dit is presies ook die boodskap van Mandelbrot (1983:19):

*Some quantity that is commonly expected to be positive and finite turns out to be infinite or to vanish … Such misbehaviour looks most bizarre and even terrifying [to a scientist] but a careful re-examination shows it to be quite acceptable … as long as one is willing to use new methods of thought.*

Ons sien in ons politiek van die dag, die ekonomie van die dag, die opvoedkunde van die dag, die wetenskap van die dag, selfs die regpleging van die dag, ondanks al die vrugtelose gehamer op inheemse kennis, steeds die gevangenskap binne hierdie lineêre, representerende denke wat altyd direk of by implikasie moet uitloop op geweld en die regverdiging van geweld - ook institusionele geweld – sensuur, skorsings, insluiting en uitsluiting, ensvoorts.

In die lig van hierdie nuwe metode, die meervoudige denke, komposisionele, a-kritiese denke, lyk die hele veld van probleemdenke aansienlik anders. Enkele opmerkings van Deleuze en Guattari, as van die belangrikste eksponente van meervoudigheid, sal hier gegaan wees. Hierdie metode, ondanks al die vrugtelose gehamer op inheemse kennis, steeds die gevangenskap binne hierdie lineêre, representerende denke wat altyd direk of by implikasie moet uitloop op geweld en die regverdiging van geweld - ook institusionele geweld – sensuur, skorsings, insluiting en uitsluiting, ensvoorts.
werklikheid te gee. Om soepel en meervoudig te wees en ooreenkomstig die heterogeniteit van taal te dink moet die denke nie inspirasie vind in waarheid en dogma nie, maar in waardes en lewe. Volgens die dogmatiese beeld van die denke vind die denke ankers in die simboliek van die boom – ‘n arboetisiële werklikheid. Hiervolgens verloop die denke lineêr en ordelik. Hierteenoor, ten einde getrou te wees aan die meervoudigheid, kies Deleuze en Guattari die beeld van die risoom. Hiervolgens maak die denke nimmerendigende en altyd nuwe konneksies of verbindinge en ook verbintenisse. Dit kom veel nader aan chaos as aan orde. Alle werklikheidsaspekte word deurentyd oor en weer aan mekaar verbind: materieel, sosiaal, kultureel, intellektueel. Dit skep nuwe perspektiewe op die sosio-politiek (die polis en die socius) en op die toekoms.

Probleme is nie doodgewone entiteit nie, maar meervoudighede of komplekse van verhoudinge en ooreenstemmende singulariteite. Daarom moet die ondersoek na probleme altyd binne ’n gemeenskap geskied. Elke oplossing moet gegrond wees in die omstandighede van die probleem. Daarom is dit nodig om ‘die gekleurde digtheid van die probleem’ binne te dring. Probleme en hulle simbolisiële velde staan in ‘n verhouding tot tekens en die meervoudige denke is al benadering wat hier regtig kan geld. In die meeste gevalle van probleemoplossing bly mense egter gevang in die dogmatiese beeld van die denke wat die waarheid van probleme verwys na die moontlikheid van oplossings. Rasionalistiese, soos empiristiese en positivistiese metodes vir oplossings vir veronderstelde probleme berus op die berekening van probleme, vrae en oplossings en nie op metodes van invensie wat geregistreer is vir gekonstitueerde probleme en werklike begrype van vrae nie, soos dit ingebed is in die komplekse netwerke van sake en verhoudinge.

Groot denkopofferings is gemaak en denkers wat ingesien het hoe belangrik hierdie gedagtes vir ons verstaan van en omgaan met die werklikheid is, is aan baie verguisings blootgestel. En tog het hulle werk deurbrake op alle vakgebiede meegebring. Die hartseerste saak is om te aanskou hoe meer en meer mense, denkers, hulle rug op hierdie “bevryding tot meervoudige denke” draai en terugkeer tot die armoede van lineêre, eenduidige denke. Hierteen moet hewig wal gegooi word. Stengers (2009) is een voorbeeld van iemand wat met mening en met sterk argumente gegooi word. So ook Salomon (2006) met sy studie oor wat hy “die hoë-risiko beskawing” noem.

Representasie is die sleutelwoord, maar is ook in meer as een geval die gevaarlike woord. Michel Serres is eksplosiet wanneer hy praat van “die vloek van representasie”. Alles word hierdeur en hiermee ingeperk, vasgevang en opgesluit. Representasie bekleemtoon dit wat teenwoordig is, hier voor my, direk gekonfronteer kan word. Sake wat so by my uitkom kan maklik die besef laat ontstaan dat dit al is wat daar is. Buite hierdie sake wat so by my uitkom, lê nog baie ander dinge, selfs belangrikere dinge, dinge wat veel meer bepalend van menslike lewe en sin is.

Om hierdie rede het ’n groot groep belangrike denkers duidelik onderskei tussen hierdie twee werklikheidsaspekte: dit wat direk toeganklik is en maklik meetbaar en dit wat moeilik toeganklik is en haas onmeetbaar bly. Menslike kennis van die werklikheid en denke oor die werklikheid moet dus hiermee rekening hou. Meesal gebeur dit nie en daarom kry ons met soveel distorsies te doen in sowel teorie as praktyk. Die grootste reeds hiervoor is dat ’n enkele denkmodus wat heeltemal ontoereikend is hiervoor gebruik word. Dit versteur die werklikheid en uiteindelik ook ons lewens. In menslike praktyke word daar dikwels gewerk asof die aarde eintlik maar plat is terwyl ons tog al so lank weet dat dit rond is. Dit maak al die verskil.

Om hierdie twee dimensies te aanvaar en daarmee te werk sonder om die een tot die ander te herlei of veral te reduseer, is noodsaaklik. Hierdie meerdimensionele opvatting van die
werklikheid vra terselfdertyd ook ‘n meerdimensionele denkbenadering. Wie dit weier, dink op ‘n ontoereikende wyse. Gelukkig word ons hierin baie gehelp deur verskeie denkers/wetenskaplikes wat duidelik tussen die twee werklikheidsdimensies onderskei en ander wat ewe duidelik tussen die twee verskillende denkmodi onderskei. Elk van hierdie onderskeidings word boonoop meesal op verskillende maniere benoem. Daar bestaan dus ‘n ryk verskynsels en die modi.

So word daar tussen die meetbare en die onmeetlike onderskei wat albei natuurlik ewe werklik is (Bernardis & Hagene), tussen die berekenbare en die onvoorsienbare (Ekeland), kristal en rook (Atlan), noodsaklikheid en toeval (Monod), determinisme en indeterminisme (Prigogine en Stengers), reël en paradoks (Lytard), die reëlmatige en die tabulêre (Serres), boom en risoom (Deleuze en Guattari). Vanselfsprekend behoort die denke hiermee in pas te wees anders sal verskraling en verarming (sommige gebruik sterker terme soos katastrofe en barbaarsheid) ons voorland wees, wat tans die geval is soos reeds aangetoon is.

Voorbeelde van toereikende denke is byvoorbeeld die onderskeid wat die filosoof Heidegger gemaak het tussen voorstelling en mediterende denke. Blaise Pascal het al enkele eeu gelede onderskei tussen l’esprit de géométrie en l’esprit de finesse. Ander gebruik terme soos calculus en aesthesis (Wersig), aggressieve en spekulative intellek (Hans Jonas), grammatica en retoriek (Jacques Lacan) om dieselfde onderskeid te bekleemtoon. Michel Serres gebruik slegs een term verbandleggende intellectio om hierdie omvangryke menslike denkvernuftigheid te versinnebeeld wat noodwendige tot invensies moet lei en wat terselfdertyd die impotensie (vermoording en versmoring) van denke en taal waartoe alle eensydighede en reduksies onvermydelik lei, moet en kan troef.

Die standaard of selfs gestandaardiseerde, of ‘natuurlike’ antwoord (omdat almal dink dit is die voorvormlikke en vervalsprekende) van die lineère, representatiewe denke is die toepassing van ‘n binêre logika waardeur die begrippepare teen mekaar afgespeel word ten gunste van een van die twee, gewoonlik die eerste. Die res van die terme sowel as die dimensie van die werklikheid waarna dit verwys gaan gewoonweg verlore of is nie relevant nie, of, selfs nie bekostigbaar nie. Hiermee word die pad na die afgronde voorberei.

Hierteenoor is die rykdom van die twee stelle begrippe veral geleë in die oneindige aantal moontlike kombinasies van terme waardeur daar elke keer iets anders en nuuts aan werklikheid verskyn. Hiervoor word ‘n ander soort logika as die rigiede binêre logika benodig – ‘n soort donserige of pluiserige logika (‘n soort vloeibare, beweeglike logika volgens die bioloog, Atlan (1979), wat ‘n mens miskien selfs ‘n vlugvoetige logika kan noem, wat daartoe in staat is om die lewende (anders as minerale) te artikuleer. In die lig van die werk van Deleuze en Guattari sou ‘n mens van ‘n “risomatiese logika” kon praat. Guattari (1989) stel wat hy noem ‘n “ekosofiese logika” voor deur middel waarvan die drie heterogene ekologiese domeine wat hy onderskei: die omgewing, die sosiale en menslike subjektiwiteit, op komposisionele wyse en in wysheid met mekaar verbind en selfs geïntegreer kan word. In sy poging om “die eer van die denke te red” wys Gasché (2007:296), ter bevestiging van die voorafgaande, op die volgende:

*What is required of any thinking that tries to save the honor of thinking … is not the theoretical elaboration of rules … but a praxis. … Rather than proceeding according to established rules, thinking is properly thinking only in the absence of preestablished rules. Its fate, therefore, is necessarily linked to … the task of phrasing what cannot be said.*

Aangesien elk van die genoemde verskillende terme iets spesiaal en eiesoortig beklemtoon, moet behoorlike erkenning aan elk verleen word eerder as dat ons gedwing word om tussen sekere ten
koste van die ander te kies. Daar kan selfs heelwat meer terme wees, of daar is inderdaad heelwat meer, as wat hier gelys is. Hierdie terme spel allereers die ryk meervoudigheid van die werkelikheid uit. Terselfdertyd gee dit uitdrukking aan die noëties-poëtiese genialiteit van menslike denkvernuf wanneer hierdie vernuf na behore gekultiveer is. Die twee denkterme wat iets van hierdie meervoudigheid beklemtou, is meervoudige denke en/of komposisionele denke. Die spel van netwerkskepping en verbandlegging tussen die verskillende terme wat telkens in nuwe kombinasies “gekomponeer” word en dus nuwe werkelikheidsfasette en –nuanses blootlê, kan ‘n noemenswaardige hydrae lewer tot sosiale, politieke en kulturele bankrotskappe van allerlei aard, om nie eers van die uitwissing van individuele ellendes te praat nie. Wat nuut raakgesien word, is dit wat gewoonlik hoop bring en toekomsmonlike ontsluit en sigbaar maak. Hiervoor is ‘n goedontwikkelde komposisionele denke nodig. Instellings moet eerder hierop fokus. Wanneer die denke egter versmoor en vermoor word – impotent raak – bly daar min hoopvol oor om raak te sien en voor te lewe.

Bibliografie

English summary:

Multiple thinking: Do institutions smother/kill thought?

Thought is the most distinct ability of humans. For humans to be fully developed beings the full development of this ability is required. If this ability is neglected humans become less human and their relationships are damaged. This damage can, with time, reach alarming proportions. It can cause the collapse of societies and even the downfall of civilisations. No wonder many thinkers through the ages have warned against the fatal consequences of the absence of thought in the full sense of the word. For this reason, the aim should always be the development of our humanity to its fullest and that includes the ability to think. The self-evident implication of this is a fulfilled humanity. This is unfortunately not at all self-evident. The fact that all humans think, does not mean that this capacity has been fully and comprehensively developed in every human being.

This article reflects on the importance of multiple or compositional thinking as the ideal mode of thinking that calls for attention and devotion. It also reflects on the essential problem that
thought development is very often hindered in individuals and in institutional contexts because of the chosen emphasis on and promotion of thinking in a simplified form. Furthermore, it is a reflection on the possible impoverishing consequences for individuals and societies of such simplifying strategies as it finds expression and comes to fruition in institutional contexts: education, politics, culture, and even religion. Eventually it becomes the general attitude ruling in society as a whole.

The alarming proportions already assumed due to the loss of thorough thinking are immense. It affects schools, universities, scientific work, political institutions, individual life, and administrative activities over a broad spectrum – as a matter of fact, it already affects the whole of society: acts of reading become stereotyped, writing endeavours are limiting rather than enriching factors, cultural contents and dispositions become lean, scientific explorations are often impoverished and fragmented, knowledge becomes a commodity and therefore empty. These are some of the crucial issues affected negatively to the extreme. Efforts to remedy the problems related to these negative effects are cosmetic most of the time. This poses enormous challenges. In case this consideration is valid, as many would suggest, it needs urgent reversal. Some proposals to this effect are made.

**The smothering/killing of thinking**

Firstly, we need to reflect on the limitations of limited thought and its consequences. A core question is whether institutions smother and kill multiple thinking in line with the thoughts developed by Mary Evans (2004) in her book: *Killing thinking: the death of the universities*, and Frank Furedi (2008) in his book: *Where have all the intellectuals gone?* Intellectual vitality and creativity are to be replaced by, or at least dictated and directed by auditing, assessing, measuring and regulating activities and strategies. Universities are no longer places where the values of independent thought and scholarly and critical activities are highly regarded but have become places where the values of the market place and the economy (of a certain kind) are cultivated and embraced. In this context the skills required for technical and economic competence are not the same as those required for intellectual understanding and an inventive spirit. The ‘waste of human lives’, implied by this new institutional dispensation, is certainly the most painful experience of all.

**Protest thinking**

If this is the case it becomes an urgent matter that the attitudes towards poor thinking should be changed; that the poverty this causes be accepted; and that alternative routes be explored and made available. What is needed is a concerted effort to protest against these mutilating developments. Isabelle Stengers alerts us to the fearful possibility of the time of catastrophes in which we find ourselves and that, in its turn, predicts the advent of a threatening barbarism. It should be realised that the boundaries of academic institutions stretch much further than economic and marketing matters. Universities are there to expand the possibilities of the intellect and this is also highly relevant for any other institution. In addition ideas, and not only practices, that can change and transform the world, should be pursued. Furthermore, the dimensions of language should again be realised and rediscovered. The loss of language means the loss of life which means the loss of a future. It is important to realise that one-sidedness is futile. As Heidegger puts it: Beware of the blind urge that would permit us to snatch at a quick answer in the form of a formula. In the last analysis, what the country needs are students educated towards the full unfolding of thought that will take us away from one-sidedness, from the quick answers caught up in a formula, and its huge potential for grave mistakes, and that will take us forward into a grand future.
Multiple or compositional thinking
At the same time an awareness of the complexity of reality, human reality as well as natural reality, in its multiplicity and scope, should be kept vividly alive. Insensitivity to the multiple and the complex nature of being and the real will lead nowhere. No simplified, linear, and hence reductionist, thinking can possibly offer adequate answers to the challenges of such a reality. Only a thought and an institution, willing to accept this and to think accordingly, will have a hope of the fulfilment of meaning and the enrichment of humans and reality. It will open new avenues for thinking about problems. No problem ever exists in isolation. It always emerges in a context with many connections to other situations and problems. A sound understanding of a problem presupposes a sound understanding of contexts and connections within which a problem appears. This requires a different kind, mode, or style of thinking.

We are confronted by two different, but closely interconnected aspects of reality; the one aspect is directly accessible and easily measurable; the other is less accessible and hardly measurable. The acceptance of these two aspects of reality and working with them without reducing the one to the other, while accepting their integration, poses the main challenge. Many thinkers and scientists are aware of this and guide us in this. They are all using their own terminology to articulate the problem. A few examples may help us: the biologist, Henri Atlan, distinguishes between crystal and smoke (or smokiness); the mathematician, Ekeland, distinguishes between the calculable and the unforeseen; Wersig, the information scientist, uses calculable and aesthesis to differentiate the two dimensions; and Monod, another biologist, differentiates between necessity and chance.

Our thinking should be in step with these two dimensions to avoid impoverishment and superficial solutions. There are numerous examples of modes of thinking complying with exactly this. Let us start with Pascal who distinguishes between l’esprit de géométrie and l’esprit de finesse; in the work of the philosopher, Heidegger, we encounter representative and meditative thinking; the social scientist, Hans Jonas, distinguishes between the aggressive intellect and the speculative intellect; Lacan between grammar and rhetoric and Lyotard between rule and paradox. These two modes are not in opposition but complementary and are required as such in order to deal adequately with the corresponding dimensions of the real – the measurable and the immeasurable. When this does not happen we encounter distortions and mutilations in the expressions of knowledge.

At the same time one discovers that the diverse concepts used to articulate the same reality and problem area, together with reflecting on these by various modes of thought, help us towards an infinitely richer and more rewarding way of encountering and giving account of our experiences of the real. And it must be kept in mind that every single term, and there are many more than the examples given here, articulates in a specific, very unique and irreplaceable way aspects of the real. The possibilities of new and different combinations of these conceptual pairs through connective, multiple intellection, are multiple, almost inexhaustible.

Two terms articulate to a great extent precisely this response to the richness of the real, namely the notions multiple or compositional thinking. The game of network creation and the establishment of connectivity that enable the composition of new combinations imply the possibility of engaging in new visions for the future and new hopes to live for. Well developed compositional thinking, instead of impoverished and lean linear thinking, offers almost a guarantee for envisioning new possibilities for the future and significant alternatives to the unworkable and undoable in which societies and individuals are often trapped.
New Public Management, science policy and the orchestration of university research – academic science the loser

A Elzinga* 

Abstract

In many countries - during the past three decades - there has been increasing alignment of public administration with neoliberal modes of governance driven by processes of globalization and privatization. Key is New Public Management (NPM) as an instrument for applying private sector or market-based techniques to public services. The paper concerns the implications and impact of these developments as they relate to the university sector where we are seeing an influx of bibliometrics to assess performativity with measures that are frequently far from adequate. These changes are related to the broader context of a globalized privatization doctrine of science policy that has gained currency in many countries. The analysis presented here probes and discusses a nexus between NPM, bibliometric performance audits, and a new paradigm in science policy. As such the paper seeks to fill an important gap in science policy studies and the literature on New Public Management more generally. It summarizes various characteristics associated with NPM, and explicates the connection with methods of research evaluation now being introduced in academic institutions. It also takes up varying responses evoked within academia by the use of bibliometrics and current methods of ranking of tertiary educational institutions. Apart from gaining a better understanding of significant changes in the higher educational and research landscapes or disciplines and the interplay of these with broader economic and political trends in society at large, the aim of the paper is also to stimulate discussion and debate on current priorities, perceptions and policies governing knowledge production.

Keywords: New Public management, research policy, transdisciplinarity, postnormal science, Audit Society Agencification, Accountingization, peer review evaluation.

Disciplines: Public Management and Governance, Management Studies and Research Management. Science Policy, Science Studies, Political Science,

Introduction

In many countries - during the past three decades - there has been increasing alignment of public administration with neoliberal modes of governance driven by processes of globalization and privatization. In the UK New Labour social democrats and Conservatives urged this trend on, equally. Stephen Cope and others (1997), analyzing the connection between globalization and New Public Management (NPM), state that,

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It is no accident that the wave of NPM crashing through governments worldwide corresponds with increasing globalization ... States have restructured as a result of globalization. NPM has been a very prominent form of restructuring in most Western governments, though its spread has been uneven. NPM rests on the twin doctrines of removing differences between public and private sectors, and shifting 'methods of doing business in public organizations', away from complying with procedural rules /and towards getting results’ (Hood, 1994, p. 129).

NPM is shorthand for applying private sector or market-based techniques to public services, an approach that rapidly spread through the Anglophone world in particular. As a politico-administrative regime it has been successively introduced into one sector after another, hastening, systematizing and legitimating these developments, making it appear that it is only a technical-administrative question mainly of cost reduction, increasing flexibility, and greater accountability and efficiency of performance on the part of public service agencies and their various practitioners (Lane 1994, 1995 & 2000). The process began to take form in the UK during Margaret Thatcher’s government (1977-1990). The label NPM is usually attributed to the renowned Oxford professor of government Christopher Hood (1991; 1995).

**Problem and purpose**

The problem addressed by the paper concerns the implications and impact of the aforementioned developments as they relate to the university sector. Although academic institutions and working conditions are being transformed with an influx of bibliometrics to assess performance with measures that are frequently far from adequate, few analysts have explicitly related these changes to the broader context of a globalized privatization doctrine of science policy that has gained currency in many countries. This is ironic since social scientists themselves have analyzed the impact of globalization and privatization via NPM methods in many other sectors of society, from health care to transport systems, and other essential public services and infrastructures where privatization and “marketization” with subsequent erosion of “the commons” has been identified, analyzed and debated. But, when it comes to our own workplace – academe – a nexus between NPM, bibliometric performance audits, and a new paradigm in science policy is mostly discussed only in anecdotal terms.

The purpose of the present paper is therefore to fill an important gap in science policy studies and the literature on New Public Management more generally. In particular the present analysis develops a novel angle in science policy analysis. Additionally, on the basis of a review of the more general literature, a second purpose is to summarize at length various characteristics associated with NPM, one might say its “anatomy” and dynamics, in order to more precisely delineate and explicate the connection with methods of research evaluation now being introduced in academic institutions. A third aim of course is to stimulate discussion and debate.

**Structure and argument**

To set the stage the paper characterizes several features of NPM and the concomitant shift in focus from “administration” to “management”. Since the changes in terminologies that attend this shift are significant they are also dealt with from a metatheoretical point of view.

At a more general level the shift identified by the paper reflects the change from “government” to “governance”, terms that will be explained below. Other changes of meaning associated with further concepts are also touched upon.
Finally it is demonstrated how the tertiary educational sector is made a regular part of what has been called contemporary Audit Society and that this in its current form impacts academe negatively in as far as short term interests override the strategic need for basic research and knowledge production for the long term future.

Even though some readers may find it somewhat tedious, in order to substantiate the paper’s claim that we are witnessing a global trend, reference has to be made to developments, experiences and responses in several countries,

In the USA some scholars have come to refer to the present situation as one of “academic capitalism” (Slaughter and Leslie 1997). The suggestion is not that most entrepreneurial individuals in research and teaching have become small capitalists. Rather the point is that a capitalist-like behaviour and (contractual) relationships have become rather prominent within the moral economy (norms or ethos) of academe.

This has on the other hand also evoked calls to a return to the traditional values and collegial norms associated with the ideal of the Humboldt-university of the 19th century that gave primacy to a wide-ranging freedom of research and a symbiotic interplay between research and teaching. The introduction of university ranking lists has, symptomatically, also led to protests from scientific communities (Butler 2007) that need to be understood in the context of broader trends.

In the concluding section there is a summary of some findings based on the review of relevant literature covering experience with NPM and new forms of research evaluation as well as discussion of the claim that, ultimately, Audit Society engenders a paradox that undermines its efficacy and hence renders it counter-functional.

**Characteristics of New Public Management and Audit Society**

It should be noted that NPM is an international trend, but that is has not been adopted wholesale as a package in all countries. One finds different versions in different countries. These differences have been explained by differences that exist between countries with regard to legal and administrative traditions, political style and cultural determinants (Christensen and Laegeid 2005). This means that it is wrong to assume that the increasing adoption of NPM methods brings with it a general global homogenization in methods of policy development and implementation. What we see rather is a common fundamental rationale or logic combined with variety in implementations in different countries.

One of the main arguments for the shift to business-mindedness in public utilities or services has been to introduce greater cost consciousness, flexibility and efficiency, to make do with less in order to produce more (Barzalay 2001). This is attended by a shift from administration to management in the public domain. Units responsible for delivering products or services are impelled to cover their own costs as far as possible, and to encourage this quasi-markets are set up in relation to which various units delivering similar kinds of products or services are induced to compete with each other. Another factor is to diminish traditional bureaucratic forms of administration with the intention of opening for greater sensitivity to public needs and by extension the possibility of more “user” participation in decision- and policy-making processes. In market economic terms the user of services and products supplied by public institutions is framed as customer or client and “the customer is always right”. What this means in practice is however a contentious issue.
Manifestations of NPM differ across policy areas in any given country and between countries. This also goes for the domain of science policy, which as already noted is, moreover, a relative latecomer when it comes to the entry of NPM. Particularly interesting in the case of science policy is the issue of accountability. A feature in this connection that is common to most countries is the use of bibliometrics, that is publication counts and citations to measure research performance, and how results of such exercises are then related to economic cost-benefit assessments (econometrics). Since accountability and “accountingization” using numbers takes on a particular form in the research and tertiary educational sector it is dealt with at some length below. Science policy as a policy domain also has specific characteristics that must be briefly outlined to contextualize the issue further.

Suffice it at this point to underline more generally the occurrence of a shift from accountancy of resource inputs to evaluation and assessment of outcomes or outputs. This is a necessary corollary to the fundamental change in doctrine relating to accountability for public sector institutions. Former trust in the wisdom and behaviour of traditional civil servants and professions as non-opportunistic is replaced by mistrust. This follows logically from the premises of a regime in which the supplier of utilities, services and other goods has to mantle the role of a rational calculator of opportunity costs without concern for the impact cutbacks and speedups might ultimately have on externalities. By the same token it is therefore logical also to find an increasing demand for control by means of externally initiated evaluations and assessment or auditing procedures as well as design of internal control systems to harmonize and comply with the new external conditions or demands. Michael Power and Richard Laughlin (1992) have called this “accountingization” (also see Almqvist 2006:24). They also argue that a significant consequence for public organizations is the emergence of new types of cultures of compliance.

Three main ingredients of the NPM narrative are:

- Competition;
- Agencification, i.e., introducing contractual relationships; and
- Accountingization.

Service deliverers in public agencies in a given sector, like health care or transport, are brought into competition with each other through competitive tendering. Contractual arrangements between a principal and an agent are articulated to specify goals and expectations (agencification and contractualization). Together with outsourcing to supplier firms and consultancies this fragments government in client/contractor and purchaser/provider splits (Cope and others 1997:449), whence a Balkanization of the public sector and emergence of public-private partnerships may occur. Agencification, also called “corporatization”, converts departments into free standing units with downward delegation of responsibilities for tasks to lower managers while strategic choices are centralized. Decentralization-centralization goes hand in hand. In terms of human resources a corresponding feature is a move from a Weberian style civil service career system to a contract system with short-term appointments in the lower ranks of employees as well as the emergence of an array of private-public partnerships. This is meant to increase flexibility but in practice it also introduces lack of continuity and lapses in institutional memory that ultimately can have a negative effect on the delivery of utilities, products and services in the public sector.
Degrees of goal fulfilment are determined by introducing performance assessment schemes (accountingization) to measure the same (more on this below).

A more complex schematism based on a review of pertinent literature will include further catchwords. Some of these are summarized in Table 1. It lists both descriptors and a few normative characterizations.

**Table 1: Some basic NPM notions**

- More for less
- Marketization (including creation of quasi-markets in administrative organizations)
- Commoditization of health care services, welfare benefits, teaching packages and research results (also those generated by publicly funded institutions)
- Inducing competition between task performers
- Turning citizens into consumers and clients (this goes for students too)
- Agencification (contractification)
- From administration to management (fostering the entrepreneurial bureaucrat)
- From input to output/outcome control
- Performance-based management (and funding), Performativity metrics (accountingization)
- Reputation and image management (PR & branding)
- Entrepreneurialism
- Partnering

**Statements regarding impacts in three different policy sectors**

In the literature one can find many case studies on the impact of NPM. Some of the consequences are particularly evident in the case of development policy in Third World countries. One author who sees NPM as a gain since it introduces flexibility and provides for cost recovery in waste management systems in big cities, for example, nevertheless observes how deregulation has led to a proliferation of private entrepreneurs in the waste collection business, many of whom do not uphold the standards called for by policies meant to promote sustainable development (van Dijk 2008). Another author notes how in development policy under NPM regimes:

> Result-based management approaches that have entered the field have the paradoxical effect of disempowering those it meant to empower (Kilby 2004:207).

A case study on a public-private planning initiative in a city in the USA that used consensus-based collaborative meetings involving citizens in “visioning” to shape the future cityscape ended up with elites capturing the mechanics of the process. This led to a situation where dissent is difficult and the outcome tends to be a vision of the future that replicates the standard economic development models of powerful stakeholders (McCann 2001). The process becomes a kind of “therapy” similar to what we observed in the case of Gothenburg, Sweden, a city where, by the

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1 For some of the characteristics see Dreschler (2005).
way, NPM has produced a system where garbage collection has become the monopoly of a couple of large entrepreneurs that cut costs by employing fewer (overstressed) truck drivers and reducing the frequency of garbage runs so that at many recycling stations heaps of waste regularly accumulates between the various bins for separating two sorts of bottles, various cans, plastic containers, bulky package wrapping and cartons, newspapers, etc.

In Denmark Susan Wright a social anthropologist who is now at the Danish School of Education has turned her attention to the bibliometric auditing system of performance indicators in place in Danish universities and what impact that is having. In her anthropological perspective - as outlined in an earlier study together with Cris Shore regarding the influx of audit practices in British higher education - the new audit system and management technique are seen to function as “political technologies” for introducing neo-liberal systems of power (Shore and Wright 1999; also 1997). Now that globalization has incrementally reduced the power of government issuing from one centre and supplanted it by an orchestration of a multiple stakeholders with particularist interests “audit embodies a whole new rationality of governance”. Since the language of governance replaces that of government, our sensitive anthropologists discover a kind of doublespeak.

One of the main claims made by the architects and advocates of auditing is that it 'enables' individuals and institutions to 'monitor' and 'enhance' their own performance and quality, and to be judged by targets and standards that they set for themselves.

Shore and Wright argue, and go on:

This language of quality enhancement suggests that audit is an open, democratic, participatory and ‘enabling’ process; a process so uncontroversial and self-evidently positive that there is no logical reason for objection. The new ‘habitual grouping’ of audit with words like ‘efficiency’, ‘effectiveness’, ‘best practice’ and ‘value for money’ disguises its hierarchical and paternalistic roots and plays down its coercive and punitive implications. (Shore and Wright 1999).

The number of examples of case studies of the influence of NPM in urban planning and other areas may be multiplied and of course one will find instances of gains in efficiency and flexibility of planning as well as some success stories. The major gist however seems to be one that confirms a shift from politics to economics and with it a systemic deficit in citizen empowerment, in as far as citizens are construed (or “reconstructed”) as consumers and public consultation exercises turn into opinion polling and market research (Ryan 2001). This is not the same as Participation in decision-making.

Two key terms: accounting and governance

“Accountingization” and auditing practices to satisfy it is the feature that is particularly interesting, both generally and in current discourses on science policy. It refers to an objective to make visible, break down and categorize costs in areas and endeavours where such costs earlier or traditionally were aggregated or more or less undefined. Under the auspices of NPM steering, follow up and evaluation or auditing are thus emphasized, predicated on a buyer-seller or principal-agent contractual and cost-cutting nexus that replaces former trust in providers and administrators of welfare tasks to serve citizens or provide public goods. Citizens are no longer, they are now clients and consumers and we get privatization and commoditization of former public goods including portions of scientific knowledge (*qua* intellectual property). Functions
and mechanisms for dividing public resources are thereby supposed to move from the realm of politics to that of the marketplace.

Paradoxically though, the quasi-markets are still created by political decisions. But now it is no longer called government but governance, i.e., a multi-level chain of delegations and decentralization in the process of orchestration and steering in tune with signals form the market. Government thus becomes negotiated or orchestrated “governance” and administration becomes business “management”. Government entails formal institutions of state and legal frameworks involving old style civil servants. Governance involves government plus looser processes of influencing and negotiating with a range of private corporate actors and public sector agencies as stakeholders where the stronger ones tend to set agendas. One gets what I want to refer to as “orchestration policy”, where “good governance” tends to get equated with “sound economic development” and in practice - when applied - is routinely taken to mean investment liberalization, services commercialization, generalized privatization and other “market” policies.

Even if NPM is now retreating at the theoretical level and making room for New Weberian Public Management thinking that once more begins to emphasize the necessity of a “commons” in order to counteract partitioning and fragmentation, it is safe to say that NPM still reigns in a lot of thinking and action in policy-making. At the same time it is meeting resistance and vocal opposition from the side of critical scholars and practitioners who demand reflexivity and attention to human rights and justice when it comes to basic needs like health and water.

NPM has fostered a predominant mode of accountability that requires reliable and hopefully fine-grained metrics of performance measures in terms of various quantitative indicators. Rewarding actors on the basis of measures of performance, some studies on health care have shown, however, may not lead to lower costs because the generation of some forms of health care that is not really necessary gets prioritized since profit-driven health care makes it competitively advantageous to encourage fairly healthy individuals to make quick extra visits to the doctor. This proves to be more profitable for the health care provider than does involvement with elderly patients with chronic illnesses, for example. The quest for profit gains thus appears to introduce a skew that is for the most part not taken into account in economic cost benefit measures. Mainstream econometrics when applied to the deliverer of services lacks the necessary categories that would be needed to consider broader social costs. In the case of policies relating to environmental protection and future climate change the precautionary principle has been introduced together with environmental economics to try and deal with such broader issues by putting a price on loss of further qualities that are seen to be essential for desirable life conditions.

Research as a domain for public policy

In the sector of tertiary education and research NPM has already had a lasting influence. This is manifested in the attention and energy that have been expended by universities to fine-tune mission statements and visions, making visible profiles and articulating various strategy documents. Some of these activities come under the heading of what is nowadays called “branding”. Public relations and alumni fundraising are also part of the picture. Some of the changes are far-reaching, while others are cosmetic. A common denominator here too is the new and fashionable notion called “governance”.

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Before going into further detail concerning the use of bibliometric measurements of academic performance in various disciplines to satisfy accountability criteria rooted in NPM practices it is necessary to briefly characterize science policy as a specific public policy domain. Additionally it is useful to consider the paradigm shift in science policy doctrine that has occurred more or less contemporaneously with the end of the Cold War.

Science policy as a separate policy domain emerged after the Second World War and it became institutionalized under the influence of OECD (Godin 2003, 2005 & 2006:654-655; Elzinga 2005). Important distinctions like the one entailed in the acronym R&D (research and development) adopted in the early 1960s for comparative statistical purposes are still with us today, although now intermediate categories like mission oriented (basic) research, strategic research, frontier research (term used in Europe) and transformational research (term appearing in the USA) get considerable attention. Unless one subscribes to some species of idealism or essentialism, strictly speaking the term basic or fundamental research has no meaning outside its use as a statistical household word: in other words it is historically and socially contingent and sometimes regarded as a contested term (Stokes 1997; Godin 2007:28-43). Nevertheless, rhetorically the term remains very important in science policy when it comes to identifying longer-term priorities and counteracting the strong pull toward applied science associated with innovation policy (Gulbrandsen and Kyvik 2010). Innovation policy, when it collapses science and technology under a single (fashionable) heading called “technoscience”, gets in the way of cultivating a broader knowledge base that may be important in the longer term.

Consequently it is not unimportant what kind of sociopolitics drives the construction of indicators to measure “development” of science and technology (S&T). This measurement within nation states occurs in accordance with particular conventions together with rules of standardization codified within the intergovernmental frameworks of either the OECD (for the rich world) or UNESCO (for the so-called developing nations).

Another important distinction introduced in the early years was the one between policy for science and science for policy (Elzinga and Jamison 1995). The former has to do with the stimulation of research to develop an advanced knowledge base while the latter is what we now associate with sectoral research policies (Elzinga 1980). Under the head of science for policy one can also include various functions and mechanisms for science advice to government (Pielke 2007).

Disciplines and transdisciplinarity – from normal to postnormal science

Early on science advisors were often physicists. Today the accent has shifted towards personalities with backgrounds in biomedical and biotechnological fields - and more recently also the environmental sciences. In some cases systematic methods of reviewing the literature have been developed to provide decision-makers and international organizations with a science-base for important policy decisions. The most visible example today is the Intergovernmental Panel on Climate Change (IPCC) and its periodical reviews with lead authors and teams producing chapters in comprehensive reports regarding trends in global climate change (Elzinga 1996).

When the IPCC was first instituted it represented a novel mode of mediating between state of the art science, and political action. Bert Bolin, the first chairman of this important intergovernmental forum emphasized the importance of integration of findings from many different disciplines (multidisciplinarity) on the one hand and a bridging of science and policy-
making on the other (*transdisciplinarity*). Initially great care was taken to maintain a strict boundary between science and politics, but as time went on the urgency of the message of global climate change led to an emphasis on powerful visual and graphical imagery to gain the attention of policy makers and the public in an effort to press for political action.

When finally in some instances (in Working Group 2 – assessing intertwining scientific, technical, environmental, economic and social aspects of climate change) dramaturgy led to insufficient attention to empirical data (e.g., the case of glacier retreat in the Himalayas), we got a situation that in turn played into the hands of longstanding lobbies of so-called contrarians or climate change sceptics whose minority voices oftentimes are amplified beyond proportion in controversy-hungry media. Recently therefore efforts are afoot within IPCC to re-organize the *transdisciplinary* interplay between science and political action in order to strengthen the integrity of the evidential base and hence the credibility of the advice scientists can provide for decision-making in an area of strong and conflicting extramural stakeholder pressures, some of which are intimately linked to the pressures of economic globalization.

Climatology is only one area of science that is in strong interaction with external stakeholder interests, and therefore it is sometimes referred to as an example of what is called “postnormal” or “postacademic” science (Ravetz 1999). The term “postnormal science” refers to areas where stakes are high while epistemic certainty is low and the (sometimes contested) precautionary principle is invoked to guide policy.

In climatology and other areas of environmental science friction may also arise from the internal dynamics of multidisciplinary research as for example in the interplay between glaciologists (or for that matter forest ecologists) out in the field concerned with empirical work “on the ground” and (the relatively more “visible”) general circulation modellers in central laboratories. This occurs when the latter “dictate” what parameters and data formats the former should prioritize for incorporation into complex simulation models. In such cases gaps between “ground truth” in the field and proxies in the models as well as the existence of different research cultures (and epistemologies) at work in the field and in the lab, respectively, may also lead to misunderstanding and conflict.

**Paradigm shift in science policy regimes**

A recent periodisation of science policy “regimes” proposed by Philip Morowski and Esther-Mirjam Sent (2008) places successive policy doctrines in the broad context of geopolitics. The authors argue that traditional analysis has tended to focus mainly on features that are characterized in terms of national innovation systems and policy advisory arrangements, how these are funded and comparisons of different priorities over time but with little reference to driving forces in broader economic and political terms. They exemplify by pointing to the distinction that became so popular during the 1990s (cf. Gibbons and others 1994) between academic disciplinary research (so-called Mode 1 scientific knowledge production) as different from research in the context of application (called Mode 2), where the latter was mainly characterized as interdisciplinary, multidisciplinary and transdisciplinary (i.e., including interaction with users of scientific knowledge in society at large, particularly industry and government sponsored agencies – cf. Elzinga 2008).
Parallel to this there was the notion of a Triple Helix of an intensified interlacing of academic, industrial and governmental relations to promote innovation (Etzkowitz and Leydesdorff 2000). In both cases, the two authors say, one gets an apparent ideal typical picture of two phases in the development of science in society in historical time, first one centred on academic institutions and thereafter a second one when applied research and stronger links with socially relevant objectives dominate. It is as if academic research in an earlier period, for example in the 1920s and ’30s lacked external institutional motives of societal relevance.

They go on to show how the concept of Mode 2 and with it the idea that the late 1980s marked a break in the traditional “social contract of science” and the advent of a new social contract in the 1990s in fact constitutes a misrepresentation of the longer-term historical record for contemporary tacit political purposes. The term “social contract” applied to science policy did not exist before. It has only entered the science policy discourse in connection with NPM thinking and its language that now in retrospect has “discovered” past contractual relationships between science and the state where - in comparison to the situation today – these were never really articulated as such before. The overriding interest in the new policy discourse has been to legitimate a major economic and political turn that was taking place around in the 1980s, whence principal agency and contract-theory rhetoric comes in handy – thus the claim that a “new science-society contract” had emerged and stabilized. It was not a matter of conscious conspiracy but rather a rethinking in science policy circles that reflected broader realignments and stakeholder interests in society (Elzinga 2002). Hyping descriptions of research in the context of application without looking for causal factors that go beyond references to the internal dynamics of innovation systems, in other words, with Mirowsky and Sent’s critically reflexive lens, can be seen to play into a broader political agenda. From the vantage point of their meta-theoretical approach these two authors therefore insist that one also has to consider the globalizing political economy.

To counteract the narrow myopic perspective they identify global events like the advent of the Cold War and later its termination with the collapse of the Soviet Union as important factors to take into consideration. Consequently they identify, apart from an older regime beginning in the late 19th century, two newer ones, namely: first “WWII to 1980” as the Cold War regime, followed by the “1980-? //and onward//” the Globalized privatization regime” of science organization. It is in the latter context that we find the increasing use of market mechanisms as instruments to hitch academic institutions more systematically to the carriage of a policy for innovation, thereby depleting policies for science.

“The academic profession is the loser”

The German sociologist, Uwe Schimank recalls how Burton Clark once described the “traditional” German university as a combination of political regulation by the state and professional self-control by an “academic oligarchy” (Schimank 2005: 363). He then goes on to make an interesting point. Analyzing the entry of NPM, Schimank finds that a reduction in academic self-governance is one of its goals.

NPM strengthens hierarchical management by rectors and deans, as well as by state authorities and external stakeholders – including industry – while implying deregulation in budgeting and personnel management, and the approval of programmes. This is what Government usually means when it promises greater /institutional – not professional/ autonomy to universities (Ibid., 365).
It is to open universities up for external stakeholder influence. Deeply mistrustful, policy makers dismiss as ivory tower intellects those who give vent to nostalgic fear of a loss of professional autonomy. These policy makers read professional “autonomy” as “irresponsibility” and therefore substitute local institutional autonomy to reduce old style professional autonomy. Schimank argues that we have to be alert when the word autonomy is uttered and ask ourselves what kind of autonomy, for whom and why. Seen in this light the audits that are becoming part of daily life in academe are disempowering academic professionals.

Schimank goes on to say,

*In this game, the academic profession is the loser. External interests, university leaders, and especially the Government seem to be the winners … To achieve competitiveness, universities deregulate, create new leadership, and accept a greater measure of public intervention. Spelled out in this way, it becomes clear that NPM is not just a bundle of loosely coupled changes, but rather an integrated approach, seeking an overall redirection of the entire system. Its message: replace the old regime, dominated by a state regulated profession, with a new regime, dominated by a market- and state-driven organization.*

(Ibid.)

This is what Mirowki and Sent also have in mind when referring to the new situation in science policy as a privatized globalization regime.

Regarding the distinction already alluded to, between science for policy and policy for science (Elzinga and Jamison 1995) it is nowadays sometimes misleadingly suggested that the former is largely evidence based whereas the latter domain of policy is anecdotal.

The so-called evidential base in the case of science for policy is actually still heavily reliant on stories and metaphors as instanced by the schematic a-historical stories advanced by the advocates of Mode 2 and Triple Helix narratives (for a critical review see Elzinga 2004). Also there has been a tendency where science policy analysts lose their arms length analytical distance when they enter into very strong symbiotic relationships with science-policy makers. In the case of European countries this has been seen to occur when leading science policy analysts with an academic base simultaneously serve as consultants in the corridors of the European Commissioners in Brussels (Elzinga 2002 and 2004). This has led to a co-production of some key notions that are then provided with an academic stamp of legitimacy and authority by university-based researchers and then circulate (recycle) throughout the worlds of research policy makers, administrators and university leaders in various countries.

**Entry of New Public Management (NPM) into science policy**

It is here in the wake of neo-liberalism and in the context of the globalization regime that NPM comes in as a handmaiden. The shift to the new regime of knowledge production characterized by Mirowski and Sent is administratively helped by it. NPM as shorthand for applying private sector or market-based techniques to public services is played out in a specific way in the new globalized privatization regime in the realm of science policy.

As already noted NPM does not necessarily imply a kind of global homogenization process. There is considerable variation in the way countries adopt its logic. Further, one finds variations between policy domains. In the realm of science policy bibliometric methods are increasingly used to measure performance in the research and higher educational landscape, therewith
influencing and changing academic cultures of accountability. The kinds of bibliometric measurements (metrics) that are developed nevertheless can vary considerably from one country to another. At the same time there is considerable cross-fertilization between evaluation units, a process that together with the advent of the first European graduate school in the field of scientometrics will probably contribute to further standardization (Gorraiz and others 2010). To a certain extent the actual approach opted for by policy-makers at the national level is influenced by the topography of the research landscape and the power and coherence of various scientific lobbies within it. Thus a country with a strong tradition of scholarship in the humanities and social sciences but less developed areas in the engineering and natural sciences or medicine will probably shy away from strict bibliometric approaches that only rely on international databases whereas the reverse may be the case when humanities and social sciences are weaker and overshadowed by the dominant “hard” sciences.

Goals, priority setting and incentive systems – from ideology to scoreboards

Research policy in its classical sense has to do with setting goals and priorities for research and development (R&D) (Ziman 1994). The question of allocating resources to R&D activities is one of science policy’s most classical components. For the most part it is a matter of allocating resources out of the public purse at the national level, but it can also concern investments on regional or local municipal levels decided by actors at these levels to stimulate new and emerging technologies (high tech) with an eye to the region’s and the nation’s future competitive advantage in a global marketplace.

It appears then that much of the current discussion about suitable models for resource allocation to research has to do with a demand of accountability in terms that are quantitative and measurable. Helga Nowotny, whom I shall cite more below, has noted that even if the word “evidence” is seldom used in science policy the philosophy nevertheless lies behind the attempts to construct metrics for fine-grained evidence regarding performance as a basis for decisions on continued financing in a part of the public sector. Although the use of quantitative measures to evaluate research performance has increased enormously there is a dearth of literature with a reflexive take on the subject.

To begin with it is useful to make a distinction between two kinds of data or evidence used as a basis for policy-decisions. Let us call them a first and a second order of evidencing.

The first order of evidence concerns situation-descriptors that are needed if one wants to tighten policy audits and facilitate future comparisons between conditions before and after the implementation of a policy or package of affiliated instruments.

A second order of evidence concerns evaluation of science policy and its instruments. It calls for reflexivity of a kind one does not often find in planning and funding agencies. This imbalance perhaps explains why so much of the energy of planners today seems to be directed towards constructing and experimenting with fine-grained metrics that may be incorporated into decision-making related to annual budgetary allocations of resources to publicly funded R&D at universities and other institutions. This is evident in several countries where performance indicators are used as a basis for changing funding flows between universities as well as between faculties and research units within them.

The policy discussion on accountability as influenced by NPM has to do with evidence of the first order, i.e., benchmarking and descriptions of states of affairs within publicly funded units with the help of numbers as well as qualitative assessments (e.g., using review panels) in a
landscape that is subject to policy orchestration by incorporating cultures of compliance. Evidence-basing of policy in the sense one finds in medical clinical work or units responsible for social work would require a second step. Such a second step would entail systematic evaluations of the efficacy of actual policy measures and instruments in order to determine to what degree intended aims or goals are achieved, for example that the prioritized profiled areas of R&D progress in a suitable manner when seen from the combined point of view of quality enhancement and relevance.

Another example would be assessing the actual impact of policies aimed at increasing a country’s international economic competitiveness, or intensification of collaboration between industry and universities in priority areas. In my reading of science policy documents I have not been able to find many credible examples of evidence-basing in such a (second order) meaning.

In order to be able to compare the result of an implementation of specific policy instruments and established goals one needs to start with a much more precise description of the existing situation that is the baseline from which one has to start. This is probably the reason why much of the talk about “best practices” is still rather loose while a lot of emphasis is given to introducing “benchmarking” that will give clearer points of reference to compare initial conditions before and final conditions after the implementation of a policy package.

The presidential election campaign in the U.S. a couple of years ago, generated some signals in the academic world suggesting that Barack Obama was a strong advocate of evidence-based science policy (Bhattacharjee 2008), meaning better “science for policy”. Some of his statements, made even long before the campaign were contrasted to the practice of the Bush Administration that by comparison was seen to be ideological, particularly with regard to U.S. climate policy, but also in the field of health care (Oberlin BlogSpot 2008).

The Obama Administration’s appointment of John Holdren as Science Adviser has confirmed the ambition of basing research policy more systematically on the accumulation of a viable knowledge base. Both the National Science Foundation (NSF) and the National Institutes of Health (NIH) have been given clear mandates to intensify efforts to develop relevant performance indicators that can be used in decision-making relating to both science for policy (innovation and health care, respectively) and policy for science (high quality curiosity oriented or fundamental research).

A new acronym for science based policy (SciSIP)

Some of the current efforts afoot in order to develop a robust indicator-based knowledge base for decision-making in science policy now fall under the heading of a new acronym, “SciSIP” (NSF 2007) which rejuvenates the crystallographer and Marxist John Desmond Bernal’s old dream of a science of science to steer the growth of science (Bernal 1939; Elzinga 1988).

John Marburger III, science adviser to President Bush, expressed the initial rationale for such efforts some years ago. Marburger tied it back to strong demands of public accountability regarding tax dollars and the generally diffuse policy of enhancing economic competitiveness of the nation in a global market. In the wake of the launching of the President’s American Competitive Initiative (ACI) Marburger (2006) proposed an agenda for a Science of Science and Innovation Policy, a characterization that become a new phrase in policy documents. He argued as follows:
Science policy makers tend to rely on economic models and data when they exist, but also employ ad hoc surveys and opinions offered by panels of experts. Science policy implementers are usually government employees and elected officials whose information comes from a variety of sources of varying degrees of visibility, with advocacy groups on the high end and science policy technocrats somewhere near the bottom. I would like to change this. I would like to have science policy tools that are so credible that their products are embraced by the advocates as well as the technocrats. I do not expect tools that approach the credibility of Newton’s laws or quantum mechanics, but I believe we can move the standards of science policy making and implementation closer to what already exists in the world of economic policy.

And further:

I am emphasizing models because they are essential for understanding correlations among different measurable quantities, or metrics. (Cf. also OECD 2006 and Marburger 2007).

Under the Obama Administration the task of presidential science adviser has been mantled by a major league scientist, John Holdren, previously a Harvard professor of environmental policy and director of the Woods Hole Research Center. However this has not changed the basic rationale; if anything, it may has gained greater credibility, being tied in part to a different philosophy in the Whitehouse regarding the role of science in society.

Emphasis is still on measuring outcomes and impacts. The intention is also to link micro and macro data sets and make indicators more directly science policy relevant. This is also the ambition that originally prompted the NSF Science Metrics initiative.

The eventual aim is to create a cadre of scholars who can provide science policy makers with the kinds of data, analyses and advice that economists now provide to various government institutions (Mervis 2006: 347 cited in Nowotny 2007:482).

On the basis of a wide call for proposals a variety of scholars two years ago were granted funding for projects under a program within the Directorate for Social, Behavioural & Economic Sciences (SBE). The three areas targeted are: analytical tools, model building, and data development & augmentation (NSF 2008, and 2007). By 2010 fifty projects located at various universities across the USA had been awarded grants in these areas and a new call for proposals was issued October 1, 2010.

The director of the SciSIP program, Julia Lane, in her statement before Congress in Washington September 23, 2010 summarized the rationale and approach further:

The program has three major aims: advancing evidence-based science and innovation policy decision making; developing and building a scientific community to study science and innovation policy; and developing new and improved datasets. The overarching goal in this effort, however, is to conduct basic research that creates new objective models, analytic tools, and datasets to inform our nation’s public and private sectors about the processes through which investments in science and engineering research may be transformed into scientific, social and economic outcomes. (Lane 2010b; see also Lane 2010a).

STAR METRICS (Science and Technology in America’s Reinvestment — Measuring the Effects of Research on Innovation, Competitiveness and Science) is the name of a broad program that is
already operational and gathering data. It represents a major step in the direction of generating indicators for a second order of evidence in policy-making, i.e., one that relates to societal impacts.

Too much “trust in numbers”?

The focus on bibliometric methods and other performance indicators of quality and relevance is also apparent in other countries. As so often is the case in science policy it is through the channels of the OECD that new approaches started in the USA are mimicked in other countries. Still, the approaches developed are different in different countries, again owing to differences in some of the legal, political and cultural factors mentioned before. There are also mixed approaches that combine traditional peer review panels with so-called “objective” methods of bibliometrics and other science indicators (scientometrics).

In the UK a system of review panels was for a long time used to evaluate and rank performance of universities and departments within them every five years. In December 2006 the government announced that a new system for the assessment and funding of research to replace that framework after the Research Assessment Exercise (RAE) of 2008 (on the principles underpinning the RAES see Wright and Williams Ørberg 1997). The new framework as part of its approach was mandated to produce robust UK-wide indicators of research excellence for all disciplines. To some extent this is now in place. It represents a move away from the old “subjective” review panel approach to RAES towards more “objective” methods based on publication counts and citation measures to gauge quality and impact, plus statistical counts of external research income and postgraduate student activity at universities.

The new framework operates with fewer and broader subject divisions than the RAES. The full set of indicators for the science-based disciplines was produced for the first time during 2009 and has begun to influence funding allocations from 2010-11. The indicators are based on data averaged across several years. For the arts, humanities, social sciences, mathematics and statistics the operation is being phased in more gradually, initially complemented by information from peer review panels. This is because publication patterns in these areas do not match those of the science-based disciplines, as the relevant international databases on publications and citation frequencies do not give a representative picture. Additionally there has been quite a lot of critique from scholars in the humanities and social sciences as well as mathematics.

The idea nevertheless seems to be that reviews and summations of relevant performance indicators will fully inform funding from 2014 onward (HEFCE 2007). The aim is to try and enhance the overall relative international level of performance (in comparison with other countries) represented by the country’s research base. As Helga Nowotny has pointed out concerning the report that pushes in this direction,

> Although the report does not carry the word ‘evidence’ in its title, it is yet another example of evidence-based policy intended to replace the RAE... By devising systems to compare ‘best practices’ at national, European and international levels, self-generating, performance-enhancing mechanisms are created. Their function is to orient towards goals and objectives that readily can generate ever new performance targets and changing objectives by absorbing existing performances... (Nowotny 2007:482).

Nowotny who has first hand experience of policy making and science advice at the highest level within the EU and is currently President of the European Research Council (established only a
few years ago to try and counterbalance the pull of applied research funding programs in the EU, for her own part, expresses scepticism and is critical of the science metrics approach. She warns against fastening in a reification of numbers and the associated myth of a “trust in numbers” on which it rests; therefore she calls for other, competing constructions of “policy rooms” distributed throughout the science and innovation systems. Perceptive users of bibliometrics and research performance indicators have also warned of inadvertent consequences inherent in too much trust in numbers (Weingart 2005).

Generating quantitative data: peer review based evaluations and foresight

A leading centre in Europe where bibliometric methods have been developed is the Centre for Science and Technology Studies (CWTS) at Leiden University, led by Anthony van Raan who is currently also the editor of the journal Research Evaluation. Another is the so-called Leuven-group, the Steunpunt O&O Statistieken (abbreviated SOOS), a Flemish inter-university consortium located at the University of Leuven and directed by Wolfgang Glänzel who also has longstanding affiliations with the Information Science and Scientometric Research Unit (ISSRU) at the Library of the Hungarian Academy of Sciences which is the co-publisher (with Springer Verlag) of the journal Scientometrics.

Bibliometrics has been found to be a useful tool for generating a quantitative core of data for peer review based evaluations and foresight exercises (Van Raan 1996). In other words the methodology is held to provide useful starting point if complemented by the activities of traditional peer review panels, hearings, on site visits and the like. Additionally, informed discussion (reflexivity) regarding measurement technologies and their use in science policy will benefit the process (Woolgar 1991). It must be remembered that bibliometric methods and citation analysis convey pictures of how visible various authors and their associated institutions are in the literature. Strictly speaking visibility is not the same as quality even though citation counts in journals with high impact factors are sometimes used as proxies (Cozzens 1989). Fields that are inherently transdisciplinary are often difficult to fit into the predominant categories that are used and therefore have a systemic disadvantage (Bondjersand others 2008).

The services of the CWTS unit at Leiden have frequently been used in bibliometric studies at Swedish universities. Medical faculties have also engaged Grant Lewison who has developed bibliometric competence at the Welcome Institute in the UK. In Sweden Olle Persson and his Information Research Group (started in 1975) at the Sociology Department of Umeå University has been working with bibliometric methods since 1985, publishing empirical and theoretical papers and engaged operationally in various commissioned evaluation exercises. More recently Ulf Sandström who is affiliated with Linköping University has over the years developed various bibliometric skills in connection with research evaluations and policy, among other at the policy unit of the Swedish Research Council (VR), and as expert consultant to the Resources Inquiry that was led by Dan Brändström. The Resources Inquiry in its report Resurser för kvalitet (SOU 2007:81) proposed a new model for the allocation of funding through direct appropriations to Swedish universities. In January 2009 the Swedish Research Council (Vetenskapsrådet, VR) was given the mandate to begin this process of introducing a system for correlating allocation of funds to universities with their outputs measured in numbers of publications and amounts of external funding they attracted. Measurement of related citation frequencies is taken as a proxy for scientific quality, an assumption that has however been severely criticized by researchers in a number of different fields who point out that what one gets is only estimates of the “visibility” of various universities and departments within them.
Even before it was endorsed by a parliamentary decision the new approach already prompted a flurry of activities at universities to speed up work in developing their own capacities to do computer-aided evaluations of research performance. These activities continue now to satisfy national policy demands and they mostly engage bibliometricians connected to the university libraries. Leading universities like Uppsala and Lund have also implemented their own comprehensive evaluations and other universities are still in the process of doing so, oftentimes using the database of performance indicators that is generated also as an “evidential” base for controversial decisions regarding some major organizational changes that bring with them more power on the part of management and less in terms of traditional collegial patterns of decision-making.

**Strict bibliometrics contested**

In Scandinavia there has been discussion regarding what is called the “Norwegian model” for linking state decisions regarding budgetary allocations to university research to systematic reviews of performance. One of the architects behind the Norwegian model is Gunnar Siverstsen (NIFU/STEP in Oslo)\(^2\) who has helped devise a system whereby researchers at universities and colleges report relevant information about their publishing activities into what has become a national database managed by bibliometricians employed at university libraries. The model is quantitative and bibliometric. An advantage is that since researchers report in their own data to the database they develop a sense of “ownership” regarding the system and therefore may find it more palatable than the so-called “objective” system of relying only on international citation databases.

A scientific publication is defined by four criteria each of which has to be satisfied: 1) presentation of a new insight; 2) presented in a form that makes the results testable and possible to use in new research; 3) expressed in a language and via a channel of distribution that makes it accessible for most researchers who might take an interest in it; and 4) the publication channel (scientific journal, report series, book, etc,) that it appears in must incorporate peer review procedures (Sivertsen 2008).

Publications distributed through local channels (if more than 2/3 of publications in a publication series coming from the same institution) or non-scientific channels (lacking peer review) are excluded.

Publication channels are divided into two levels: Level 1: a category that covers “normal” quality, where one usually finds 80% of publications in a discipline; Level 2: a category that covers the other 20% where one finds the most significant or highest quality publications, e.g., high impact international scientific journals. In case of a multi-author article the publication is

\(^2\) The acronym is Norwegian; the English name of the center is Norwegian Institute for Studies in Innovation, research and Education - <http://www.nifustep.no/English/Pages/default.aspx>.
divided into corresponding fractional parts attributed to the respective authors’ home institutions. A point system is used to give weights to different kinds of publications, and publication points are calculated annually by multiplying the author-fraction affiliated with an institution times the appropriate vectors for publication form (species & levels).

In addition to publication points three other indicators are combined in the result-based decisions for redistributing funds amongst universities and colleges with an eye to their final quality measure expressed on a national scoreboard. The other three indicators are first the number of doctoral degrees, secondly EU-funding attracted, and thirdly Norwegian Research Council funding attracted over the same period. The evaluation/measurement exercise was incorporated into the state budget for universities 2005 and has since then been extended to include the national research institutes sector and health-related enterprises.

**Swedish experience and the proposal of a more “objective” model**

Interested parties in Denmark, Finland and Sweden have studied the Norwegian model as an alternative to “strict” reliance only on international Science Citation Index data when incorporating quantitative and bibliometric information as a basis for state budgetary allocations of funds to university and other forms of research in the public sector. As already indicated several Swedish universities have been developing bibliometric functions to provide university boards with instruments to monitor quantity and quality of publications.

The most comprehensive report until recently has been one from the University of Uppsala where consultants from the CWTS/Leiden were employed to do an extensive evaluation, *Quality and Renewal. Kof07 Report* (see Uppsala University home page). At the national level the White Paper called the Resource Inquiry (or Brändströmska utredning) on financing forms for universities’ activities (SOU 2007:81) reflects a certain enchantment with the British experiences with the RAE-system and the discussions regarding its replacement, at least in part, by “robust” indicators.

This Swedish White Paper criticizes the Norwegian model for being too costly and cumbersome because it involves local university based staff to manage researchers self-reporting of publications into a national database that needs to be continually upgraded and validated. To circumvent this “subjective” element the “Swedish model” therefore uses a quasi-objective mode of measuring performance at an aggregate level for comparison of individual universities in this country. The idea is to only make use of existing information regarding publication counts, relative performance levels above or below a world norm calculated for a large number of different classes of journals registered and indexed in the Thomsen/ISI database Web of Science (WoS). The characteristics of the model are:

1. The numerical value the model pins on a university is obtained by focusing on publications in given disciplinary areas;

2. Calculating productivity by translating the actual number of publications to a virtual number of middling level of averagely productive researchers that for each disciplinary-specific area would be required to produce the same number of publications;

3. Calculating the citation-value by looking at the average number of citations received by the publications in question and dividing this by the expected compiled value (number of citations one would expect the corresponding number of middle-level averagely productive researchers to receive (field normalization));
4. Multiplying the productivity value with the citation-value for each disciplinary area for the various universities reviewed.

A matter of cutting costs

It has been argued (Sandström & Sandström 2007b) that the advantage with the “strict” model is that one does not need to collect raw data from the universities. One gets the raw data directly from the database of the ISI/WoS. This procedure, it is argued, is much less costly than having to rely on universities’ databases that require competent staff to provide and manage local inputs that are constantly upgraded and validated. The other advantage emphasized is that application of techniques to achieve field-normalized indicators allows comparisons to be made across different disciplinary areas like technological science, medicine, natural sciences, social sciences & humanities as well as between sub-classes within these broad areas, something the Norwegian model is purported unable to do.

The foregoing line of argument also appears in some work of the aforementioned bibliometrics group at the Australian National University (ARC Linkage Project 2005). In 2007 two of this team revisited and evaluated the political science portion of the 2001 UK/RAE. The outcome of the original review panel assessment (RAE 2001) was compared with the results of a new evaluation for the year 2001 carried out by the Australian bibliometricians using only quantitative indicators accessible in international databases.

The authors of the Australian report (Butler & McAllister 2007: 14-15) write:

*Our findings presented here suggest, unequivocally, that a metrics-based model, using objective, transparent indicators drawn from a range of readily-available measures, will yield results which are very close to those of a peer-based evaluation model /using review panels/. Such a stronger reliance on quantitative indicators, of which bibliometrics is a central measure, will, most importantly, obviate the need for a large peer review committee and the consequent indirect biases that it introduces into the system. And not least, such an approach would help to reduce one of the most oft-quoted criticisms of the RAE, namely the cost in university resources and academic staff time.*

In the Swedish case, in practice for policy purposes the “objective” model (above) is not employed to the full and some adjustments were arbitrarily introduced before it was put in place to govern the budgetary allocations for the period 2009-2012. One such adjustment in order to compensate for a systematic bias against humanities disciplines is that the number of publications in this area is multiplied by a factor of two. Also, for this period as a start only 10% of the block grants flowing from the Ministry of Education for research at individual universities is allocated on the basis of competition. The 10% incentive key furthermore is broken down into two parts, where one half (5% of the total allocation) goes up or down depending on a given university’s relative ability (*vis-à-vis* that of the country’s other universities) to attract research funding from external sources and the other half varies on the basis of the outcome of the bibliometric measure of publications counts (again relative to the performance of other universities on the same measure). Those that do well in the performativity assessments get more resources, those that do not do so well get less.

At the next level, within each university the leadership of that university can decide how to further decide about the distribution of its budget using a more radical distribution key for funding flows down to the level of the faculties where further performativity measures may be
employed before the funds actually reach individual institutions. Since the whole process is quite
new it is too early yet to see the consequences of the new national policy.

Concluding remarks

The purpose of the present paper is to fill an important gap in science policy studies and the
literature on the problem of the impact of New Public Management. As such the paper
elaborates an important and novel angle in science policy analysis. Furthermore it summarizes at
some length various characteristics associated with NPM, one might say its “anatomy” and
dynamics, and explicates its nexus with methods of research evaluation now being introduced in
academic institutions. Arguments for and against the application of “strict” bibliometric
performativity assessments as a policy tool are reviewed. In line with the foregoing, and based on
the paper’s comprehensive review of relevant literature, a number of significant policy
conclusions may now be stated.

First of all we should not lose sight of significant differences between disciplines as well as
differences between major areas of knowledge. While humanities, social sciences and some
applied as well as interdisciplinary and clearly transdisciplinary areas (Bondjers and others 2008)
are having difficulties to adjust, robust research institutions in most natural sciences and
mainstream medical areas probably will have no difficulty under stricter accountingization
regimes to turn new number-grinding exercises to their own advantage (Herbert and Müller-Hill
1997). It will become a natural ingredient in reputation management. Still, even in such
instances diversity in academic science landscapes may turn out to be the loser.

Secondly, there is a paradox that emerges both in natural and social sciences. “Control of
control” as Michael Power calls it tends to become a ritual when where trust gets lost.
Institutions contracted by a principal to perform services go up a learning curve and develop
skills in formatting reports on outcomes in terms meant to satisfy the principal. These function
as signals to assure the principal that objectives and rules are being followed to such and such a
degree. The suspicious principal may mistrust the reports and require further evidence to be
reassured that controls are in place. This leads to the introduction of a second order control, one
wherewith the task becomes one of verifying if a system of control is in place (supposedly
internalized in the working environment of the agent). At this stage one is no longer concerned
with the actual detail or content of the performance per se, but rather in the existence of second
order routines as a proxy (see Table 2).

Table 2. The ritual of Audit Society (according to Michael Power)

<table>
<thead>
<tr>
<th>Control of control</th>
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<tr>
<td>Management organizes ....&gt;&gt; internal audit in order to satisfy ....&gt;&gt; external audit incorporated in.....&gt;&gt; state inspection</td>
</tr>
<tr>
<td>Response = Symbols of compliance (assurances)….&gt;&gt; sent back to state authority = system of</td>
</tr>
<tr>
<td>&lt;&lt;................ internalizing Delegated control that is then subjected to topdown control by the external controller (as proxy to make sure)</td>
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</tbody>
</table>
Thirdly NPM as an instrument of Audit Society introduces changes in the social relations and cultures of major societal institutions that are evaluated. Academic institutions are no exception. Overtly there is a move toward a culture of compliance while underneath it all researchers still seek to maintain agendas of their own. The cynical view is the one expressed by Daniel Greenberg (2007a, also cf. 2007b) in his article in the journal Science where he suggests that the ultimate name for a typical university running with the trend of the times ought to be “The University of Avarice” (the article is illustrated with a nice cartoon). It is a question of “campus capitalism” as a handmaiden of industrial and financial capitalist agendas in society at large. External relevance pressures, marketization, commoditization of public goods and subsequent accountingization bring with them cultural changes in the hallowed halls of academe, to be sure. In sum:

- A culture of compliance
- A culture of profiling, corporate branding, trademarking and conscious reputational management and identity management

A fourth point is that apart from orchestrated self-regulation via the inducement of a compliance culture one also by extension gets practices of reputation management whereby institutions try to enhance their image. To do well in the universe of citation indicators, publication behaviour in research communities, it has been speculated, may also undergo change to adapt to new computer-aided models for redistributing funds between competing universities and departments within them (Debackere & Glänzel 2004: 273-274). Weingart (2005) speaks of “inadvertent consequences”. Bornmann (2010) has coined the phrase “mimicry in science” to draw attention to a significant factor that is already changing publication patterns. For some universities image may become more important than content.

Reputation in other words becomes a key asset on which providers trade. In our universities we see manifestations of reputation management in the practice of trade-marking and cultivating brand names (branding), and even in disputes and endless discussions about such a simply matter as to how the university’s traditional logotype should be modified to bring it in tune with the times. According to identity consultants even a logotype is much more than a pattern on a paper or letterhead, it is a symbol that embodies a metaphysical means to unify actors around a mission as well as attract customers.

A fifth conclusion, more generally, is that the new initiatives to develop performativity metrics in the spirit of NPM in the higher educational and research sector are indicative of changes wrought in science policy during the past couple of decades as we have moved out of Cold War regime to the new policy paradigm of privatized globalization. The new initiatives have undoubtedly been important for improving the evidence-base for policy-making but they should not simply be adopted uncritically and taken at face value.

Further conclusions that can be drawn from the foregoing review of the entry of NPM in discourses of governance or orchestration of academic research is that academic research tends to be the loser. Bibliometric methods on their own are not trustworthy and may induce unwanted skews into research landscapes; therefore they need to be combined with self-reporting academic databases, traditional peer review panels, on site visits and case studies that are undertaken independently and at arms-length from policy- and decision-making. Short term interests related
to tangible utility is furthermore detrimental to strategic needs of diversity in basic research and scientific knowledge production for the long-term future.

For this and other reasons it is evident that a greater amount of reflexivity needs to be brought into discussions about accountability and the role of NPM, i.e., there is a need for critical metatheoretical reflection on both NPM and the various metrics that have been and are still being constructed. This is particularly relevant considering the mismatch that exists, for example, vis-à-vis research fields in the humanities and also regarding transdisciplinary modes of research and publication patterns. Comparison of the role of NPM methods and pertinent accountability technologies associated with it in other policy domains may also prove useful.

Finally, traditional historical and newer types of oral history case studies and reviews that analyze longer term trends in various academic disciplines and specialities continue to be important sources of tacit knowledge that needs to be articulated. In this connexion the specialized field that goes under the heading of history, philosophy and social studies of science stands challenged to become more policy relevant.

**Bibliography**


Bornmann, Lutz (2010), "Mimicry in science?", *Scientometrics* 2 June 2010 (On line: http://www.lutz-bornmann.de/icons/Mimicry.pdf)


Fulltext:


Gorraiz, Juan and others (2010), ”esss 2010: A review of the inaugural European Summer School for Scientometrics in Berlin”, *Scientometrics*, 18 September 2010 online.


Lane, Julia (2010b), Statement in Testimony before the U.S. Congress September 23, 2010: http://www.nsf.gov/about/congress/111/jil_policyscience_092310.jsp

Marburger, John H. III (April, 19 2007):  
<http://commerce.senate.gov/public/_files/Testimony_JohnMarburger_OSTP_FY08JHMSenateCommerceTestimony_FINAL.pdf>


Mervis, Jeffrey (2006), ”NSF begins a push to measure societal impacts of research”, Science, Vol. 312, No. 5772, p. 347.


Osborne, David and Ted Gaebler (1992), Inventing Government (Reading: Addison-Wesley Publ. Co.).


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A cost-effectiveness analysis of options for reducing pollution in Khayelitsha township, South Africa

E MUCHAPONDWA

Abstract

Average levels of PM10 pollutants in Khayelitsha, a poor informal settlement near Cape Town, are unusually high. The contributory factors are the burning of household waste, wood and used tyres; vehicular emissions; and dust. This paper gives guidance towards selecting interventions for reducing these pollutants. The options include planting windbreak trees; paving roads and walkways; using cleaner sources of energy; and supplying additional refuse skips. Based on cost data collected from relevant municipal departments and service providers, over a 20-year planning horizon, the following are cost equivalents: planting between 419 and 936 windbreak trees; paving 6 685m² of exposed areas; replacing between 451 and 870 wood-fired meat traders’ braai (i.e. barbecue) sets with gas braais; and providing a 6m³ refuse skip. On the basis of cost-effectiveness in reducing PM10 pollutants, this paper ranks the interventions as follows: (1) providing gas braai sets; (2) planting windbreak trees; (3) paving exposed areas; and (4) providing the refuse skip. Thus, providing gas braai sets to the meat traders in Khayelitsha will significantly reduce PM10 levels, but will also contribute to the sustained livelihoods of some of the poor households. However, planting windbreak trees may nevertheless be undertaken because of this option’s linkage to climate change initiatives, which open up a wide range of potential funding opportunities.

Keywords: air pollution, cost-effectiveness, Khayelitsha, PM10, pollution control

Disciplines: Economics, Environmental studies, energy studies.

1. Introduction

Air pollution poses significant health-related challenges; particularly for poor people such as those living in South African informal settlements, whose health is already compromised by
inadequate food, shelter\(^1\) and social services. The challenges emanate mainly from the high risk of contracting respiratory and cardiovascular illness, including chronic bronchitis and asthma. Illness has two detrimental effects on the poor: (i) it reduces the productivity of poor people, which in turn compromises their ability to generate income; and (ii) it increases the pressure on the meagre income of the poor, as they must pay for medical care – or receive home-based care from family members who would otherwise have been trying to earn an income. Thus, alongside other poverty-reduction initiatives that seek to increase the income levels of the poor, there is a need to prioritise initiatives that seek to reduce air pollution in areas where the poor people live; as such, the latter set of initiatives helps reduce the depth of poverty. This paper looks at a typical South African case study, in which the livelihoods of poor people can be enhanced through controlling air pollution – emanating partly from one of the limited livelihood options available to the poor.

Khayelitsha is a poor informal settlement, established near Cape Town in 1985 to cater for a growing black migrant population under apartheid. It currently has a population of about half a million and is among the largest townships of South Africa (Ndingaye 2005, Maverick 358 cc 2006, Médecins Sans Frontières 2010). The Khayelitsha air pollution station monitors four major pollutants, namely PM10, sulphur dioxide (SO\(_2\)), ozone (O\(_3\)) and nitrogen dioxide (NO\(_2\)). The pollutant which has raised much concern is PM10, also called ‘inhalable particulate matter’. The average PM10 levels (which have been monitored since 1999) are unusually high, at 48 µg/m\(^3\) for annual average concentrations, and are estimated to be 70% above those of Cape Town’s central business district (CBD), which is nearby (KAPS 2008). Furthermore, the Khayelitsha PM10 levels frequently surpass the United Kingdom (UK) safety threshold levels of 50 µg/m\(^3\) (for 24-hour concentrations) and 40 µg/m\(^3\) (for annual average concentrations) adopted by the City of Cape Town Metropolitan Municipality, under which Khayelitsha falls. While there are no separate statistics for Khayelitsha, it is believed that the problem is significant because of the health impacts for PM10 exposure in Cape Town in 2002: 234 cardiovascular hospital admissions, 28 806 incidences of chronic bronchitis and 217 563 incidences of restricted activity days (Scorgie & Watson 2004).

The Khayelitsha Air Pollution Strategy (KAPS) project was implemented to provide an understanding of the factors behind the high levels of PM10 observed. The project identified the factors that contribute to high PM10 levels in Khayelitsha as household waste burning, informal meat traders who burn wood for cooking fuel, waste tyre burning, vehicular emissions, and dust blown by wind from the unpaved roads and surfaces (KAPS 2008). The current study seeks to give guidance towards selecting the interventions for reducing PM10 levels in Khayelitsha.

The structure of the rest of the paper is as follows. Section 2 gives a background to the air pollution problem in Khayelitsha. Section 3 outlines the theoretical framework on which this study is based. Sections 4 and 5 determine the costs and effectiveness of a selection of the proposed interventions. In section 6, there is a presentation and discussion of the cost-effectiveness analysis results; after which, section 7 concludes.

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\(^1\) In 2007, about 14.5% of South African households were estimated to be living in informal dwellings (StatsSA 2007).
2. Background

Air pollution generally refers to suspended particulate matter (PM), gaseous pollutants and odours. The major pollutant, which has raised much concern, is suspended PM. Types of suspended PM include diesel exhaust particles; coal fly ash; wood smoke; mineral dusts such as coal, asbestos, limestone and cement; metal dusts and fumes; acid mists (for example, sulphuric acid); and pesticide mists (Kjellström et al. 2006). The suspended PM includes the classes of the finer fraction, with median aerodynamic diameter of less than 10 microns (PM10), and the most hazardous fraction, with median aerodynamic diameter of less than 2.5 microns (PM2.5). Meteorological factors, such as wind speed and direction, are usually the strongest determinants of variations in suspended PM, along with topography and temperature inversions. In general, the effects of suspended PM can be divided into health, productivity and amenity categories (Voorhees et al. 2001). Long-term studies have documented increased cardiovascular and respiratory morbidity and mortality associated with exposure to PM10. Ecological studies of small areas based on census data, air pollution information and health events data (with adjustments for potential confounding factors, including socioeconomic status) also indicate that mortality increases with exposure to PM10 (Kjellström et al. 2006).

The brown haze and inversions above Khayelitsha have been points of concern and study for many years (for example, see Wicking-Baird et al. 1997 and Scorgie & Watson 2004). However, over time the annual average PM10 concentrations and the number of episode days (days on which the threshold has been exceeded) in Khayelitsha have remained high, as shown in tables 1 and 2 below.

| Table 1: Annual average concentrations (µg/m³) of PM10 for Khayelitsha (2000 to 2007) |
|------------------------------------------|----------|----------|----------|----------|----------|----------|----------|
| 2000                                    | 2001     | 2002     | 2003     | 2004     | 2005     | 2006     | 2007     |
| No data                                 | 51.64    | 50.28    | 50.83    | 42       | 45       | 50       | 45       |


| Table 2: Number of PM10 episode days recorded at Khayelitsha station (2000 to 2007) |
|------------------------------------------|----------|----------|----------|----------|----------|----------|
| 2000                                    | 2001     | 2002     | 2003     | 2004     | 2005     | 2006     | 2007     |
| 52                                      | 29       | 86       | 137      | 92       | 111      | 103      | 85       |


The extent of the health effects of PM10 depends on actual exposure. Total daily exposure is determined by people’s time and activity patterns, and it combines indoor and outdoor exposures. Young children and the elderly may travel less during the day than working adults, and their exposure may therefore correlate closely with air pollution levels in their homes. Children are particularly vulnerable to environmental toxicants because of their greater relative exposure and the effects on their growth and physiological development. Epidemiological analysis is needed to quantify the health impact in an exposed population (For examples, see Schwartz (1994), Wilson & Suh (1997) and Moolgavkar (2000)). High concentrations of
PM10 affect people with respiratory problems such as asthma, chronic bronchitis, coughing, wheezing and shortness of breath, as these particles can penetrate the lungs (KAPS 2008). Respiratory symptoms have been found to be the most commonly occurring health concern in two informal settlements in the Cape Metropolitan Area (Mathee & Von Schirnding, 1996). In general, the major pollutants emitted by combustion have all been associated with increased respiratory and cardiovascular morbidity and mortality (Kjellström et al. 2006).

The variety of precursors to PM10 also leads to many different interventions. Interventions are often more sustainable if they address the driving forces behind the pollution at the community level, rather than attempting to deal with specific exposures at the individual level. In addition, effective methods for preventing exposure to PM10 may not exist at the individual level, and the only feasible individual-level intervention may be treating cases of illness. Examples of interventions to reduce PM10 include creating urban forests, covering unpaved roads and walkways, using alternative household burning energy sources, reducing garbage burning, lowering the sulphur content of diesel, and traffic demand management in urban areas (Kjellström et al. 2006).

For Khayelitsha, an intervention scenario committee was set up by the KAPS steering committee to investigate possible intervention strategies. The following interventions (aimed at reducing PM10 directly, or reducing its precursors) were suggested: planting of windbreak trees; covering of unpaved roads and walkways; promoting the use of alternative, cleaner-burning energy sources; providing additional refuse skips for household waste; establishing a tyre deposit-refund scheme; switching to Euro 2 vehicle emission standards; promoting the use of public transport; and mounting pollution avoidance and awareness educational campaigns (KAPS 2008). Given that we do not know how much each of the emission sources contributes to the overall PM10 level, we assume that each emission source contributes emissions significant enough to be a target of clean-up. If some emission sources contribute insignificant amounts to the overall PM10 level then interventions should not target the clean-up of such emission sources, as the scale of feasible clean-up would not reduce the overall PM10 level significantly. Ideally, one would want to implement all the independent feasible interventions, if that will result in lower PM10 levels and there are enough resources. However, implementation of each of the feasible interventions entails use of scarce resources; therefore, there is a need for triage.

It should be noted that some of the proposed interventions cannot be successfully implemented in constrained jurisdictions such as Khayelitsha, for several reasons. Firstly, establishing a tyre deposit-refund scheme\(^2\) and switching to Euro 2 standards\(^3\) can only be effective if implemented

\(^2\) For viability, the scheme would need to guard against the importation of tyres from other areas. In any case, there are already national efforts by industry and government to establish a national waste tyre collection scheme. So far, the tyre industry has formed a Section 21 Company called the South African Tyre Recycling Process (SATRP) Company to manage the waste tyre collection process on its behalf, and the Department of Environmental Affairs and Tourism (DEAT) has published the ‘Waste Tyre Regulation’ for public comment; and SATRP aims to operate a sustainable South African waste tyre collection process and make it available to all users of waste tyres a year after promulgation of the Waste Tyre Regulation by DEAT. More information is available at http://www.rubbersa.com/index.htm.

\(^3\) For viability, the switch would need to be implemented nationally; otherwise, vehicles from other jurisdictions without such standards cannot be stopped from entering Khayelitsha. Currently, all vehicles in South Africa should comply with the Euro 1 emissions standard; and it has already been estimated that a switch to Euro 2, a stricter emission standard, would result in 5% to 10% improvement per annum in national air pollution from vehicular sources.
Reducing pollution in Khayelitsha

at national level. Secondly, promoting the use of public transport in Khayelitsha is not feasible given that there is no excess capacity on public transport in Khayelitsha; and the City of Cape Town is not directly in charge of public transportation, as the railway service is under a national authority, the bus service is under a provincial authority, and the minibuses are privately owned. Thirdly, a pollution avoidance and awareness educational campaign should not be seen as independent from the other interventions, as they all need to come co-packaged with educational campaigns.

Thus, the potentially feasible measures for reducing PM10 in Khayelitsha include planting windbreak trees; covering unpaved roads and walkways; promoting the use of alternative, cleaner-burning energy sources; and providing additional refuse skips for waste material.

3. Theoretical framework

The most common method of evaluating air pollution control interventions in which costs and benefits can be valued in monetary terms is cost-benefit analysis (CBA). For examples of cost-benefit analysis, see Krupnick & Portney (1991), McPherson et al. (1999), Voorhees et al. (2001) and Leiman et al (2007). On one hand, the costs associated with an intervention are usually easily discernible. Costs associated with implementing an intervention may potentially be incurred by three economic sectors, namely the private sector; society at large; and the governmental regulatory authority (Voorhees et al. 2001). These costs include direct and indirect costs, where direct costs comprise capital costs (expenditure for facilities, equipment, etc) and operating costs (implementation costs, maintenance costs, materials costs, equipment leasing, parts and supplies, direct labour, fuel and power, services provided by private contractors, and research and development).

Indirect costs include the macroeconomic impacts due to shifts in economic activity between industries, including changes in the distribution of labour, capital, and other production factors within the economy, and changes in the distribution of goods and services (Voorhees et al. 2001). It is mostly because of the indirect costs that reliance on the engineering costs of an intervention has been criticised, because capital and operating expenses alone do not account for the dynamic and general equilibrium impacts of regulation.

On the other hand, the benefits of an intervention are usually not that obvious, and in most cases are not readily perceptible in monetary terms. The basic components of benefits are the health, productive and amenity effects that will be avoided. In addition, it is worth noting that some interventions have a broader value; for example, tree planting has amenity values beyond its effect on air quality.

The process of estimating the benefits of an air pollution control intervention has two steps: namely finding the physical impacts, and then monetising them. The physical impacts of air pollution control interventions are found by (1) estimating the dose-response function, (2) multiplying the slope of the dose-response function by the exposed population and (3) multiplying the product by the estimated change in air quality. Three valuation approaches have

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4 Dose-response functions provide the link between exposures to ambient air pollutant concentrations and the resultant health outcomes. Dose-response functions for PM10 exposures are typically expressed for respiratory 

TD, 6(2), December 2010, pp. 333-358.
been used in the literature to monetize the benefits associated with interventions: (1) market valuation of physical effects, (2) stated preference methods, and (3) revealed preference methods.

The effects of air pollution that are most amenable to market valuation include human health effects and productivity effects (for example, work output, crop yield, fishing yield, damage to industrial equipment and soiling). Amenity effects – including visibility, odour and noise – are the most amenable to surrogate market valuation using either contingent valuation or hedonic pricing (and it is worth stressing that the feedback from the KAPS survey indicated that amenity effects dominated perceptions of the problem). However, ecosystem health typically does not have market value. Likewise, natural ecological impacts which may occur cannot be valued without relevant dose-response functions (Voorhees et al. 2001).

Given the varied nature of the possible interventions, it may not always be possible to catalogue and monetise the returns associated with each intervention. Furthermore, a full cost-benefit analysis may not be necessary; especially when the problem is to determine how best to comply with a requirement to reduce PM10. In such cases, one may only need to compare the interventions on the basis of the resources required to implement each intervention, up to the point yielding a unit reduction in PM10. Such an analysis would essentially be a cost-effectiveness analysis – a widely-used alternative to cost-benefit analysis, especially in areas such as health and defence policy.

Cost-effectiveness analysis is a systematic method for finding the lowest-cost means of accomplishing an objective. More broadly, cost-effectiveness analysis compares costs and the effects of an intervention to assess whether the intervention is worthwhile on economic grounds. In particular, it compares mutually exclusive alternatives in terms of their costs and a single, quantified (but not monetised) effectiveness measure (Boardman et al. 2006). Cost-effectiveness analysis is often used in cases for which a full cost-benefit analysis would be inappropriate; for example, where the problem is to determine how best to comply with a legal requirement. Note that in general the cost-effectiveness analysis procedure does not produce an efficient allocation, because the predetermined objective may not be efficient; all efficient policies are cost-effective, but not all cost-effective policies are efficient (Perman et al. 2003). Nonetheless, a good cost-effectiveness analysis can be more useful than CBA.

Though cost-effectiveness analysis does not monetise benefits, it does measure two other metrics: costs in monetary terms; and effectiveness of an intervention, which may be measured in, say, kilograms of PM10 reduced. The ratio of the two measures is what is used as a basis for ranking alternative interventions. (Of course, an appropriate basis from which to compute the effects and costs of alternatives must be chosen.) Even though the ratio can be expressed in two ways, namely cost/effectiveness and effectiveness/cost, the most commonly-used approach is the cost-effectiveness ratio, computed by dividing the costs of an alternative by the measure of its effectiveness. Thus, cost-effectiveness analysis involves computing cost-effectiveness ratios in order to choose policies or interventions that promote efficiency, especially where the chosen predetermined objective is itself efficient. Costs and effectiveness are always measured incrementally.
Examples of cost-effectiveness analysis for assessing air-quality policy include studies carried out in Jakarta, Kathmandu, Manila and Mumbai, under the World Bank’s Urban Air Quality Management Strategy in Asia (Grønskei et al. 1996a, 1996b; Larssen et al. 1996a, 1996b; Shah et al. 1997 cited in Kjellström et al. 2006). In each city, an emissions inventory was established and rudimentary dispersion modelling was carried out. Various measures for reducing PM10 and mitigating health impacts were examined in terms of reductions in tons of PM10 emitted, cost of implementation, time frame for implementation, and health benefits and their associated cost savings. Some of the abatement measures that have been implemented include introducing unleaded gasoline, tightening standards, introducing low-smoke lubricants for vehicles with two-stroke engines, implementing inspections of vehicle exhaust emissions to address the problem of gross polluters, and reducing garbage burning (Kjellström et al. 2006). For other examples of cost-effectiveness analyses, see O’Ryan (1993), McPherson et al. (1998), Nowak et al. (1998), US EPA (2006) and Escobedo et al. (2008).

Our intention is to conduct a cost-effectiveness analysis of a selection of the proposed interventions for reducing PM10 in Khayelitsha. In order to do this, we need to understand only the costs of implementing each intervention and the associated impact of the intervention.

4. Ascertaining the costs of interventions

In this section we ascertain the costs of each of the selected interventions. In general, the costs are direct and indirect, and include intangible costs. Some costs will be immediate while others will be spread over time. Immediate costs are usually associated with implementing or mounting the intervention, while future costs could be the necessary maintenance and operating costs to guarantee the standard of the intervention’s impact.

4.1 Planting of hardy windbreak trees

Khayelitsha lies in the Cape Flats area. On the whole, the natural vegetation on the Cape Flats is slow-growing shrubs and bushes, sparse grasses or reeds and geophytes (bulbs) (Burgess 2008). The prevalent use of firewood on the Cape Flats also contributes to the decrease in vegetation that previously helped in soil stabilisation. The geophysical characteristics of the Cape Flats predispose the area to air-quality problems. The area is windy, flat and sandy, meaning that dust is easily picked up by the wind. It was estimated that in 2006, roughly 70% of the Khayelitsha area was not covered by vegetation and was therefore a source of dust. This estimate is derived from aerial photographs taken at the time; there has been development in the last four years, and the open area has expanded. Windblown dust clogs drains, exacerbating flooding. This kind of flooding gives the dust cycle further impetus (Schoeman 2008).

It is believed that windblown dust contributes significantly to PM10 in Khayelitsha. This is because Khayelitsha is near the coast; the sand contains particles that are very fine and blown about easily; there are very few mature trees and large built structures to act as windbreaks; there are many exposed areas that are not stabilised by plant material, in areas that are undeveloped or have natural vegetation; and there are many un-surfaced informal footpaths in areas between residences and buildings and on undeveloped land. Also, as the informal footpaths take higher pedestrian traffic, the exposed sandy area becomes larger and larger, leaving more surface area open for wind erosion. Many areas that have been developed or surfaced are adjacent to undeveloped land and one often finds that the sand blows in from these adjacent sites, covering
the new surface. Windblown sand is transported inland from areas closer to the sea (beyond Lookout Hill) (Schoeman 2008). Thus, the set of interventions requires integrated programmes for stabilising soil.

The first proposed intervention would be planting hardy trees to serve as windbreaks and dust-deposition facilitators. In general there are no large indigenous trees found naturally on the Cape Flats, so planting trees suitable for the Khayelitsha area and able to meet the needs of an urban environment is particularly challenging. In most urban environments trees are used to create windbreaks; delineate edges of spaces and places; provide shade to pedestrians; provide wind shelter for housing, play areas and sports fields; increase biodiversity; and generate oxygen to reduce carbon dioxide poisoning caused by carbon-based fuel systems and cars. It is very difficult to grow trees in Khayelitsha and there are relatively few historical precedents to call upon, since Khayelitsha has only existed for 22 years (Burgess 2008).

Though there are shrubs and plants that are well adapted to these conditions, we assume that this intervention would use trees. Trees planted in Khayelitsha are very often stunted due to a number of factors such as: (i) Insufficient wind protection by buildings and walls. If necessary, trees can be protected with shade netting or other material on the wind side; (ii) Exposure to harsh conditions. Nursery trees grown in protected environments take a sudden ‘knock’ when planted and exposed to harsh conditions; it is better to plant trees that have been ‘hardened off’; (iii) Lack of regular maintenance. There is a need for ongoing maintenance every year, such as regular feeding of the tree with fertiliser and compost to ensure that the tree gets sufficient nutrients from the soil for good growth; and (iv) Lack of adequate regular precipitation. There is a need for optimal, ongoing watering of the growing tree (Schoeman 2008).

For the tree-planting programme to be effective in reducing dust (and consequently PM10), there must be enough suitable land for an adequate number of trees to be planted. The location of planting also matters significantly if the trees are to be effective wind barriers (or dust-preventive agents). If there is inadequate public open space for use in the tree-planting programme, a possible alternative would be to plant the trees along the roads. (A problem in this regard is the situation of drainage and water pipes, which are usually laid alongside roads. Also, one would be restricted to roads that are not earmarked for future expansion.)

There are several tree species options suitable for Khayelitsha, for example Beefwood (casuarina), ficus rubiginosa, populous simonii and Kareeboom (rhus spp). Although an alien species, casuarina is a favourite because of its quick maturation time. It is also not threatened by firewood users as it is not a good source of fuel. At the same time, it captures dust particles rather well. Another more typical (though less robust) tree is the ficus rubiginosa, which could also cope well in Khayelitsha but would need more help than casuarinas do. The planting costs of any tree variety chosen will largely be made up of costs for the tree, cage, water and maintenance. Tables 3 and

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5 Certain types of grasses could be considered, as could other options such as road-tarring and laying hardtop on open spaces. For planting, one would have to look for plants that sustain themselves without excessive irrigation.

6 However, it should be noted that Khayelitsha was covered by Port Jackson (Acacia longifolia) and rooikrans (Acacia cyclops) trees, both invasive Australian acacias. Planting of Australian acacias is now illegal.

7 However, maximising the benefits requires that trees be deployed in tight plantings as windbreaks. Dense tree-planting will assist in breaking down the force of the wind in the area on the sheltered side of such windbreaks.
4 below gives the approximate tree costs (excluding valued added tax) for *casuarina* and *ficus rubiginosa*.

### Table 3: Costs of a *casuarina* tree-planting intervention

<table>
<thead>
<tr>
<th>Description</th>
<th>Amount (R)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cost of a tree, cage, water and two years’ maintenance</td>
<td>2 000</td>
</tr>
<tr>
<td>Total</td>
<td>2 000</td>
</tr>
</tbody>
</table>

Source: City Parks Department

### Table 4: Costs of a *Ficus rubiginosa* tree-planting intervention

<table>
<thead>
<tr>
<th>Description</th>
<th>Amount (R)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cost of a 100-litre tree</td>
<td>850</td>
</tr>
<tr>
<td>Excavation of tree hole</td>
<td>350</td>
</tr>
<tr>
<td>Compost and soil preparation per tree</td>
<td>1 260</td>
</tr>
<tr>
<td>Cage to protect tree during growth</td>
<td>2 000</td>
</tr>
<tr>
<td>Stone mulch around the base of the tree</td>
<td>50</td>
</tr>
<tr>
<td>Geofabric around the base of the tree</td>
<td>50</td>
</tr>
<tr>
<td>Drip irrigation fittings per tree</td>
<td>100</td>
</tr>
<tr>
<td>Total</td>
<td>4 660</td>
</tr>
</tbody>
</table>

Source: Schoeman (2008)

### 4.2 Covering of unpaved roads and walkways

Apart from planting exposed areas, some of the ways that can be used to reduce PM10 pollution include paving exposed walkways and roads, and adding windbreaks in the form of buildings, walls and other structures. It is important to note that the City of Cape Town has already embarked on a paving and tree-planting project along Spine Road in Khayelitsha (see Figure 1). The Klipfontein Non-Motorised Transport (NMT) Route is a City of Cape Town initiative, and is intended eventually to provide a continuous link from Khayelitsha to the Cape Town CBD. Sections of the NMT route have been in development since 2007. The aim of the initial phase of

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Without tight planting, effectiveness is lowered. But there is a negative aspect: the association of tightly-planted trees with crime is a problem.

To completely ascertain the costs and effectiveness of the intervention of planting hardy windbreak trees, ideally one would need to know the number of trees that constitute an effective windbreak in Khayelitsha, the associated cost, and the associated reduction in PM10.
the project is to service a three-kilometre stretch of Spine Road. So far only a kilometre straddling Wards 94 and 97 has been serviced. The major concerns of the NMT project are safety, accessibility, and beautification. Thus, the main stakeholders are envisaged to be pedestrians, cyclists, wheelchairs, etc (Tukushe 2008).

Under the NMT project, adjacent roadways and informal walkways are paved. Trees are planted about 5 metres apart and caged to guard against vandalism. Each tree is fitted with a drip irrigation system. Refuse bins, signage and public benches are also provided on these surfaces. The City Parks department immediately takes over the planted trees for maintenance. *Ficus rubiginosa* and *populous simonii* have been planted, but they may be adversely affected by the harsh climatic and sandy soil conditions (Tukushe 2008).

**Figure 1: NMT project combining paving and tree planting in Khayelitsha**

Source: Edwin Muchapondwa

Even though the primary goal of the NMT project is not air-quality management, it makes a contribution to PM10 reduction nevertheless. In percentage terms, only a small proportion of the exposed areas in Khayelitsha have been covered by the NMT project. However, the NMT project will also assist with the adjacent roadways, where the road and stormwater catchpits should become less clogged with sand. The area that has been covered by the NMT project is approximately 14 330m². The estimated paving cost based on final certificate costs is R280/m² excluding VAT (Schoeman 2008). Under the proposed KAPS intervention there would be
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surface covering of unpaved areas and walkways in the area surrounding the Air Quality monitoring site on Lansdowne Road in Khayelitsha.⁹

Table 5: Costs of covering unpaved areas and walkways

<table>
<thead>
<tr>
<th>Description</th>
<th>Amount (R)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cost of paving 1m² (includes site clearance, earthworks, surfacing, etc)</td>
<td>280</td>
</tr>
<tr>
<td>Total</td>
<td>280</td>
</tr>
</tbody>
</table>

Source: Schoeman (2008)

4.3 Promoting the use of alternative, cleaner-burning energy sources

The KAPS surveys captured heavy reliance on wood by informal meat traders. Wood is used extensively by informal traders as the main fuel for grilling meat. The wood is burnt for about 12 hours every day. There is extensive use of green wood despite all involved knowing that it emits more smoke than seasoned wood. The reasons for its continued use are that green wood prolongs the life of a fire; other wood is scarce during winter; and there is a belief that burning green wood keeps flies at bay. In addition, the burning of animal fats associated with grilling meat makes the resulting PM10 pollution very serious. Most of the meat traders buy from local wood traders, who collect from the bushes as far as 5km away.

This intervention would involve replacing the wood used by the informal meat traders at the business centres with cleaner-burning energy sources.¹⁰ Possible alternatives include charcoal and gas.¹¹ For various practical reasons, gas is the option chosen for this intervention. The meat traders would need to acquire the gas braais and cylinders. The surface area of the wood braai used currently is about 0.54m². The equivalent surface area can be obtained from a 4-burner gas braai. Figures 2 and 3 show typical wood and gas braais, with equivalent surface areas.

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⁹ It should be pointed out that the prime motivation for focusing on the area in the vicinity of the monitoring station should not be to achieve lower pollution readings by reducing dust only in the neighbourhood of the monitoring equipment.

¹⁰ A slight complication with this intervention is that it requires commitment by individuals to cooperate in reducing or eliminating wood usage. Given that this intervention targets businesspeople, it must make business sense for the informal traders to switch to cleaner-burning energy sources willingly. It is possible that the costs for the alternative sources could be prohibitive. If this is the case, effective implementation of this intervention would require targeted subsidies. The intervention would also need to recognise the existence of a well-established wood-trading industry which supplies wood to meat traders. Any switch to alternative energy sources may have a negative impact on the livelihood of the wood traders.

¹¹ Another alternative is improved wood-burning technology. An on-going initiative, the SADC Programme for Basic Energy & Conservation (ProBEC), being implemented by the German Agency for Technical Cooperation (GTZ), promotes efficient biomass energy technologies through the use of a ‘Rocket’ stove. However, as currently designed the ‘Rocket’ stove is not suited to the ‘braai-ing’ application (Mrubata et al. 2008).
Figure 2: The base section of the type of wood braai currently being used by meat traders in Khayelitsha

Source: Edwin Muchapondwa
A 4-burner gas braai costs between R2 000 and R4 000, depending on quality. A gas cylinder of any size can be obtained for a deposit of R150. The traders would then need to refill the cylinders with a quantity of gas – 9kg, 14kg, 19kg or 48kg. It is estimated that using a 4-burner gas braai for 12 hours of a day would burn 3kg of gas, or 90kg per month. As can be calculated
from the table below, the lowest cost of gas is about R16.12 per kg (excluding VAT). At that price, the cost of 90kg of gas (i.e. a month’s supply) would be about R1 450.

<table>
<thead>
<tr>
<th>Description</th>
<th>Amount (R)</th>
</tr>
</thead>
<tbody>
<tr>
<td>4-burner gas braai</td>
<td>2 000 to 4 000</td>
</tr>
<tr>
<td>Gas cylinder deposit</td>
<td>150</td>
</tr>
<tr>
<td>Total</td>
<td>2 150 to 4 150</td>
</tr>
</tbody>
</table>

Source: Quotations from suppliers

4.4 Providing additional refuse skips for household waste
Reducing pollution in Khayelitsha

The City’s policy is to provide lockable shipping containers which are cleared twice a week. Currently, the Solid Waste Department supplies one 6m shipping container per 400 dwellings (Horn 2008) (see Figure 4). Households in all the informal settlements are given free black bags in which they accumulate their waste before off-loading it at the container.

Figure 4: A lockable shipping container currently meant to be used by 400 dwellings

Source: Edwin Muchapondwa

The data on waste management service delivery in Table 8 below suggests that 89.97% of households had their waste removed by the local authority at least once a week in 2005/2006. The remaining households’ waste could fall into any of the other categories: removed less often than once a week, communal refuse dump, own refuse dump, or no rubbish removal. In some informal settlements, community servicing is arranged on a rotational basis as a way to involve communities and create incomes for them. Due to a recent shortage of shipping containers a

The Solid Waste Department strongly asserts that all households in Khayelitsha are serviced at least once per week. The informal settlements unit carries out surveys once every two weeks. The Solid Waste Department provides a service if they become aware of newcomers who would not be receiving a service. In cases where there are service delivery problems the councillor is supposed to bring this to the attention of the sub-council or the call centre. It is likely that at times some people simply miss the waste collection, since it is scheduled for once a week. Sometimes mischievous action leads to the burning of waste, and this is likely to happen from TD, 6(2), December 2010, pp. 333-358.
very limited number of skips – each with a carrying capacity of 6m³, or 72 black bags – were temporarily rolled out, and will be replaced when containers become available (Horn 2008).

**Table 8: Proportion of refuse removed by local authority at least once a week: 2005/2006**

<table>
<thead>
<tr>
<th>Khayelitsha Wards in KAPS survey area</th>
<th>Proportion of weekly refuse removed (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ward 87</td>
<td>99.64</td>
</tr>
<tr>
<td>Ward 88</td>
<td>77.03</td>
</tr>
<tr>
<td>Ward 89</td>
<td>98.55</td>
</tr>
<tr>
<td>Ward 90</td>
<td>88.15</td>
</tr>
<tr>
<td>Ward 91</td>
<td>86.47</td>
</tr>
<tr>
<td>Ward 92</td>
<td>Not available</td>
</tr>
<tr>
<td>Simple Average</td>
<td>89.97</td>
</tr>
</tbody>
</table>

Source: CoCT (2005a, 2005b, 2006a, 2006b, 2006c, 2006d)

The current proposed intervention targets PM10 from the burning of household waste. The contention is that refuse removal is inadequate, leading people to resort to burning waste. In this intervention the primary motive is to serve those who are currently not being served by the current refuse removal infrastructure. This intervention would entail the provision of additional refuse skips to be positioned at points where burning of waste has been identified, in order to eliminate the need to burn the levels of burnt waste observed currently. The time to time; but not frequently. There is therefore a need for enhanced communication and education. There might be a need to find new ways of educating the communities, e.g. community theatres (Coetzee 2008).

Depending on the structuring of refuse removals, it might also be the case that some people merely miss the current refuse removal routines which are otherwise capable of accommodating them. The times, days and locations of refuse removals may simply be inconvenient for some households. The extent to which burning of waste is a problem should be identifiable from the data on its contribution to PM10 levels in Khayelitsha. However, detailed current information regarding the exact extent of informal waste burning and the likely extent of emissions is not available.

This intervention would need to be implemented along with a targeted public awareness and educational campaign. Furthermore, the onus would be on the City Solid Waste Management Department to ensure that the additional refuse skips are well managed, to avoid creating other environmental health problems – there is a risk that the additional skips will simply spill over and create additional environmental and health problems as animals scavenge on the waste.

Even though the provision of additional refuse skips has been suggested as a possible intervention, the Solid Waste Department does not recommend such an action as an effective way of curbing PM10 levels. Given the high level of waste removals, it is not believed that additional refuse skips would add much to the aggregate amount of refuse collected. In the Solid Waste Department’s view, the provision of additional refuse skips constitutes an unnecessary cost, given that one would need to either invest in the additional skips as well as additional vehicles to collect those skips, or contract private waste management service providers to do so. Given that the City itself does not currently have the necessary equipment, especially the vehicles, this

---

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15 Even though the provision of additional refuse skips has been suggested as a possible intervention, the Solid Waste Department does not recommend such an action as an effective way of curbing PM10 levels. Given the high level of waste removals, it is not believed that additional refuse skips would add much to the aggregate amount of refuse collected. In the Solid Waste Department’s view, the provision of additional refuse skips constitutes an unnecessary cost, given that one would need to either invest in the additional skips as well as additional vehicles to collect those skips, or contract private waste management service providers to do so. Given that the City itself does not currently have the necessary equipment, especially the vehicles, this
Solid Waste Department estimates that servicing a skip costs roughly R900 per lift, and normally two lifts are done per week. This is a cost of R93 600 per skip per year. Table 9 summarises the costs of the current intervention and those of the other three interventions discussed earlier.

### Table 9: Costs of the PM10 reduction interventions

<table>
<thead>
<tr>
<th>Intervention</th>
<th>Costs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Planting of windbreak trees</td>
<td>R2 000 to R4 460/tree</td>
</tr>
<tr>
<td>Covering of unpaved roads and walkways</td>
<td>R280/m² paved</td>
</tr>
<tr>
<td>Promoting the use of cleaner-burning energy sources</td>
<td>R2 150 to R4 150/gas braai</td>
</tr>
<tr>
<td>Providing additional refuse skips for household waste</td>
<td>R900/skip lift; 2 lifts/week</td>
</tr>
</tbody>
</table>

5. Ascertaining the effectiveness of interventions

Ascertaining the impact of an intervention is not a trivial task, as it does not only depend on emissions rates. Exposure to the emissions is what may really matter. But exposure to emissions is also intricately influenced by other factors such as height of release of pollutants; proximity of source to areas with high human exposure potential; duration and frequency of emissions; and climatic variables such as inversions. For instance, Scorgie & Watson (2004) report that over the Cape coast a persistent low-level subsidence inversion is evident, with its base at approximately 1 km; in addition, the height and persistence of elevated inversions vary with latitudinal and longitudinal position. Khayelitsha is also known to experience low level inversions, a few metres above ground, which trap air pollution. Furthermore, diurnal variations in the wind field and in atmospheric mixing depths – and hence in pollution accumulation and dispersion potentials – result in significant daily variations in air pollutant concentrations, even on days when there is little difference in emission rates (Scorgie & Watson 2004).

To judge the impact of interventions, we start from the premise that PM10 has known impacts on health outcomes, productivity and amenity values. Such information is readily available from the relevant dose-response functions. Therefore, instead of focusing on the impact of interventions in terms of how the constituents of PM10 (i.e. dust, mist, smoke, etc) from the various interventions affect health outcomes, productivity and amenity values, we focus on the extent to which the interventions affect PM10 levels. It must be noted that we are focusing on intervention would also mean a heavy administrative burden, because implementing the intervention would require the tendering and contracting of private waste management service providers. Therefore, the Solid Waste Department is of the view that additional refuse skips should only be considered as an emergency service. In fact, the usual practice is to provide skips as an emergency until regular integrated service can be provided (Coetzee 2008). This paper takes the view that the provision of additional refuse skips should not be dismissed independently of other interventions. The views of the Solid Waste Department will be accounted for appropriately under costs and effectiveness of the additional refuse skips.

*TD*, 6(2), December 2010, pp. 333-358.
the primary PM10 emissions. With this information, it is then feasible to compare the impacts of the various interventions in terms of a plausible common denominator, i.e. their effect on PM10 levels (or PM10 emission rates).

Ordinarily, the effect of each intervention on PM10 levels could be obtained by using the relevant emissions factors for fuel usage changes and changes in direct PM10 emissions in each intervention. Emission factors are given in kg of PM10 emitted as a result of a unit of fuel burned. Using the United States Environmental Protection Agency (US EPA) database, Scorgie and Watson (2004) derived the following PM10 emission factors for fuel burning in the industrial, commercial and institutional sectors.

Table 10: PM10 emission factors for industrial, commercial and institutional fuel combustion

<table>
<thead>
<tr>
<th>FUEL</th>
<th>UNITS</th>
<th>PM10</th>
</tr>
</thead>
<tbody>
<tr>
<td>Coal</td>
<td>kg/tonne</td>
<td>6.60</td>
</tr>
<tr>
<td>Coke</td>
<td>kg/tonne</td>
<td>6.60</td>
</tr>
<tr>
<td>Diesel</td>
<td>kg/kilolitre</td>
<td>0.96</td>
</tr>
<tr>
<td>Paraffin</td>
<td>kg/kilolitre</td>
<td>0.24</td>
</tr>
<tr>
<td>Wood</td>
<td>kg/tonne</td>
<td>2.63</td>
</tr>
<tr>
<td>LPG</td>
<td>kg/kilolitre</td>
<td>0.07</td>
</tr>
<tr>
<td>Waste</td>
<td>kg/tonne</td>
<td>6.30</td>
</tr>
<tr>
<td>Natural gas</td>
<td>kg/10^3 m^3</td>
<td>0.03</td>
</tr>
</tbody>
</table>

Source: adapted from Scorgie & Watson (2004)

Scorgie & Watson (2004) also derived the following PM10 emission factors for household fuel combustion.

Table 11: PM10 emission factors for household fuel combustion

Primary pollutants are those emitted directly into the atmosphere, and secondary pollutants are those formed in the atmosphere as a result of chemical reactions, such as hydrolysis, oxidation, or photochemical reactions (Scorgie & Watson 2004).
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<table>
<thead>
<tr>
<th>FUEL</th>
<th>UNITS</th>
<th>PM10</th>
</tr>
</thead>
<tbody>
<tr>
<td>Coal</td>
<td>g/kg</td>
<td>4.10</td>
</tr>
<tr>
<td>Paraffin</td>
<td>g/l</td>
<td>0.20</td>
</tr>
<tr>
<td>LPG</td>
<td>g/kg</td>
<td>0.07</td>
</tr>
<tr>
<td>Wood</td>
<td>g/kg</td>
<td>15.70</td>
</tr>
</tbody>
</table>

Source: adapted from Scorgie & Watson (2004)

On one hand, for interventions using the above fuels it is easy to compute their effectiveness in PM10 reduction by making use of the emission factors given in Tables 10 and 11. First, consider the displacement of wood used by households. The effect of displacing wood should be a reduction in PM10. The KAPS survey reported an average daily wood consumption by informal meat traders of 50kg (KAPS 2008). Using the emission factors in Table 11, the differential impact of a switch from wood braais to gas braais is a reduction in PM10 of 15.63g for every 1kg reduction in wood used. On average each trader would contribute to a daily and weekly PM10 reduction of about 781.5g and 5.470kg respectively. Second, consider the displacement of burnt waste. We estimate that one black bag full of waste has an average mass of about 25kg. Therefore, a skip with a capacity of 72 black bags would have an estimated capacity of 1 800kg. Providing an additional skip which is lifted twice a week means that at best, an estimated 3 600kg of household waste will be properly disposed of rather than burnt every week. The impact of the proper disposal is a reduction in PM10 of 6.30g for every 1kg reduction in burnt waste. Thus, the expected PM10 reduction from burnt waste per week would be 22.68kg.

On the other hand, for those interventions which bring about PM10 reduction through elimination of windblown dust, an intricate modelling of the dispersion mechanisms of PM10 emissions would be called for. For instance, the main factors influencing traffic-generated dust emissions alone on unpaved roads include vehicle velocity, number of wheels per vehicle, particle size distribution, road surface moisture, tyre width, length of unpaved road, and traffic volume. Unfortunately, such modelling is beyond the scope of this study; in addition, dispersion modelling for the KAPS project is still ongoing and the current study could not benefit from those results. Table 12 shows the effectiveness measures for promoting the use of alternative, cleaner-burning energy sources (i.e. using gas braais) and providing additional refuse skips for household waste. The table also shows the lack of data on the effectiveness of planting windbreak trees and covering unpaved roads and walkways.

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17 This is not a trivial reduction given that the airport and medical waste incineration were each estimated to emit about 3 tonnes of PM10 in 2004 (Scorgie & Watson 2004). The number of informal meat traders in Khayelitsha is not known. Nevertheless, it is not expected that all meat traders could adopt gas braais in place of wood braais, because of concerns related to affordability, access, safety and security. However, for every 20 informal meat traders to adopt the gas braais, annual PM10 emissions would decrease by over five tonnes. (The focus groups during the survey stages included 20 informal meat traders.)

18 The Solid Waste Department asserts that there is a limit to the extent to which providing additional skips will reduce PM10 since there is not much additional household waste to collect, given the existing high waste-management service-delivery levels.
Table 12: The effectiveness of the PM10 reduction interventions

<table>
<thead>
<tr>
<th>Intervention</th>
<th>Effectiveness (PM10 reduction)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Planting of windbreak trees</td>
<td>?</td>
</tr>
<tr>
<td>Covering of unpaved roads and walkways</td>
<td>?</td>
</tr>
<tr>
<td>Promoting the use of alternative, cleaner-burning energy sources</td>
<td>5.470kg/braai/week</td>
</tr>
<tr>
<td>Providing additional refuse skips for household waste</td>
<td>22.68kg/skip/week</td>
</tr>
</tbody>
</table>

Thus, as was pointed out earlier, the proposed interventions for reducing PM10 in Khayelitsha are not comparable, and evaluating their effectiveness is non-trivial. Despite the difficulties caused by the lack of objective data on the effectiveness of the various interventions, this section tries to give a cost-effectiveness ranking on the basis of perceptions of effectiveness. It starts from the realisation that pollution control is a long-term activity. It is therefore assumed that the objective of the current analysis is to guide the selection and ranking of the proposed interventions over a 20-year time horizon. In order to do this, we pick the intervention that we think is the simplest in terms of implementation by the City and use it as the base category for comparison purposes.

On this basis, we pick the provision of additional skips as the base category, as it entails contracting (or possibly extending the current contracts of existing) private waste management service providers to do so. The provision of an additional skip will cost R900 per lift and two lifts per week are expected, i.e. a cost of R1 800 per week. If a decision were made to provide and service an additional skip for 20 years, it would cost R1 872 000, assuming that the price remained constant. (The assumption of a fixed price is not unrealistic, as the contract and payment can be made immediately, with the service provider being cushioned by the interest he or she can earn from invested prepayments.)

Now, for comparison we assume that an initial capital outlay of R1 872 000 has been put forward for use by any of the other interventions. Firstly, tree-planting: as the cost of planting and maintaining a tree is between R2 000 and R4 460, it is possible to plant between 419 and 936 trees immediately, from the given capital outlay. Secondly, paving: as the cost of paving is R280/m², it is possible to pave 6 685m² immediately, from the same capital outlay. Lastly, gas braais: as the gas braai equipment costs between R2 150 and R4 150 each, it is possible to supply between 451 and 870 gas braai sets from the given capital outlay.

Even though we do not have objective data on the effectiveness in PM10 reduction of all the proposed interventions, we use our perception of the effectiveness of the proposed interventions assuming a capital outlay of R1 872 000 for each. The provision of 451 to 870 gas braai sets to informal traders in Khayelitsha is likely to have an immediate, significant impact on PM10 reduction. Given that the wood PM10 emission factor is 15.7kg/tonne, displacing wood usage of 50kg per day per informal trader by switching to gas should contribute significantly to PM10 reduction in Khayelitsha. The next most effective interventions are likely to be those which reduce dust. Planting 419 to 936 trees in a strategic formation is likely to reduce more windblown dust than would paving 6 685m² of exposed areas. Lastly, provision of an additional
skip for the duration of the planning horizon is expected to be the least effective. (We have ranked the ‘gas braais’ intervention ahead of provision of additional refuse skips despite the latter having a lower cost-effectiveness ratio; because in this case, many gas braais have more effectiveness than one skip.)

Therefore, based on our perception of the effectiveness of the proposed interventions, we can create an ordinal effectiveness measure of the proposed interventions in Table 13, where a higher value indicates greater effectiveness. It should be noted that with an ordinal measure, what matters are relative positions rather than actual magnitudes; therefore, the multiples of 1000 used here could have been any set of numbers, as long as the same ranking is applied to each line item.

### Table 13: Perceived ordinal effectiveness of specified PM10 reduction interventions

<table>
<thead>
<tr>
<th>Intervention</th>
<th>Quantity (from budgeted R1 872 000)</th>
<th>Effectiveness</th>
</tr>
</thead>
<tbody>
<tr>
<td>Planting of windbreak trees</td>
<td>419 to 936 trees</td>
<td>3 000</td>
</tr>
<tr>
<td>Covering of unpaved roads and walkways</td>
<td>6 685 m² paving</td>
<td>2 000</td>
</tr>
<tr>
<td>Promoting the use of cleaner energy sources</td>
<td>451 to 870 gas braais</td>
<td>4 000</td>
</tr>
<tr>
<td>Providing additional refuse skips for waste</td>
<td>1 skip</td>
<td>1 000</td>
</tr>
</tbody>
</table>

### 6. Results and discussion

Cost-effectiveness analysis provides some guidelines for selecting and ranking proposed alternative interventions on the basis of their costs and impacts on PM10 reduction. Given the above ordinal ranking of effectiveness and the fact that the cost of the above interventions is the same, it is possible to compute specific cost-effectiveness ratios. The cost-effectiveness ratios are computed by dividing the costs of each alternative by the measure of its effectiveness. Cost-effectiveness analysis in this case gives preference to those interventions with the lowest cost of achieving PM10 reductions. The cost-effectiveness ranking (in descending order) is as follows: (1) providing gas braai sets to meat traders; (2) planting windbreak trees; (3) paving exposed areas; and (4) providing extra refuse skips. This information is also provided in table 14.

### Table 14: Cost-effectiveness analysis of specified PM10 reduction interventions

<table>
<thead>
<tr>
<th>Intervention</th>
<th>Cost</th>
<th>Effectiveness</th>
<th>Cost-effectiveness ratio</th>
<th>Cost-effectiveness ranking</th>
</tr>
</thead>
</table>

*TD, 6(2), December 2010, pp. 333-358.*
Planting of 419 to 936 windbreak trees  
R1 872 000 3 000 624 2

Covering of 6 685 m² unpaved roads and walkways  
R1 872 000 2 000 936 3

Promoting the use of 451 to 870 gas braais  
R1 872 000 4 000 468 1

Providing one additional refuse skip for waste  
R1 872 000 1 000 1872 4

As indicated earlier, cost-effectiveness analysis only provides some guidelines for selecting and ranking proposed alternative interventions on the basis of their costs and impacts. Ultimately, the actual selection and ranking of alternatives would have to take into account many other factors such as socioeconomic, implementation and enforcement issues – for example, planting windbreak trees results in a reduction of carbon dioxide in addition to reducing PM10; this means that it may be possible to link this intervention to climate change initiatives, thus opening up a wide range of potential funding opportunities.

7. Conclusion and recommendation

The average PM10 levels in Khayelitsha are unusually high and are estimated to be 70% above those of the Cape Town CBD nearby (KAPS 2008). High PM10 levels are detrimental to people’s health, productivity and amenity values. The KAPS project was implemented partly to provide an understanding of the factors behind the observed high levels of PM10 in Khayelitsha.

The current study aimed to give cost-effectiveness rankings of feasible interventions for reducing PM10 levels in Khayelitsha. Given the huge disparity in the scales of these interventions and the general lack of objective data on their effectiveness, the study used the scale for each intervention that was compatible with a capital outlay of R1 872 000 – the amount needed to provide one additional refuse skip over a 20-year planning horizon.

In cash terms, the following are cost equivalents: planting between 419 and 936 trees in a strategic formation to reduce windblown dust; paving 6 685m² of exposed areas; providing between 451 and 870 gas braai sets to informal meat traders to replace their wood-fired braais; and providing one additional refuse skip for a 20-year planning horizon. Using our perception of the effectiveness of the above interventions in reducing PM10 pollution or its precursors, the interventions were ranked in descending order of effectiveness as follows: (1) providing gas braai sets to meat traders; (2) planting windbreak trees; (3) paving exposed areas; and (4) providing extra refuse skips. Providing gas braai sets to the meat traders of Khayelitsha will significantly reduce the PM10 levels, but also contribute to the sustained livelihoods of some of the poor households.

Thus, despite the difficulties caused by the lack of objective data on the effectiveness of the various interventions, this study has given some guidance on how to select and rank the proposed interventions, primarily making use of cost data and perceptions on effectiveness. It
should be reiterated that cost-effectiveness analysis only provides guidelines for selecting and ranking proposed alternative interventions on the basis of their costs and impacts. In addition, other relevant constraints such as socioeconomic, implementation and enforcement issues must be taken into account when choosing between the alternatives. For example, planting windbreak trees may be chosen ahead of the other options because of its linkage to climate change initiatives, which could open up a wide range of potential funding opportunities.

8. References

Benson, Sally (2008). (personal communication); Air Quality Monitoring, Scientific Services, City of Cape Town.


Burgess, Claire (2008). (personal communication); Vela VKE Engineering (Pty) Ltd, Contractor of the City of Cape Town on the Klipfontein Non-Motorised Transport Route.

City of Cape Town (CoCT) (2005a). ‘A Socio-Economic Profile of Ward 91 (Khayelitsha) looking at the Economic and Human Development Department’s programmes and projects in 2005/06’, Economic and Human Development Department, August 2005.

City of Cape Town (CoCT) (2005b). ‘A Socio-Economic Profile of Ward 92 (Khayelitsha, Site B) looking at the Economic and Human Development Department’s programmes and projects in 2005/06’, Economic and Human Development Department, August 2005.

City of Cape Town (CoCT) (2006a). ‘A Socio-Economic Profile of Ward 87 (Khayelitsha) looking at the Economic and Human Development Department’s programmes and projects in 2005/06’, Economic and Human Development Department, January 2006.

City of Cape Town (CoCT) (2006b). ‘A Socio-Economic Profile of Ward 88 (Heinz Park, New Woodlands, Philippi) looking at the Economic and Human Development Department’s programmes and projects in 2005/06’, Economic and Human Development Department, January 2006.

City of Cape Town (CoCT) (2006c). ‘A Socio-Economic Profile of Ward 89 (Khayelitsha) looking at the Economic and Human Development Department’s programmes and projects in 2005/06’, Economic and Human Development Department, January 2006.

City of Cape Town (CoCT) (2006d). ‘A Socio-Economic Profile of Ward 90 (Khayelitsha, Site C) looking at the Economic and Human Development Department’s programmes and projects in 2005/06’, Economic and Human Development Department, January 2006.

Coetzee, Barry (2008). (personal communication); Manager: IWM Strategy, Policy and By-laws; Solid Waste Planning, City of Cape Town.

Escobedo, F.J., Wagner, J.E., Nowak, D.J., Luz de la Maza, C., Rodriguez, M. and Crane, D.E. (2008). Analyzing the cost effectiveness of Santiago, Chile’s policy of using urban forests...


Horn, Peter (2008). (personal communication); Area Cleaning Branch; Solid Waste Planning, City of Cape Town.


Reducing pollution in Khayelitsha


Schoeman, Robyn-Anne (2008). (personal communication); Vela VKE Engineering (Pty) Ltd, Contractor of the City of Cape Town on the Klipfontein Non-Motorized Transport Route.


Retrofits, EPA420-S-06-002, Office of Transportation and Air Quality, Research Triangle Park, NC.


Exploring the impact of Feuerstein’s Instrumental Enrichment Programme on the cognitive development of prospective mathematics educators

MM Kloppers* and MM Grosser**

Abstract

In this article the researchers report on the findings obtained from a sequential explanatory mixed method study through testing and narratives in order to determine the extent to which 24 prospective Mathematics educators at a South African university enrolled for a BEd-degree possess cognitive skills, and to establish the potential of the Feuerstein Instrumental Enrichment programme (FIE) to develop and improve the cognitive skills of the said prospective educators. Results indicated that there is a need for improving the cognitive skills of the prospective Mathematics educators and that the FIE programme possesses the latent potential to improve and develop cognitive skills.

The significance of this research lies in the contribution it makes in particular to equip lecturers involved in educator training with knowledge regarding the merits of the Feuerstein FIE programme for improving cognitive performance.

Keywords: Cognitive skills, cognitive development, intervention, mediation, cognitive development, Instrumental Enrichment.

Disciplines: Mathematics teaching, Cognitive development, Teacher education.

1. Introduction and problem statement

The critical outcomes, as formulated in the National Curriculum Statement of South Africa, envisages learners who are, among others, competent in the solving of problems, effective in the collection, organizing and managing of activities and successful in evaluating and applying information critically (Department of Education, 2003a, p. 2). In achieving these critical outcomes, the Government wishes to turn schools into “thriving centers of excellence” (Zuma, quoted by Davis, 2009). This corresponds with an aim of the Constitution of the Republic of South Africa, namely to “improve the quality of life of all citizens and free the potential of each person” (Department of Education, 2003a, p. 1), to enable learners to think “smarter” than was the case in the past (Pithers & Soden, 2000, p. 237) and to equip learners with skills to enable them to decipher, question, validate and reason through the substantiality or validity of information (Barnes, 2005, p.12).

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However, the poor performance of learners in South Africa is highlighted by the Third International Mathematics and Science Study (TIMSS) and the Third International Mathematics and Science Study-Repeat (TIMSS-R) which both report deficiencies with regard to higher-order skills, inter alia including the ability to think critically. Maree, Molepo, Owen and Ehlers (2005, p. 124), Howie (2007) and Van der Walt and Maree (2007, p. 223) indicate that the aforementioned ideals have not yet become reality. The TIMSS studies revealed that the South African Grade 8 learners had the lowest scores in Science and Mathematics, two subjects which require well developed cognitive skills such as application and reasoning. The strong cognitive focus required for performance in Mathematics is clear, according to the National Curriculum Statement for Mathematics. Learners should demonstrate the ability to think logically, analytically, holistically and laterally and be capable of applying knowledge from familiar to unfamiliar situations (Department of Education, 2003a, p. 5).

In support of the argument of Feuerstein, (2007, p.5), the researchers agree that the inability of learners to deal with the cognitive demands placed on them can inter alia be attributed to poorly developed cognitive skills and that educators themselves need to possess cognitive skills before they can nurture these skills among their learners (Lombard & Grosser, 2004, p. 213). As the classroom is the most obvious place to deal with the development of cognitive skills, the poor TIMSS results could indicate that educators are not succeeding in equipping learners with cognitive skills (Lombard & Grosser, 2008, p. 572). Prospective educators therefore need to be equipped with the necessary cognitive skills to enable them to develop these skills in their learners.

The researchers’ own observations as ex-teachers and presently as lecturers revealed that most of the learners and students do not possess adequate cognitive skills which attribute to learners being unmotivated, negative and passive (Peretti & Austin, 1980, p. 225; Feuerstein, 1982, p. 37). Our observations informed our conclusion that purposeful efforts should be undertaken to establish the cognitive skills of prospective educators and to recommend ways in which cognitive skills could be enhanced. Haywood, Burns, Arbitman-Smith and Delclos (1984, p. 22), Thornton (2002, p. 7-41), Bjorklund (2005, p. 58) and Bauer (2006: p. 128-131) are of the opinion that cognitive skills can be acquired systematically over time even if these skills were not developed during the pre-school years. This research set out to determine whether this statement holds true.

2. Cognitive Development and the Feuerstein Instrumental Enrichment Programme

The aim of the teaching of thinking should be to teach learners to think independently and effectively on their own (Beyer, 1991, p. 8; Engelbrecht, 1995, p.11-12; Schraw & Olafson, 2003, p.196; Feuerstein, 2008). It is therefore important that educators themselves should function on an abstract level of thinking in order to create classroom climates conducive to the development of cognitive skills (Wragg & Brown, 2001, p. 1). Learning should include mediation and negotiations, and the educators should act as facilitators of learning to encourage learners to become self-regulated and to construct knowledge with understanding independently (Gouws, 1998, p. 72, 73; Doolittle, 2000; Eggen & Kauchak, 2004, p. 28; Woolfolk, 2004, p. 323; Bjorklund, 2005, p. 81; Langford, 2005, p. 234, 235; Kok, 2007, p. 64-44; Ormrod, 2008, p. 29, 196).

Cognitive development focuses among others, on the nurturing of skills to compare, classify, categorize, analyse, synthesize, evaluate, solve problems, make decisions and reason (Sigel, 1991, p. 43; Eggen & Kauchak, 2004, p. 335). The mentioned skills can be divided into two

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important components, namely cognitive and meta-cognitive thinking skills and strategies (Beyer, 1987, p. 17; Monteith, 2002, p. 97; Halpern, 2007, p. 10). Cognitive thinking skills are used to create meaning and involve complex strategies such as decision-making, problem-solving, and conceptualization, as well as more discrete, less complex skills like analysis or synthesis, reasoning skills and more advanced critical thinking skills which are used to distinguish between relevant and non-relevant information (Beyer, 1987, p. 17; Monteith, 2002, p. 97; Halpern, 2007, p. 10). Meta-cognitive thinking skills are used to direct and control cognitive skills (Ormrod, 2008, p. 266-277) and are linked to the reflective skills of planning, monitoring and evaluating the learning progress (Thornton, 2002, p. 102; Grabe & Grabe, 2004, p. 47-49; Van den Berg, 2004, p. 279-280; Gelter, 2005, p. 337; Bereiter, 2006, p. 14; Kok, 2007, p. 28-30).

Rudd (2007, p. 46) claims that thinking should be taught directly in order for learners to reach their full potential, and therefore educators should be familiar with different approaches to the development of thinking skills. With regard to the cognitive development of learners, the role of the educator receives prominent attention. Educators should create safe environments, assist learners to discover their own thinking abilities and reflect on them, teach mutual relationships and create opportunities for learners to act on their own thinking (Wragg & Brown, 2001, p. 1; Singh, Granville & Dika, 2002, p. 328, Le Roux, Olivier & Murray, 2004, p. 89; Winstead, 2004, p. 43). Many learners struggle to think independently of the teacher and to apply knowledge outside the content of their text books (Engelbrecht, 1995, p. 11-12; Sonn, 2000, p. 259; Schraw & Olafson, 2003, p. 178-293; Elder & Paul, 2004, p. 36). More complex and sophisticated ways of reasoning and problem-solving should therefore be developed (Pratt, 2005) and learners should be granted the opportunity to explain their thinking and be active participants who take responsibility for their own learning (Vakalisa, 2007, p. 5). Educators can no longer be only the conveyers of knowledge, but should be aware of the way their learners think and be able to build bridges from the way learners think to more complex and sophisticated ways of thinking (Pratt, 2005). Haywood et al. (1984, p. 20) and Lombard and Grosser (2004, p. 572) are of the opinion that educators do not possess the ability to utilize the process of formal organized thinking and are therefore not capable of conveying it to their learners. Furthermore, educators should purposefully create learning environments which cherish in-depth learning and higher-order thinking (Sing & Khine, 2008, p. 288, 289).

In addition to this, Fisher (1990, p. 4), Vygotsky (in Ormrod, 1995, p. 58-62), Schayer (2000, p. 36-59), Eggen and Kauchak (2004, p. 55-57), Donald et al. (2004, p. 69), Woolfolk (2004, p. 46-52), Langford (2005, p. 46-52), Ormrod (2008, p. 39-43) and Feuerstein (in Wittrock, 1991, p. 82) argue that cognitive structures can *inter alia* be changed through a mediated learning approach to teaching. Feuerstein, Miller, Hoffman, Rand, Mintzker and Jensen (1981, p. 272) define mediated learning experiences as the conveyance of general cognitive structures from the experienced to the inexperienced, less capable person. If learners are exposed to mediated learning experience from a young age, they will have cognitive structures at their disposal which will enable them to organize, join, connect and relate stimulus information (Feuerstein et al., 1981, p. 272; Feuerstein, Hoffman, Jensen & Rand, 1985, p. 47; Fraser, 2006, p. 9). A mediated learning approach expects of learners to think actively and independently (Cole, Hung, McCaslin & Hickley, quoted by Schraw & Olafson, 2003, p. 181). In essence, mediation implies that teaching and learning should clarify the intent and meaning of what is to be learned and enable learners to apply what they have learned. In addition to this, teaching and learning should create individualized and challenging opportunities for learners to become competent, self-regulated learners who can share information with others (Falik, 2001).
Studies done at school level and Higher Education level in, inter alia, Israel (Feuerstein et al., 1981, p. 282; Savell, Twohig & Rachford, 1986, p. 390; Kozulin, 2008), The United States of America (Toomey, Smyth, Warner & Fraser, 2000), New Zealand (Sharron, 1987, p. 236), Venezuela (Sharron, 1987, p. 15), Cleveland and Bahia (Kozulin, 2008) and in South Africa (Feuerstein et al., 1981, p. 282; Savell et al., 1986, p. 390; Kozulin, 2008) have shown that the mediated learning approach of Reuven Feuerstein possesses the latent potential to develop and improve thinking skills. Reuven Feuerstein holds the belief that intelligence is not a fixed entity and can be nurtured (in Matthews, 2001, p. 150). In addition to this, Feuerstein (2008) argues that a mediated learning approach can equip learners of any age with concepts, strategies and skills to repair cognitive deficiencies and to think independently (Feuerstein, 2008). Furthermore, the relevance of the FIE programme for South African pre-service teachers is documented in a study conducted by Skuy, Lomofsky, Fridjhon and Green (1993, p. 92-108). This particular study reports on the merits of the FIE programme for educationally disadvantaged students from a “coloured” community studying towards a teaching qualification at a former teacher training college in South Africa (Skuy et al., 1993, p.95). However, no studies documenting the success of Feuerstein’s mediated learning approach with pre-service teachers studying towards a teaching qualification at university level could be located. Therefore this research makes an important contribution by highlighting the merits that the FIE programme hold for the training of educators studying towards a BEd-degree at a university.

Reuven Feuerstein structured his mediated learning approach to cognitive development in an intervention programme, the FIE programme which consists of fourteen content-free instruments that each comprise a number of pencil and paper exercises. The FIE programme is not culturally biased, and no prior knowledge or subject knowledge is required for participating in the programme. The programme creates a safe environment where intrinsic motivation is developed and enhanced through reflective thinking (Egozi, 1994, p. 361). The posing of questions during mediation plays an important role in the development of thinking (Rotterdam, 2000, p.6) and this technique is used in all the FIE lessons. The main purpose of the instruments is to improve the cognitive functioning of the learner irrespective of age, culture and socio-economic environment by increasing intrinsic motivation and promoting reflective thinking through which autonomous cognitive behaviour is learned (Wittrock, 1991, p. 83). The programme exercises address cognitive skills such as classification, spatial relationship, planning, organizing, inductive and deductive reasoning (Link, 1991, p. 11; Feuerstein, Rand, Hoffman & Miller, 1983, p.1 26). In particular, the programme focuses on the factors leading to poor cognitive development and attempts to change the passive dependent cognitive style of the learner into an active independent cognitive style (Feuerstein et al., 1983, p. 1). Learners demonstrate cognitive deficiencies when they find it problematic to gather, organize and use information, are impulsive and do not possess strategies or structures for thinking (Fisher, 1990, p. 132; Feuerstein, 2007, p. 5). These deficiencies can impact on the input, elaboration or output level of the learning process (Nickerson, Perkins & Smith, 1985, p. 152). Cognitive deficiencies in the input phase imply blurred and sweeping perceptions that lead to unplanned, impulsive, inaccurate and unsystematic learning. Furthermore, learners cannot work with two or more sources of information at a time (Feuerstein et al., 1983, p. 73; Feuerstein et al., 1985, p. 52-53; Feuerstein, 2007, p. 5). If learners lack cognitive functions in the elaboration phase they experience difficulties in planning their actions, defining problems and distinguishing between relevant and irrelevant cues for solving a problem (Feuerstein et al., 1983, p. 73-74; Feuerstein 2007, p. 5). Impaired cognitive functions in the output phase are recognized by trial and error responses and the inability to communicate responses accurately (Feuerstein et al., 1983, p. 74; Feuerstein, 2007, p. 5).
In the context of this study the researchers focused on two instruments in the FIE programme, namely Organization of Dots and Analytic Perceptions. Organization of Dots aims at empowering learners to organize, plan, categorize, analyze and summarize spontaneously, restrict impulsive behaviour, improve problem-solving techniques and social interaction, and develop reflexive processes. Cognitive functions which are developed by Analytic Perception are spontaneous comparison, identifying relationships and categorizing (Feuerstein, 1996).

3. Research Framework and Design

Framed within a pragmatic paradigm, this pilot study was explanatory in nature. Sequential explanatory mixed-method research involving a quantitative and qualitative method of data collection was utilized (Ivankova, Creswell & Plano-Clark, 2007, p. 254-265). Quantitative data collection by means of testing and qualitative data collection through participant narratives characterized the research process. In the context of this study, the test results were obtained and analysed where after the participants were requested to write down their personal experiences with the FIE programme in the form of a narrative. The narratives were analysed and used to gain a deeper understanding of the test results. Primarily, the focus was on the quantitative data while the qualitative data was used in a secondary role to explain and better understand the test results obtained (McMillan & Schumacher, 2006, p.28).

As part of the quantitative component, a pre-experimental pre-test post-test research design was used with two groups of randomly assigned participants, namely Group 1 and Group 2. The verbal and non-verbal reasoning tests of the DAT-L test battery were used to determine the extent to which cognitive skills were developed among the participants. The pre-test was done with the entire group of participants before the commencement of the study to determine the cognitive skills of the group before the application of the FIE intervention programme. The researchers personally exposed both groups to intervention with the FIE programme on rotational basis for a period of twelve hours over six weeks in an attempt to develop and/or improve thinking skills. After the implementation of the intervention, each of the groups was tested again with the same verbal and nonverbal reasoning DAT-L tests to determine whether the intervention programme had developed and/or improved thinking skills. Furthermore, after the six week intervention implementation period with Group 2, Group 1 received a retention test, to establish what happened to the thinking skills of Group 1 during the period in which they were not exposed to the intervention. To explain the data gained through the test results, participants were requested to record their perceptions of and experiences related to the FIE programme in a narrative. This was used to determine more specifically which aspects of the programme the participants regarded as important and valuable, as well as to support the quantitative data obtained through the DAT-L tests.

The intervention period was geographically bound and kept short because Mouton (2009) suggests that a shorter, bounded implementation timeframe for an intervention decreases the influence of other factors on the research and enables one to make more reliable deductions regarding the impact on the intervention before it is implemented with larger groups. The elements of a plan as formulated by Feuerstein (1996, p. 33) were used as a basic point of departure for all the lessons. Learners had to define goals, look at available information, decide on the best strategy to be used, determine where to start, know the rules and check their work (Feuerstein, 1996). Manuals supplied with the instruments were used to guide the implementation of the programme activities meticulously according to a fixed procedure to make sure that both groups received the intervention in similar ways. Throughout, the principles of...
mediation were applied and learners were able to monitor, test and correct themselves. Unknown vocabulary, concepts and instructions were clarified and learners had the opportunity to work independently on the exercises. Learners had the opportunity to discuss problems in order to improve problem-solving behaviour and more importantly to become aware of their own cognitive behaviour during problem-solving (Savell et al., 1986, p. 386; Grosser, 1996, p. 77). Learners were encouraged to apply the knowledge gained from the instrument to real life situations.

3.1 Population and sample

The research was conducted at a South African university with a purposefully and conveniently selected sample consisting of all the second year education students with Mathematics as major (n = 24). These students were chosen due to the fact that one of the researchers lectured Mathematics to the students which made easy access to the students possible. Although students with Mathematics as major subject were used, the focus of this research was on the general development of cognitive skills irrespective of subject context. The students were randomly grouped into two groups, Group 1 and Group 2, comprising eleven and thirteen participants respectively. The participants were heterogeneous regarding the biographical variables gender, language and culture. As these groups were too small, the impact of these variables on the results was not determined. Only the impact of the independent variable, the FIE programme, with respect to the dependent variable, cognitive development, was established.

3.2 Hypotheses

As the study was pre-experimental in nature, only the following tentative null and directional and non-directional alternative hypotheses could be formulated.

\( H_0 \): The FIE programme of Reuven Feuerstein will have no statistical significant impact on the cognitive skills of prospective Mathematics educators.

\( H_{11} \): The FIE programme of Reuven Feuerstein will have a statistical significant impact on the cognitive skills of prospective Mathematics educators.

\( H_{12} \): There is a relationship between the FIE programme of Reuven Feuerstein and the cognitive skills of prospective educators.

3.3 Data collection instruments

3.3.1 DAT-L test

With the assistance of the Human Sciences Research Council, the DAT-L test was identified as a suitable test to determine the cognitive development level of the participants (Owen & Vosloo, 2008). The DAT-L test makes use of static assessment procedures, and supported the focus of the study, namely to determine cognitive development as product after the implementation of the intervention, in contrast to dynamic assessment procedures that rather aim to determine the potential for cognitive development (Colman, 2001; Tzuriel, 2009).
The DAT-L is a set of six differential aptitude tests which focus on the following facets of cognitive functioning: vocabulary, verbal and non-verbal reasoning, computations, comprehension, comparison, spatial visualization, memory and mechanical insight (Owen & Vosloo, 2008). For this research, the tests for verbal (Test 2) and non-verbal reasoning (Test 3) were used as they are related well to the skills used in the two instruments of the intervention programme, namely Organization of Dots and Analytic Perception.

The rationale for using Test 2 rests upon the assumption that certain skills are required to determine relationships and to solve problems which require logical thinking, and are required for successful general reasoning (Owen & Vosloo, 2000: p.4). The test comprised twenty five questions and required the participants to understand, logically process and solve verbal problems. Feuerstein’s instrument Organization of Dots, although non-verbal in nature, aims at helping learners to improve their skills to solve problems, organize information spontaneously, understand relationships, think logically, plan, categorize, analyse and summarize all of which can be applied across a variety of learning contexts (Feuerstein et al., 1983, p.140-141).

Test 3 aims to realize relationships between figures, to identify a missing figure and to follow changes that a figure can undergo in a pattern of figures (Owen & Vosloo, 2000, p.5). This test consists of twenty five questions divided into two sections, A and B. In Section A, learners have to match figures and in section B, they are expected to identify a missing figure when there is a change in figures. This test measures the skill to solve problems of a logical nature when no words or numbers are given. The improvement of non-verbal reasoning skills is addressed in the Feuerstein Instrument Analytic Perceptions (Feuerstein, 1996).

3.3.2 Narrative analysis

On completion of the research, all the participants wrote narratives that documented their perceptions and experiences with the FIE programme. The narratives focused on obtaining information regarding the four elements suggested by McMillan and Schumacher (2006, p. 62), namely detail about personal experiences during the intervention, particular incidents or experiences of importance during the intervention, the use of expressive language to describe what the intervention achieved and how meaningful the intervention appeared to be. By means of inductive analysis the researchers independently worked through the narratives and identified codes related to the aforementioned elements after which codes were compared and common themes identified (Cohen, Manion & Morrison, 2007, p. 476).

Reliability and validity of the DAT-L test

The reliability of the test instrument for South African learners varies between Cronbach alpha coefficients of 0.55 - 0.67 for verbal reasoning and 0.67 - 0.71 for non-verbal reasoning and are regarded as satisfactory by the authors of the test (Owen, 2000, p. 43).

For the actual study Cronbach alpha coefficients of 0.59 and 0.24 were calculated for Test 2 and Test 3 respectively. The reliability for Test 3 is quite low, which could possibly be attributed to the fact that very few of the participants completed the test in the set time frame. If the last five test items of the test are not considered when calculating the Cronbach alpha coefficient, the reliability coefficient that is reflected is 0.70. In most of the social sciences, a Cronbach alpha between 0.7 and 0.8 is regarded as acceptable. Some researchers, however, argue that 0.75 and
0.80 are acceptable, and in some instances 0.60 is regarded as in order for an initial exploratory study, as was the case with this research (Garson, 2008; Simon, 2008).

In addition to the Cronbach alpha coefficients, reliability was also guaranteed by administering and marking the tests meticulously according to the instructions in the test manual. All the marks were checked twice to ensure reliability. There was only one correct answer and no marks were deducted for wrong answers. Tests were taken in classroom environments familiar to the learners to avoid the interference of unfamiliar circumstances (Cohen et al., 2007, p. 156-160).

The following important aspects were considered to ensure reliability and validity for the test-retest situation:

- The time interval between the two tests was short enough to prevent the possible influence of external factors and long enough so as to prevent the learners from remembering the questions from the first test.
- Tests were collected after administration and no answers were made available to the participants. The test questions were in no way related to the subject content whatsoever which could have benefitted the participants (Cohen et al., 2007, p. 146; Pietersen & Maree, 2007a, p. 215; McMillan & Schumacher, 2006, p. 140).

**Trustworthiness of the narratives**

To ensure the trustworthiness of the narratives, the completion of which was a subjective process, the following guidelines as indicated by Nieuwenhuis (2007, p. 113-115) were followed: the coded data was verified by an independent coder to eliminate researcher bias. In addition to this, the findings were not used to generalize to other populations. The researchers merely wanted to determine the effect of the intervention and the experiences that the participants had with the intervention in the bounded geographical context of a specific South African university. An inductive process of data analysis was followed to ensure that meaning and understanding were derived from the exact words of the participants.

**3.4 Ethical considerations**

The participants were informed about the nature of the study and what their involvement would entail in order firstly to obtain their assent as to whether they would like to take part or not. The participants were also assured that their responses would remain confidential and anonymous and that they would be informed about the outcome of the study. After obtaining assent, written consent was obtained from all the participants involved in the research.

**4. Data Analysis and Discussion**

**4.1 Data analysis and interpretation of the DAT-L pre-test and post-test results**

Data analysis was conducted through standardized descriptive and inferential statistical procedures by an independent statistician. Non-parametric statistical procedures were used due to the small sample (n < 30) and due to the fact that it could not be presumed that the study variables were normally distributed (McMillan & Schumacher, 2006, p. 308; Pietersen & Maree, 2007b, p. 233). The Mann-Whitney test which is a non-parametric equivalent of the parametric t-test was used to compare the pre-test and post-test results of the two independent groups, Group 1 and Group 2 (Pietersen & Maree, 2007b, p. 233). The Mann-Whitney test
uses ranks rather than real values. This implies that extreme values will have a lesser impact on results than the parametric t-test (Pietersen & Maree, 2007b, p. 233). The Wilcoxon signed-rank test, a non-parametric test similar to the parametric t-test, was used to compare the differences between the pre-test and post-test results within the groups. Table 1 reports on the pre- and post-test results of Group 1 and Group 2.

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<thead>
<tr>
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<th>Group 1</th>
<th>Group 2</th>
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<tbody>
<tr>
<td></td>
<td>N</td>
<td>Mean (25)</td>
</tr>
<tr>
<td>Pre-test Test 2</td>
<td>11</td>
<td>14.0</td>
</tr>
<tr>
<td>Pre-test Test 3</td>
<td>11</td>
<td>9.6</td>
</tr>
<tr>
<td>Post-test Test 2</td>
<td>11</td>
<td>15.8</td>
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<tr>
<td>Post-test Test 3</td>
<td>11</td>
<td>11.2</td>
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<tr>
<td>Retention test Test 2*</td>
<td>11</td>
<td>15.8</td>
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<tr>
<td>Retention test Test 3*</td>
<td>11</td>
<td>15.0</td>
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|                  | N     | Mean (25)   | Standard deviation |
| Pre-test Test 2  | 13    | 12.9        | 2.929               |
| Pre-test Test 3  | 13    | 10.3        | 3.966               |
| Post-test Test 2 | 13    | 15.4        | 2.434               |
| Post-test Test 3 | 13    | 13.5        | 4.594               |

Table 1: Pre- and post-test results of participants

* Retention test only applicable to Group 1

The standard deviation is an indication of the variance of scores around the mean (Coolidge, 2006, p. 76). The larger the standard deviations, the further the values lie from the arithmetic mean (Steyn, Smit, Du Toit & Strasheim, 2004, p.137). The standard deviations revealed that there was not a large variance in the pre- and post-test results for both groups, which indicated that the participants were more or less on the same cognitive developmental level and thus comparable.

Although the researchers did not focus on Mathematics as a subject in particular, the low mean scores obtained in the pre-tests by the participants is distressing when taking into consideration that these were second-year education students with Mathematics as major, a subject that, as prerequisite for effective learning, expects learners to have a variety of well developed cognitive skills (Winicki-Landman, 2001, p. 30; Sing et al., 2002, p. 324; Winstead, 2004, p. 44, Department of Education, 2007, p. 4; Sezer, 2008, p. 351).

The mean of the pre-test for Group 1 (14.0) is higher than the mean of the pre-test of Group 2 (12.9) for test 2. Although the results for Group 1 were better than those of Group 2, it appeared as if participants in both groups could improve regarding cognitive skills such as logical thinking and general reasoning which were tested with Test 2. The mean of the post-test of Group 1 for Test 2 (15.8) was higher than that of Group 2 (15.4), and when comparing this with the pre-test results, it seemed as if there was an improvement in the application of cognitive skills.

The mean of the post-test of both groups was greater than the mean of the pre-test, which might point out that the intervention programme possibly, has the potential to improve the cognitive skills. This augurs well for findings in the literature that highlight the merits of the FIE

Regarding the pre- and post-test results of both groups for test 3, it is important to mention that the means of the post-test were very low at 9.6 and 10.3 respectively. It seems as if the non-verbal skills were more problematic than the verbal skills. An improvement was, however, noted for both groups in the post-tests with means of 11.2 and 13.5 respectively. The improvement of the means of Group 1 regarding Test 3, from the post-test (11.2) to the retention test (15.0), as well as the fact that the post-test mean for Test 2, remained the same during the retention test. This result could point in the direction that Feuerstein’s intervention programme possibly has the potential to improve the application of cognitive skills, but also that these skills, when established, could be retained in the absence of direct mediation and result in autonomous cognitive behaviour (Feuerstein et al., 1983, p. 115-118).

Inferential statistics assisted the researchers to provide deeper dimensions to the results and to ultimately accept or reject the hypotheses. The Mann Whitney test, a non-parametric t-test for independent groups was used (Pietersen & Maree, 2007b, p. 233) to indicate significant differences between groups 1 and 2. Table 2 reports the results for the differences between the different test occasions for Group 1 and Group 2.

<table>
<thead>
<tr>
<th>Test 2 Group 1</th>
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<th>Test 3 Group 1</th>
<th>Test 3 Group 2</th>
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<tbody>
<tr>
<td>Pre-test</td>
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<td>Post-test</td>
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<tr>
<td>N</td>
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<td>Z (Mann-Whitney statistics)</td>
<td>Statistical significance (p)</td>
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<tr>
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<td>.117</td>
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<tr>
<td>13</td>
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<td>63.500</td>
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<td>Pre-test</td>
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<td>Post-test</td>
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</tr>
<tr>
<td>N</td>
<td>Median rank</td>
<td>Z (Mann-Whitney statistics)</td>
<td>Statistical significance (p)</td>
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<tr>
<td>Post-test</td>
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<tr>
<td>N</td>
<td>Median rank</td>
<td>Z (Mann-Whitney statistics)</td>
<td>Statistical significance (p)</td>
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<td>71.500</td>
<td>-.000</td>
</tr>
<tr>
<td>13</td>
<td>12.50</td>
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<tr>
<td>Post-test</td>
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</tr>
<tr>
<td>N</td>
<td>Median rank</td>
<td>Z (Mann-Whitney statistics)</td>
<td>Statistical significance (p)</td>
</tr>
<tr>
<td>11</td>
<td>10.73</td>
<td>52.000</td>
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</tr>
<tr>
<td>13</td>
<td>14.00</td>
<td></td>
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</tbody>
</table>

Table 2: Significance of differences between the pre- and post-test means when using the Mann-Whitney test

Statistical significance: * p < 0.05

The data tabled above, indicate that there was no statistical significance between Groups 1 and 2, as p > 0.05 for all the different test occasions. This implies that not one of the groups benefitted more than the other from the intervention programme.
The non-parametric Wilcoxon Signed ranks test was used to compare the improvement of cognitive skills within the groups. The results are reported in Table 3.

<table>
<thead>
<tr>
<th>Group 1</th>
<th>N</th>
<th>Mean rank</th>
<th>Z</th>
<th>Statistical significance</th>
</tr>
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<tr>
<td></td>
<td></td>
<td>Negative</td>
<td>Positive</td>
<td></td>
</tr>
<tr>
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<td>2.83</td>
<td>6.64</td>
<td>-1.946</td>
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<td></td>
<td></td>
</tr>
<tr>
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<td>.00</td>
<td>5.50</td>
<td>-2.810</td>
</tr>
<tr>
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<td></td>
</tr>
<tr>
<td>Post-test Test 2</td>
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<tr>
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<td></td>
<td></td>
</tr>
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<td>6.89</td>
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<td></td>
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<td>6.38</td>
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<td></td>
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<td>Pre-test Test 3</td>
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<th>Z</th>
<th>Statistical significance</th>
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<td></td>
<td>Negative</td>
<td>Positive</td>
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</tr>
<tr>
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<td>.00</td>
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<tr>
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<td></td>
</tr>
<tr>
<td>Pre-test Test 3</td>
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<td>2.00</td>
<td>7.91</td>
<td>-2.909</td>
</tr>
<tr>
<td>Post-test Test 3</td>
<td>13</td>
<td></td>
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<td></td>
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</tbody>
</table>

**Table 3: Significance of differences between pre- and post-test means within groups as measured by the Wilcoxon Signed ranks test**

Statistical significance: * p < 0.05

From the results reported in Tables 2 and 3 it is clear that the statistical significant differences in test results did not occur between the two groups, but mainly within the two groups. Regarding Group 1, the post-test results of Test 2 were statistically significantly better than the pre-test results for Test 2 of Group 1, as p = 0.016. The same applied for Test 3, where a statistical significant improvement was noted for the post-test results, as p = 0.015. No statistical significant difference was noted between the retention test and the post-test results for Test 2 and the retention and pre-test results of Test 2. The cognitive skills did not weaken or improve further during the retention period. A statistically significant difference is again noted between the retention test and the pre-test results of Test 3 (p = 0.005), as well as between the retention test and the post-test of Test 3 (p =0.010), in favour of the retention test results. This implies that once the cognitive skills were established, they were retained and improved, possibly through continuous use.
A similar trend was noted for Group 2. There was a statistically significant difference between the pre- and post-test results of Group 2 for Test 2, \( p = 0.001 \), as well as between the pre- and post-tests of Test 3, \( p = 0.004 \). The statistically significant differences confirm that the FIE programme possesses the latent potential to improve cognitive ability (Toomey et al., 2000; Kozulin, 2008).

The test results of Group 1 and Group 2 indicate that cognitive development does not happen at once. Cognitive development takes time and requires purposeful efforts for extensive practice in applying acquired cognitive skills (Van den Berg, 2004, p. 280; Rudd, 2007, p. 46). It is disturbing that the test results for the pre-test indicated that the participants lacked verbal and non-verbal cognitive and meta-cognitive skills and strategies (Beyer, 1987, p. 17; Monteith, 2002; p. 97; Thornton, 2002, p.102; Grabe & Grabe, 2004, p. 47-49; Van den Berg, 2004, p. 279-280; Gelter, 2003, p. 337; Bereiter, 2006, p. 14; Halpern, 2007, p. 10; Kok, 2007, p. 28-30). Without well developed cognitive and meta-cognitive skills and strategies, the participants would not be able to function as self-regulated learners who can independently construct knowledge with understanding (Gouws, 1998, p. 72, 73; Doolittle, 2000; Eggen & Kauchak, 2004, p. 28; Woolfolk, 2004, p. 323; Bjorklund, 2005, p. 81; Langford, 2005, p. 234, 235; Kok, 2007, p. 64-44; Ormrod, 2008, p. 29, 196). In support of Lombard and Grosser (2004, p.213), the researchers argue that, if the participants are not equipped with these skills, they will not be able to nurture these skills among their learners one day, and the critical outcomes of the National Curriculum Statement, which envisage all learners as competent in the solving of problems, effective in the collection, organizing and managing of activities and successful in evaluating and applying information critically (Department of Education, 2003a, p. 2), will not become a reality.

The improvement in the post-test results supports the view of Feuerstein et al. (1983, p. 59) who argue that the cognitive potential of learners is not static and fixed, but dynamic in nature.

4.2 Data analysis and interpretation of the narratives

After the intervention period, the participants were asked to write down their perceptions of and experiences with the FIE programme. The aim was to determine whether the narratives confirmed the quantitative test results before final conclusions could be made. An inductive analysis procedure was used to analyse information obtained from the participant’s experiences of the intervention. Main ideas or codes from each participant’s narrative were identified and themes were developed regarding person, incidents, language and experiences from the intervention. The participants indicated inter alia that they could manage themselves better, that their self-confidence increased and that their problem-solving and decision-making skills improved. In addition to this, their speed in the execution of tasks improved, they considered more than one solution to a problem, could change their strategies, did not give up in difficult situations, thought about the steps involved in problem-solving, could apply the cognitive skills addressed in the instruments to real life situations, worked less impulsively, though a problem through, avoided mistakes, paid attention to detail, checked their work, considered what was given before starting with their tasks, thought critically about information, defined a goal and admitted that planning plays an important role in success. Participants were positive about the programme and commented that it also helped them to reflect on their own lives because they would now be able to identify mistakes they have made in their own lives and think about their mistakes differently. They also mentioned that the programme helped them with intrinsic motivation and persistence on tasks.
The participants’ personal experiences indicate changes and improvement with regard to the cognitive functions that are required in the input, elaboration and output phases of the learning process, as highlighted by Feuerstein et al. (1983, p. 73); Feuerstein et al. (1985, p. 52-53) and Feuerstein (2007, p. 5). Furthermore, the researchers argue that the improved cognitive functions as documented by the participants in their narratives could have attributed to the improvement noted in the post-test results of the participants. The researchers link their argument to the views of Fisher (1990, p. 132) and Feuerstein (2007, p. 5) who indicate that cognitive development and improvement occur when cognitive deficiencies linked to the input, elaboration and output phases of the learning process are ameliorated.

The researchers cautiously assumed that the participants lacked exposure to mediated learning experiences. They base their argument on the fact that the narratives indicated that the participants acquired important cognitive and meta-cognitive skills and strategies that are necessary for cognitive development through the mediated learning approach on which the intervention was based. Participants mentioned in their narratives that they now realise the importance of planning their work, using different strategies to solve problems, reflecting on their work and linking what they have learned to real life situations, which links well with what Fraser (2006, p.9) indicates as some of the merits of mediated learning.

4.3 Accepting/rejecting hypotheses

At the onset of the study tentative null and alternative hypotheses were formulated. Based on the statistically significant results that were obtained, and acknowledging the fact that other biographical variables could have impacted on the results, the researchers cautiously reject the null and non-directional alternative hypothesis. They accept the directional alternative hypothesis as statistically significant improvement after the implementation of the intervention was noted between Group 1 and Group 2 for all the test occasions, with the exception of pre-test 2 and the retention test 2, as well as post-test 2 and the retention test 2 results for Group 1.

5. Findings

Although this research was an exploratory pilot study with a number of limitations linked to the sampling procedure and the type of experimental design used, a number of important conclusions can be derived from this research that should be followed up in more comprehensive studies.

The researchers argue that, in a competitive society, intelligence on its own is not sufficient and learners need to purposely develop cognitive skills in order to solve problems and reason in a rapidly changing world. Educators need to support learners in the development of these skills and they should therefore acquire skills like analysis, synthesis, reasoning and problem-solving themselves before conveying these skills to their learners.

Our aim was to establish whether prospective educators possess cognitive skills as well as the potential of the FIE programme to develop and improve cognitive skills. The pre-test results revealed that the prospective Mathematics educators who took part in the study, did not possess adequate cognitive and meta-cognitive skills and strategies. These results create reason for concern as it appears that the educators who taught these learners at school, as well as the lecturing they received during their first year at university, did not purposefully create
opportunities to enhance their cognitive development. Based on the results of this research, it is clear that educator training should devote much more attention to the cognitive development of prospective educators.

This research revealed that low cognitive performance is reversible through mediation. This implies that instead of labelling the cognitive skills of prospective educators as inadequate, emergent or latent, a pro-active mediated learning approach during the training of these educators should be adopted to improve their cognitive skills. Prospective educators who experience problems in executing cognitive skills for the completion of academic tasks, should be exposed to mediated learning on a more frequent basis, as well developed cognitive skills are regarded as pivotal to educators’ teaching effectiveness (Birjandi & Bagherkazemi, 2010, pp. 135-145; Elizabeth, May & Chee, 2008, pp. 43-57; Hashemi, 2008; Korthagen, 2004, pp. 77-79; Tamblyn, 2000, pp. 16-19). In addition to this, well developed cognitive skills are needed to avoid student educators falling into working ways which are disorganized, overly simplistic, spotty about getting facts, apt to apply unreasonable criteria and then becoming easily distracted, ready to give up at the least hint of difficulty and being intent on a solution that is more detailed than possible or being satisfied with an overly generalized and uselessly vague response (Faciono, 2009, p. 10).

According to a mediated learning approach the purpose of teaching and learning should focus on teaching prospective educators how to think and not what to think. It is imperative that skills such as analysis, reflection, evaluation, making valid conclusions and problem-solving need to be nurtured among prospective educators. In addition to this, prospective educators need to be made aware of the fact that deficient cognitive skills can contribute to poor academic performance. These deficient cognitive skills refer inter alia to impulsive ways of working, inaccuracy, the inability to distinguish between relevant and irrelevant facts, and a lack of self-regulation during learning (Feuerstein, 2007, p. 5). In essence, when complying with the aforementioned important challenges, educator training will equip teachers to lay the foundation for enhancing cognitive development among learners at school.

6. Conclusion

In order to provide quality education at school level and to develop learners to become competent thinkers and problem solvers, a qualitative improvement in the training of educators will have to take place. Teacher education institutions are therefore faced with a two folded challenge, namely (a) to motivate student educators that the teaching of thinking skills is important and that it can be done, and (b) to equip student educators with skills so that they become effective thinkers themselves. It could be argued that educators should become effective thinkers themselves before they can teach learners how to become effective thinkers. The researchers are convinced that the FIE programme has the potential to enhance cognitive development, and should therefore be utilized during the training of educators.

References


Feuerstein's Instrumental Enrichment Programme


Department of Education see South Africa. Department of Education.


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Feuerstein's Instrumental Enrichment Programme


Psychological debriefing (PD) of trauma: a proposed model for Africa

EL VAN DYK AND GAJ VAN DYK

Abstract

Africa is a continent with severe trauma. Traumatic events include experiences of child soldiers, people living in war and conflict zones, and people struggling with the HIV/AIDS pandemic. These events cause high levels of trauma. The trauma causes psychological disorders like post traumatic stress disorder, acute stress disorder and combat stress reaction, specific in the military environment.

This article focuses on a better understanding of the implications of trauma for military people and civilians. It discusses the different theories and models of psychological debriefing. Lastly the article discusses psychological debriefing models for military forces and the civilian population to prevent severe psychopathology after traumatic incidents in Africa.

Keywords: Psychological debriefing, community health, social work, model for Africa.

Disciplines: Community health, social work, psychology, education, nursing

Introduction

Africa is a continent with severe trauma. According to the Human Development Report (2005), 40% of the world’s conflict is in Africa. Notably, child soldiers have been used throughout Africa. In Uganda up to 2000 women and children were captured by the Lord’s Resistance Army (LRA). The LRA was responsible for the killing, torture, rape, mutilation and abduction of thousands of adults and children until late 2005. On the other hand the United People’s Defence Force (UPDF) used child soldiers to gather intelligence from the LRA. In Sudan thousands of child soldiers were recruited and used by armed forces, government backed militias and armed opposition groups. The youngest was 9 and the average age was 16 years old. In Zimbabwe, the National Youth Training Programme for people between 10 and 30 years old, was used up until 2007 to train people for political intimidation, attacks on the opposition, forced displacement, killings, torture, rape and the destruction of property (The Coalition to Stop the Use of Child Soldiers, 2008).

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In Africa there are 2.2 million refugees. New armed conflict in Central African Republic, Chad, Democratic Republic of Congo (DRC), Somalia and Sudan led to refugee outflows into Kenya (25 000), Cameroon (25 000), Sudan (22 500) and Uganda (9400) (The UN Refugee Agency, 2007).

It could be argued that sexualised violence perpetrated by soldiers in wartime does more than harm the physical and mental health of women. Many victims have struggled with lasting consequences both physical and psychological. In war, rape is a deliberate strategy. After mass rapes of women and girls, perpetrators can share a feeling of omnipotence, and leaders may want exactly that to happen as a way of boosting cohesion in the troops, while traumatising the enemy. It can also contribute to the spreading of the HIV/AIDS pandemic in Africa: Sub-Saharan Africa remains the region most affected by AIDS, with more than two thirds (68%) of all people infected with HIV living there. Women are disproportionately affected, representing 61% of people living with HIV in the region (UNAIDS, 2007).

In the military environment in Africa other traumatic stressors are involved. The well known wars in Burundi, DRC and Sudan for example caused high levels of trauma for the soldiers involved. Dhladhla (2008, p 68) did research on ex-combatants and wrote: “participation in war or armed conflict is a recognised pathogenic stressor which often results in psychological dysfunction”, if the trauma is not treated. Bruwer and Van Dyk (2005) wrote that in peacekeeping operations in Africa, soldiers often experienced the following stressors as traumatic: separation from the family, isolation and frustration during the operation, harsh environmental conditions, child soldiers and causalities of the population like pregnant women. These are some statistics illustrating the extent to which trauma in Africa has the potential to destroy the mental health of people, their future, relationships and reason for existence.

This article will look at Psychological Debriefing (PD), as an intervention, after a traumatic event or a traumatic phase of life with the aim of preventing psychological complications, healing pain and creating future orientation. Trauma and some common consequences of trauma will be discussed so that one can understand why PD can play an important role after traumatic events. This paper will also focus on the different models of PD, the role of PD during military operations, as well as in traumatic circumstances in countries in Africa. A proposed PD model for military forces in Africa, as well as for the civilian populations will be discussed. This paper will contribute to disciplines like community health, military science, psychology and social work on knowledge and skills.

**What is trauma**

In order to understand PD one must first understand trauma. According to Perry (2006, p.1), “trauma is a psychologically distressing event that is outside the range of usual human experience”. He continues to say that trauma often involves a sense of fear, terror and helplessness, and that trauma is an experience that induces an abnormally intense and prolonged stress response (Perry, 2006). In such circumstances it can destroy the health levels of a community, for example, after a disaster.

Trauma can also be seen as the influx of violent and urgent events which exceeds the defensive capacity of the person, such that the person can not master these events through normal adjustment processes (Crocq, & Crocq, 1987). Trauma is most often the result of a critical incident (rape), series of incidents (disasters) or a situation like war.
Lewis (2001) writes a critical incident is described as any unplanned, unexpected or unpleasant situation faced that causes individuals to experience unusually strong emotional reactions and which have the potential to interfere with their ability to function either immediately or later. War is an ongoing destructive process, where the population and soldiers experience trauma, losses, helplessness, feel out of control, struggle with feelings of anger, hate, resentment and sadness. The underlying assumption of PD is that reactions due to trauma are normal expected reactions being experienced by a normal person in response to an abnormally challenging situation (Lewis, 2001).

Consequences of trauma

Trauma affects every part of a person’s being – their thoughts, emotions, behaviour and physical reactions. Trauma also refers to overwhelming, uncontrollable experiences that psychologically impact on victims by creating in them feelings of helplessness, vulnerability, loss of safety and loss of control. These traumatic results can result in psychological disorders such as ‘Post Traumatic Stress Disorder’, ‘Acute Stress Disorder’ and ‘Combat Stress Reaction’ in military operations.

Post traumatic stress

Prior to 1980 there was no formal diagnosis for Post Traumatic Stress Disorder (PTSD). People who showed symptomatic behaviour as a result of a traumatic event were described as having a character defect (Carll, 2007). PTSD was first recognised as a psychiatric disorder in the third edition of the American Psychiatric Association’s Diagnostic and Statistical Manual of Mental Disorders (DSM-III) (McNally, Bryant, & Ehlers, 2003).

PTSD is a psychiatric disorder that can occur in soldiers and other people who have experienced or witnessed life-threatening events such as natural disasters, terrorist incidents, war or violent personal assaults. People suffering from PTSD often re-live the experience through nightmares or flashbacks of the incident. They may also have difficulty sleeping and can feel detached from their environment. PTSD can lead to the development of other related disorders such as depression (American Psychiatric Association (APA), 2005).

People who suffer from a traumatic event may have a range of different reactions including anger, self-blame, fear and anxiety. The question, however, is what qualifies as a traumatic event? According to the DSM (APA, 2005), to qualify as being exposed to trauma, an individual no longer needs to be a direct victim. As long as the person is confronted with a situation that involves threat to the physical integrity of that person or others and experiences the emotions of fear, horror or helplessness, then the experience counts as exposure to a PTSD-qualifying stressor (APA, 2005). Usually, PTSD will appear within three months of the traumatic incident, but it may at times only appear later (Baumann, 1998).

According to Baumann (1998) factors that influence the vulnerability of the individual to the development of PTSD include the following:

- Psychological difficulties present before the traumatic event.
- The trauma is severe and/or persisting.
- The age of the person.
- Absence of a social support system.
• Previous exposure to trauma.
• Lack of safety in their environment.
• The trauma was initiated by people rather than nature.

The more factors that are present, the more likely it will be that the person will be vulnerable to trauma. PTSD symptoms are grouped into three categories: 1) intrusion or the re-experiencing of the event, 2) avoidance of associated stimuli and emotional numbing and 3) hyperarousal (Baumann, 1998).

Intrusion is when people complain that memories of the traumatic incident come back to them unexpectedly. These flashbacks of the events intrude into their lives and cause discomfort. These sudden, vivid memories will normally be accompanied by strong painful emotions associated with the traumatic event. These flashbacks can sometimes be so strong that the person feels that he/she is experiencing the traumatic event all over again (APA, 2005).

Avoidance symptoms tend to affect relationships with others. The person may try to avoid close emotional ties with family, colleagues and friends. At first, the person may feel numb and only complete routine, mechanical activities. Then, when re-living the traumatic event, the individual may alternate between a flood of emotions caused by the flashbacks of the events and an inability to feel or express emotions at all. A person with PTSD may try to avoid situations that are reminders of the original traumatic event (Baumann, 1998).

PTSD can cause individuals to act as if they are constantly threatened by the trauma that caused their disorder. This hyperarousal can cause them to become suddenly irritable or explosive, even when unprovoked. They may have trouble concentrating or remembering current information and, because of terrifying nightmares, may develop insomnia. Many people with PTSD also attempt to rid themselves of painful flashbacks, loneliness and anxiety by abusing alcohol or other drugs to help them dull or forget the pain and trauma temporarily. This tendency can lead to further problems in their personal lives (Baumann, 1998).

Acute stress disorder

The definition of Acute Stress Disorder (ASD) requires that the individual has experienced or witnessed an event that has been threatening to either him/herself or another person and that the person’s response to this event must involve fear, helplessness or horror (Bryant, & Harvey, 2002). The symptom cluster that distinguishes ASD from PTSD is the emphasis on dissociative symptoms.

A person must display at least three of the following symptoms in order to satisfy the criteria: 1) a subjective sense of numbing or detachment, 2) reduced awareness of his/her surroundings, 3) derealisation, 4) depersonalisation and 5) dissociative amnesia (Bryant, & Harvey, 2002). Numbing refers to a detachment from expected emotional reactions. The individual tends to show no emotions regarding the traumatic event. Reduced awareness of his/her surrounding refers to the person being less aware of what is happening around him/her during the traumatic event or immediately after it. Derealisation is when the person perceives his/her environment to be unreal or dreamlike. Depersonalisation refers to the sense that one’s body is detached or a person is seeing himself or herself from another’s perspective. Dissociative amnesia refers to the person’s inability to recall specific parts of the traumatic event (Bryant, & Harvey, 2002).
The only other significant difference between ASD and PTSD is the time frame given for diagnosis. The time frame for ASD requires that the symptoms be present two days after the event and not persist for more than one month. Persons suffering from ASD will receive treatment much earlier due to this time period (Bryant, & Harvey, 2002).

**Combat stress reaction**

Combat Stress Reaction (CSR) is also known as battle fatigue, shell shock and combat neurosis. Generally, CSR is characterised by a reduction in the person’s capacity to function as a soldier and the subjective experience of overwhelming distress and inescapable anxiety (Freedy, & Hobfoll, 1995). According to Noy (1987), CSR consists of three stages: 1) immediate, 2) acute and 3) chronic. The immediate stage is characterised by anxiety, hyperactivity and panic after, for example, an artillery bombardment. Intense emotional turmoil, in the form of rage, crying and terror or extreme unresponsiveness can be observed. These extreme reactions can start suddenly at a breaking point or they can gradually build up to a point. During this stage, it may still be possible to prevent the disorder with psychological debriefing from developing to the next stage. During the acute stage, the soldier may try to use defense mechanisms like repression, dissociation or denial.

PD alone will no longer be effective during this stage. The soldier will need more treatment then PD, which can include removal from the battlefield, sometimes hospitalised with medication and a more detailed long term treatment approach (Nathan, 2005). During the chronic phase functional efficiency is reduced and the soldier will suffer from exaggerated startle response, explosive anger, disruptive sleep and persistent battle dreams. This phase is very similar to PTSD and may persist indefinitely (Noy, 1987). Normally, the soldier also needs more than PD.

The principle indicators of CSR includes: 1) strong enough emotions that interfere with task accomplishments, 2) tension that is out of the control of the soldier and that does not decrease during times of relief, 3) distress that is significantly more intense than that of other soldiers that are experiencing the same conditions and 4) behaviour that is different to that of the soldier’s normal behaviour (Freedy, & Hobfoll, 1995). If this disorder is left untreated it can ultimately lead to the development of PTSD (Noy, 1987).

**Trauma experienced during military operations and disasters**

Although each war and each deployment is different, there are however some fundamental aspects that are the same. Freedy and Hobfoll (1995) discuss some dimensions of war–zone stress. The biggest stressor for any soldier is the possibility that he/she may lose his/her life or he/she may lose a close friend. Other stressors that can lead to PTSD and CSR include demands on physical and emotional resources, levels of combat exposure, witnessing abusive violence, participation in abusive violence and subjective or perceived threats.

Demands on emotional resources can take the form of threats of personal injury or engaging in hostile destructive activities whereas demands on physical resources can take the form of inadequate supply of food, water and shelter as well as physical exertion. Levels of combat exposure can take many forms for example being on the receiving end of a fire fight, firing a weapon at an enemy and being exposed to wounded, dying or dead people (Freedy, & Hobfoll, 1995).
During peacekeeping missions, soldiers are not often actively involved in fire fights and are exposed to situations where they witness the aftermath of brutal attacks on civilians or the attack itself and they are not allowed to intervene. This can create feelings of powerlessness and also contribute to PTSD and CSR (Freedy, & Hobfoll, 1995).

During disasters in Africa like the flood in Mozambique, the drought in Ethiopia, bomb blasts in Uganda or with personal disasters like rape, communities or individuals can experience shock, overwhelmed by emotions, can feel traumatised and helpless without a vision for the future. Such a situation can destroy the community’s health and can be characterised by the anxiety, depression, anger and conflict. This paper wants to empower community health workers, social workers, community leaders and psychologists to help with PD.

Defining psychological debriefing

PD has been defined as “a brief, short-term intervention aimed at mitigating long-term distress and preventing the emergence of post traumatic stress” (Devilly, Gist, & Cotton, 2006, p.318). PD has also been defined as a “planned structured group activity, organised to review in detail the facts, thoughts, impressions and reactions following a critical incident” (Dyregrov, 1997, p.589). PD is implemented within three days after a traumatic event and is predominantly done in terms of group interventions facilitated by trained peers or mental health professionals (Foy, Eriksson, & Trice, 2001). PD is a single session, semi-structured crises intervention designed to reduce unwanted psychological problems following a traumatic event by promoting emotional processing through the ventilation and normalisation of reactions (Bisson, McFarlane, & Rose, 2000). However, it must be made clear that PD is not psychotherapy or counselling, but only an intervention (Van Dyk, 2000).

The aim of psychological debriefing

PD aims to prevent the development of abnormal stress responses and tries to promote normal stress responses (Deahl, 2000). Furthermore, PD aims to prevent the after effects of trauma, such as PTSD and CSR, stimulate group cohesion, normalise reactions, accelerate normal recovery, stimulate emotional ventilation and promote a cognitive grip on the situation (Dyregrov, 1997). Van Dyk (1999) writes that after the emotions are debriefed it is most important to empower or better still, “ego-power” the victim. The ego represents the centre of our decisions, plans, actions and reactions. If the ego is developed, it is well able to deal with many difficult situations and master the future in a more competent way, instead of getting under severe pressure of anxiety. PD is also used as a screening function to determine whether or not a person who experienced trauma should be referred for treatment or not (Arendt, & Elklit, 2001).

A brief history of psychological debriefing

PD dates as far back as World War I. During this war, a model that was based on three principles, namely proximity, immediacy and expectancy (PIE) was utilised. The focus of this model was to treat soldiers close to the battlefield (proximity) as soon as possible (immediacy) with a strong prospect that they would return to the battlefield for active duty (expectancy). During World War II, Brigadier General Samuel Marshall was the chief historian of the US Army. He coincidentally discovered that during the collection of his data for his records, which consisted primarily of group discussions with troops, that these discussions influenced troops’ emotions for the better (Mirzamani, 2006). This was known as Historical Group Debriefing (HGD) (Adler, Castro, & McGurk, 2009). In the early 1980’s Mitchell developed a model
named critical incident stress management (CISM) for the emergency medical services in the United States of America (USA). Part of the CISM programme was a model called critical incident stress debriefing (CISD). A lot of attention has since been placed on this one aspect of CISM because it was believed that CISD can be used to prevent the development of PTSD.

Then, in 1989, a Norwegian psychologist by the name of Dyregrov adopted the term PD but maintained that PD and CISD were essentially the same thing. Ever since, the two terms have become interchangeable and serve the same meaning (Regel, 2007). The past couple of years different models on PD were developed. Following is a discussion of those models

Mitchell’s model

Mitchell developed one of the first PD models in 1983. His original model consisted of a “comprehensive, systematic and integrated multi-component crises intervention package” (Regel, 2007, p.411). This package was developed for the use of individual as well as group interventions. This model was known as the CISM model (Regel, 2007). The CISM model comprised of many elements including pre-crisis education, assessment, defusing, CISD and specialist follow up (Regel, 2007).

For the purpose of this paper, only CISD will be discussed as it is the element that has received the most focus during the past few years. CISD is a structured approach that consists of seven phases. These phases include the following: 1) the introductory phase, 2) the fact phase, 3) the thoughts phase, 4) the reaction phase, 5) the symptom assessment phase, 6) the information phase and 7) the re-entry phase (Devilly, & Cotton, 2003).

During the introductory phase, the participants are introduced to the CISD model and its components. They are also informed that confidentiality applies to the entire session and that they should feel free to say whatever they want. It is also emphasised that they will not be forced to say more than they want to, but they are encouraged to participate in the discussions. One of the most important parts of the introduction is to make it clear to the participants that PD is not counselling or psychotherapy, but a discussion of psychological elements (Mirzamani, 2006). During the fact phase, the aim is to establish the facts of the particular incident. This is done by asking specific questions, for example, ‘Where were you deployed?’ and ‘What happened when you made contact with the enemy?’ During this stage their emotions will also come to the fore. These emotions are openly acknowledged and judged as normal reactions to the traumatic event (Rose, & Tehrani, 2002).

During the third phase, the participants’ initial thoughts regarding the event are discussed. Here participants are encouraged to discuss the personal meaning the event has for them (Rose, & Tehrani, 2002).

During the fourth phase, which is the reaction phase, the participants discuss the emotional, physical and behavioural reactions that result from the traumatic event. This phase usually takes the majority of the session and is the deepest phase of the PD session. The facilitator will ask questions such as ‘What is the worst part of this event for you?’ During this phase, participants are urged to speak freely and openly about their fears and emotions associated with the event. The fifth phase is the symptom assessment phase. During this phase the facilitator will look for physical, emotional, cognitive or behavioural symptoms of PTSD and other psychological disorders associated with traumatic events (Mirzamani, 2006).
The next phase of the intervention is the information and teaching phase. During this phase general information is given regarding the stress reaction and the normal nature of these reactions. The facilitator gives specific advice regarding the reactions the individuals can expect as a result of the stressor (Mirzamani, 2006).

The facilitator also gives the participants advice regarding alcohol consumption, relationships and other relevant factors (Rose, & Tehrani, 2002). The last phase of this model consists of the re-entry phase. During this phase, all the issues that were discussed are summarised and further attention is given to certain issues if needed (Mirzamani, 2006). It is also during this phase that referral information is provided for future follow ups (Devilly, & Cotton, 2003). Individuals who show symptoms of PTSD or other psychological disorders associated with trauma must be referred to qualified professionals so that they can receive help as soon as possible (Rose, & Tehrani, 2002).

Dyregrov’s model

Dyregrov based his PD model on the work of Mitchell, although there are some differences between the two models (Mirzamani, 2006). For the purpose of this paper, only the differences will be discussed seeing that the models are relatively similar. There are three main differences between the two models. Firstly, where Mitchell’s model starts the discussion with where the traumatic event started, Dyregrov starts his discussion of the event at what happened before the event occurred. He does this by asking questions such as ‘How did you find out about this event?’ (Rose, & Tehrani, 2002). Secondly, Dyregrov also focused on the cognitive decision making process of the individual during the event. This is done by asking questions such as ‘Why did you decide to do that?’ It is suggested that these questions reduce the tendency of individuals to blame themselves for what has happened. A third difference between the two models is that Dyregrov also focused on sensory information by asking questions such as ‘What did you hear, smell, taste and see?’ Dyregrov’s model placed more emphasis on the reaction and responses of the individuals than Mitchell’s model does and it is therefore suggested to be safer for the participants (Rose, & Tehrani, 2002).

The controversy on PD as illustrated by Van Wyk and Edwards (2005) is that “debriefing” is a military term referring to interviews in which critical incidents are examined by those involved in them and those in authority. Everly and Mitchell (2000) wrote critical incident stress debriefing (CISD) refers to one form or model of group crisis intervention, sometimes generally referred to as group psychological debriefing (PD). CiGrang, Peterson and Schobity (2005) wrote that there are a number of factors that have made PD especially appealing to a military population. PD de-emphasizes psychotherapy and pathology, while emphasising normalization of reactions and returning members of the military to duty. The authors are aware of the academic discussion on the advantages and disadvantages of PD, but this is not the focus of this article.

The authors want to use the advantages of PD, but agree with Edwards, Sakasa and Van Wyk (2005), Petronko (2005) and Nathan (2005) that a once off PD session is not the most effective method to deal with PTSD. PD will be part of the proposed model with the function that members can get psychological closure after a traumatic event. Further it can be used as a psychological triage by clinical psychologists on members who are psychologically fit to go back to the operational environment (Dhladhla & Van Dyk, 2009).
Raphael’s model

Raphael starts the debriefing process by focusing on factors prior to the traumatic event. However, her focus was more on the training and preparation the individuals received prior to the incident. Her model also suggested some areas that may be useful during the intervention. According to Rose and Tehrani (2002), these include the following:

- The stressors that the person experiences personally, such as death and survivor conflict.
- Frustrations that may increase the stressors. For example, inadequate skills, training or equipment that could have helped prevent the incident.
- Special relationships with friends and colleagues who experienced the same incident.

It is suggested that these topics are discussed in a systematic manner to ensure that the participants can work through the emotions that may be evoked. Raphael’s model makes use of more straightforward questions such as ‘Was your life directly in danger?’ This model also focuses on positive aspects of the incident by asking questions such as ‘Do you feel good about something you did?’ Raphael also suggested that the participants analyse the feelings of people who went through the same incident. These aspects are not present in the previous two models (Rose, & Tehrani, 2002).

Lastly, the model focused on what was learnt from the experience of the incident, feelings around going back to duty and the problems that can arise from returning to the battlefield (Rose, & Tehrani, 2002).

The multiple stressor debriefing model

According to Mirzamani (2006), the multiple stressor debriefing (MSD) model consists of four stages. During the first stage, the participants are introduced to debriefing and ground rules are laid down for the duration of the intervention. The participants are then asked to describe what it is about the incident that troubles them the most.

During the second phase of this model, participants are asked to describe their feelings and reactions they experienced as a result of the incident. The third phase of this model emphasised the coping strategies that the participants will need and they are also given information regarding normal and abnormal reactions to stress. Participants are asked about their previous coping skills in the past as well as how they are coping with the current stress. The facilitator will use coping strategies identified within the group and where possible not introduce new strategies. During the last stage of this model, the participants are asked to give their views on how they feel about leaving the disaster site. The emphasis of the discussion then moves to separating from co-workers and preparing them to terminate the PD session. Before leaving, it is emphasised that the participants must continue talking with their colleagues and their partners. By the time they leave, any remaining questions are answered and referrals are made if necessary (Mirzamani, 2006).

Frontline treatment

Frontline treatment has been used for many years in different militaries around the world. It is considered that the closer to the frontlines individuals are debriefed the quicker they will return
to active duty. It has been suggested that soldiers must only be removed from the battlefield if there is no improvement in their abnormal behaviour (Freedy, & Hobfoll, 1995).

The intervention of trauma usually starts by providing the soldier with temporary relief from stress and seeing to his/her biological and social needs (Freedy, & Hobfoll, 1995). This model is based on the principles of proximity, immediacy and expectancy where the expectancy is that soldiers will return to active duty as soon as possible. According to Freedy and Hobfoll (1995), this model follows the following guidelines:

- Meet the individuals’ physiological needs first.
- Treat the individuals as soon as possible.
- Temporary relief from the stressor is provided.
- Use human contact to reassure, clarify and share emotions.
- Humanise and legitimise fears.
- Allow expressions of grief, guilt and shame, but challenge self-depreciation.
- Convey to the individual expectation of full recovery and return to duty.
- Promote social support that will allow reintegration of the casualty in his/her unit.
- Do not change the soldier’s status as a member of the combat team until appropriate efforts to reverse the traumatic effects of the stress have been made and have been proven unsuccessful.

It is important to prevent isolation during the first stages of the treatment as this may worsen the traumatic experience. Based on the three principles of this model, proximity, immediacy and expectancy, it is suggested that the individual is treated as close as possible to the battlefield as soon as possible, with the expectation that he will return to the battlefield. This is the bases of the model and is believed to contribute to the success of PD (Freedy, & Hobfoll, 1995).

**Battlemind psychological debriefing**

Battlemind Psychological Debriefing is one of the newest models of PD. According to Adler et al. (2009), three types of Battlemind Psychological Debriefing have been developed. Two of these are ‘in-theatre’ models and the third one occurs at post deployment.

For the purpose of this paper, only the in-theatre models will be discussed. These two models are namely the ‘Time-Driven Battlemind Psychological Debriefing’ and the ‘Event-Driven Battlemind Psychological Debriefing’. Time-Driven Battlemind Psychological Debriefing is designed to be implemented at intervals during deployment whereas Event-Driven Battlemind Psychological Debriefing has been designed to be implemented when support is requested after a traumatic event. Due to the fact that units may be deployed in remote areas for long periods of time, it is not always possible to provide them immediately with professionals to facilitate PD when such a request is made. For this reason, Time-Driven Battlemind Psychological Debriefing is favoured above Event-Driven Battlemind Psychological Debriefing.
The Time-Driven Battlemind Psychological Debriefing model consists of 5 phases which includes the 1) introduction phase, 2) event phase, 3) reactions phase, 4) self and buddy-aid phase and 5) the battlemind focus phase. During the introduction phase, the facilitator briefly gives the participants some information about him/herself and his/her experience. He then introduces the program and its aims and gives positive expectations for the program. During this phase the ground rules for the session are also laid down. It is important for the facilitator to make it clear to the participants that they will have to return to duty after the session is complete. During the second phase, the events phase, the facilitator establishes the events that have placed the unit under strain. The facilitator asks the members to discuss one or two specific events that may have happened during the deployment that may be difficult for them to think about. The facilitator must gather as much information about the incident from the group as possible, but must not allow the group to get over-involved on one point (Adler et al., 2009).

The goal of the next phase, the reaction phase, is to have the participants share their reactions in order to normalise their reactions. This phase commences by focusing on the cognitive responses of the members and continues on to their emotional responses. Before the facilitator transitions to the next phase, he/she must summarise what was said and include reactions that may occur that might have been left out by the members. It is also important for the facilitator to address issues of self blame and doubt that the members might have regarding their actions. The fourth phase focuses on the identification of three major symptoms: anger, withdrawal and sleep problems. The goal is to normalise these symptoms and explain to the soldiers what they can do for themselves as well as their buddies. During the discussion of anger, it is important to explain to the participants that it is normal to develop a short temper and that feelings of revenge are normal, but it must be emphasised that they need to remain professional and be able to return home with a story that they “can live with”. When discussing withdrawal, it is important for the members to discuss the signs of withdrawal as well as the importance of keeping an eye on each other to ensure that a fellow member receives the necessary support and professional help when needed (Adler et al., 2009).

Lastly, when discussing the problems, it is important for the facilitator to once again normalise sleep problems and discuss solutions for sleep disturbances. The last phase of this model focuses on helping the group become psychologically ready to continue with their deployment (Adler et al., 2009).

Facilitators ask questions to extract ways in which members have maintained perspective, focused on positive adaptation, identified coping strategies and recognised similarities and differences in their adjustment. This is done in order for participants to learn how to cope with the stressor through sharing it with each other. Participants must be reminded that they must 1) trust their military training and personal decisions, 2) watch out for one another 3) listen to their leaders and 4) inform their leaders if there are any problems. In closing, the facilitator should inform participants where they can receive further help if they should need it, and must emphasise that seeking help when in need of it is a sign of strength and leadership (Adler et al., 2009).

**Proposed PD model for military forces in Africa**

It has been suggested that high-risk organisations such as the military and police force should make use of models that do not only include an intervention model, but other tactics and strategies as well. One such model is the CISM model which consists of the following methods, in addition to CISD (Everly, & Mitchell, 1999, pp. 71–92):
• **Pre-incident preparedness training:** This refers to educating soldiers in high-risk occupations about the kinds of stressors they are likely to encounter on the job, about common stress reactions and about stress-management techniques. This can be given to soldiers prior to deployment so that they can know what to expect.

• **One-on-one individual crisis support:** This refers to attempts to mitigate acute stress reactions, often at the scene of the trauma. The counsellor attempts to provide psychological distance between the scene and the soldier in distress by having the person take a walk or withdraw for a couple of hours from the battle field. This may not always be possible immediately during military operations, but necessary when possible.

• **Demobilisation:** This refers to providing food, rest and information about coping with stress reactions to large groups of soldiers as they rotate off duty. This method includes group informational briefing, which refers to providing facts about a critical incident to a large group of individuals indirectly affected, as well as providing information about common psychological dynamics (e.g. grief, anger) and about how to access psychological services. These tactics are only relevant to the military in terms of providing food and rest to the individual for a couple of hours.

• **Debriefing:** This refers to a small-group intervention that usually takes place within twelve hours of the traumatic event. It involves having participants explore and discuss the incident and their emotional reactions to it. It is the practice in the Canadian Defence Force (Rosebush, 1998) and in the armed forces of the United States of America (Keller, 2005) to sensitise and empower military leaders with knowledge of PD for the management and early referral of soldiers in operations.

• **Family support:** This refers to debriefing family members of the soldiers involved in the crisis. For example, giving support to spouses of soldiers in the military.

• **Referral mechanisms:** This is concerned with procedures for referring individuals for psychiatric or psychological services. The facilitator must provide the individuals with information on where and how to get help from trained specialists if needed.

If a model such as CISM is considered for the military forces in Africa then certain limitations may arise, such as problems with regards to having enough debriefers available to implement the program as needed. A possible solution to this problem would be to train platoon commanders and company commanders to be able to do PD in their platoons or companies as needed. This can be the first line of defence against the development of psychological problems. However, this would mean that they would also have to be trained to recognise the signs and symptoms of PTSD, CSR and ASR so that the affected individual can be referred to the field hospital when needed.

Another solution will be to train medics in PD so that the medic in the combat situation is not only trained to treat physical injuries, but also to prevent psychological disorders.

**Proposed model for traumatised communities in Africa**

The models above are more applied in the military which is a more structured environment than rural communities in Africa. On the other side, there is also a need to apply a debriefing model for communities in Africa for example in Mozambique (flood), Ethiopia (drought), Kenya (political unrest), Uganda (bomb blast) and Zimbabwe (political unrest). It is important to be
Psychological debriefing for Africa

aware of some of the specific characteristics of African communities in the management of PD. Sefotho (2005) wrote that psychological services, to do debriefing is not common practice in the communities in Africa. On the other hand there is high levels of trauma in the African rural communities around HIV/AIDS (Bakunda, 2009), annual victims of abortions (Temu, 2006), single parenthood and HIV/AIDS orphans (Nakkazi, 2008). A high percentage of the population have low levels of education and a limited mental health service to support them with trauma or psychological debriefing.

This paper wants to propose out of the above models of PD a simple model for African communities which will be suitable for people with a low education level, possible to implement without modern infrastructure and be applicable with simple resources - specifically for children.

Van Dyk (1999) developed an adjusted model for Africa, consisting out of three phases:

**Cognitive phase**, where people can tell their story in terms of what they saw, heard and experienced in a group of ten people, in a half circle.

**Affective phase**, this is where people start to vent/share their deepest, most painful and traumatic experiences and specific emotions. It is where people work through feelings of guilt, fear, resentment and anger. African communities, with a more collectivistic approach, are doing better in a group situation where they feel together, cry together and support each other. During this phase the following techniques are available to help children (Van Dyk, 2000):

- Telephone game – children phone a family member to tell their story and share their emotions.
- Sunglasses – children hide behind dark glasses when sharing their emotions.
- Puppet play – children use puppets to project their emotions to the puppets.

**Empowerment phase**, here the debriefer use the potential and creativity of the group to facilitate solutions for their helpless and powerless situations. Doing so to create a future and to empower their ego power. It is important to use games, play and role modelling to empower the children of Africa.

Psychologists can train teachers, nurses, sisters, and community leaders to become debriefers in the African communities for the better mental health of our people.

**Summary and concluding remarks**

PD has evolved a lot since World War I, but the aim and ways of implementation of PD has mostly stayed the same. There are a number of different models of PD, but they all essentially have the same structure and only differ in terms of their focus. The proposed PD model for the military forces in Africa can hopefully be helpful in preventing PTSD as well as to facilitate a higher level of mental health in soldiers.

The model for the traumatised communities in Africa can be implemented through hospitals, schools, as well as the ministers of health and education in Africa. It is believed that the implementation of these models can potentially bring relief to the traumatised people in Africa.

References


The influence of social components in marriage counseling

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Abstract

The purpose of this article is to focus on an additional counselling tool that complements the genogram and that will enable counsellors to successfully utilise the time spent during a counselling session. The article sets forth the thoughts of socialisation as well as various social components that influence the construction of reality of the self. These social components elaborate on aspects such as our identities, our beliefs, our evaluation, regulating our behaviour and focusing on our sense of self. The main objective is to answer the question: What is the influence of social components on marriage counselling?

Key Words: counselling, socialisation, counsellors, marriage, identities, behaviour.
Disciplines: Sociology, Psychology, Counselling, Family Studies.

1. Introduction

The purpose of this paper is to focus on an additional counselling tool, complementary to the genogram and the egogram, which will enable counsellors to ensure successful utilisation of time spent during counselling. The goal of the marriage counsellor is not to effect any drastic change in the personality of either partner, but to help each to perceive his or her own reality, the reality of the partner, and that of the marriage or relationship more clearly, and to focus on social components which may influence the reality of both parties.

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2. Socialisation

Much of our self-knowledge comes from socialisation. During childhood, we are treated in particular ways by our parents, teachers and friends and we participate in religious, ethnic or cultural activities that later become significant aspects of ourselves. Children who spend their weekends being taken to art exhibitions and concerts by their parents, for example, may come to think of themselves as cultured individuals. Socialisation, then, forms the core of our experience. The regularities in those experiences may eventually become internalised as important aspects of the self-concept. The self-concept becomes the

*collection of beliefs we hold about who we are…* (Taylor, Peplau and Sears 1994).

The self-concept is heavily influenced by factors that make us distinctive and, according to Taylor, Peplau and Sears, we will mention things about ourselves which make us distinctive in a particular situation. A deaf woman, for example, is more likely to mention that she is deaf if there are relatively few deaf people in her particular group, whereas she is more likely to mention the fact that she is a woman where she finds herself in a predominantly male group.

There are several concepts embedded within socialisation that help broaden our self-knowledge and that play a vital role in the socialisation process. Before we continue with the main focus of the article, we need to briefly discuss these concepts.

2.1 Reflected appraisals

Berne (1987) states:

*Parents deliberately or unwarily, teach their children from birth how to behave, think, feel and perceive. Liberation from these influences is no easy matter, since they are deeply ingrained and are necessary during the first two or three decades of life for biological and social survival.*

C.H. Cooley, as referred to by Taylor, Peplau and Sears (1994) developed the concept of the *looking-glass self*, maintaining that people perceive themselves as others perceive and respond to them. Our perception of how other people react towards us is called *reflected appraisals*. Sometimes people give us explicit feedback about our qualities. This process often begins in socialisation, when our parents tell us not to be so shy, how good we are at the piano, how math is not our strong point, or what good readers we are. Generally speaking, there is a strong relationship between how parents think about their children’s abilities and the own self-conceptions of the children on these same dimensions. In later childhood and early adolescence, feedback from peers may be more important. Adolescence brings with it additional sources of direct feedback, such as whether one is asked out on a date by many people or only a few, or whether the persons one asks out accept or decline the invitation. On the whole, people prefer objective feedback about their personal attributes.

*Objective feedback is regarded as less biased and fairer than personal opinion* (Taylor et al. 1994).

The opinions of others still count, however. This is particularly the case when those opinions are shared by a large number of people when we may come to believe that they are true. We also learn about ourselves through interpreting the reactions that other individuals display towards us.
2.2 Self-perception

When we observe ourselves, we see that we tend to prefer certain activities above other activities, certain foods above other foods, or certain persons above other persons. Self-knowledge is gained when we are able to observe these regularities. On the other hand, Bem’s (Taylor et al. 1994) self-perception theory suggests that this source of self-knowledge may be useful primarily for aspects of the self that are not particularly central or important. For example, we do not need to observe ourselves avoiding anchovies to know that we do not like anchovies. Bem feels that many important aspects of the self have clear internal referents in the form of enduring beliefs, attitudes and affective preferences.

2.3 Social comparison

At times, when we want to evaluate ourselves on a particular dimension or quality, some of the information is not readily available. As a result of this, we assess our personal qualities by comparing ourselves to other people. Taylor, Peplau and Sears (1994) provide us with an example:

\[ (Y)ou\ know\ if\ you\ are\ a\ good\ dancer\ or\ not\ by\ observing\ those\ around\ you\ and\ noting\ whether\ you\ seem\ to\ be\ dancing\ more\ gracefully\ than\ those\ people. \]

Taylor, Peplau and Sears refer to this process as social comparison. We tend to compare ourselves with those who have similar abilities to us. We receive information from those with whom we can compete on an equal basis, and with this information, we can evaluate our qualities and self.

Since the family is an intricate part of a larger network of culturally patterned ways of behaviour and shared ways of looking at the world, each individual becomes immersed in shaping mechanisms that vitally affect their own behaviours, perceptions and orientations toward all areas of life, including those relating to the opposite sex in dating, marriage and the family. The question can now be asked, what are the mechanisms that are brought into play to channel our perception and desires into socially approved and predetermined avenues?

While such orientational attitudes are ordinarily deemed a matter of personal preference, perceptions of marriage ability and desirability are, in fact, determined by a myriad of socio-cultural factors. These factors influence and shape each individual’s reality. In a way, societies exercise control over their members and, to assure continuity over time, each society needs to exercise this control; it is a basic fact of social existence. An example of this can be gender-role, which focuses on the important facet of the socialisation of the members of both genders. Individuals must be socialised in order to become truly human. This process continues throughout life as new roles are played in each new situation or group that the individual enters. Social pressures mould newcomers so that they conform to the expectations and the customs of the particular group they are entering. Only then can the individuals accept their roles in the particular society. Each generation learns from the other in time (Duvall and Muller 1985). The resulting social control, however, is so pervasive that it affects almost every aspect of life. To demonstrate this aspect, as well as how the social components shape the individual’s reality of what is expected or not, let us look at two people, Peter and Mary, as taken from the authors Henslin (1985), Goode (1982), Belkin and Goodman (1980), Bell and Vogel (1968) and Eshleman (1994).

Largely invisible to Peter and Mary, were the shaping devices put into effect by their society, culture and family, and what they constructed for themselves regarding their own schema. For example, their culture dictated that monogamy is the only acceptable form of marriage and their
society had provided idealised expectations concerning the proper timing of marriage, which is after school. Their peer group becomes another shaping device and exercises remarkable influence over them. It exerts social control over personal choice in matters of height, weight, age, race, intelligence, social class as well as popularity and reputational qualities of their prospective ‘dates’. Other sources of primary influence on Peter and Mary, that are worth mentioning, are their parents - whose residence in a certain social class and radically segregated neighbourhood limits their choices, their religion - with membership typically following social class and radical lines and its highly specific teachings about right and wrong in dating and marriage, and their education whether private, public, or parochial schools - with their mix or lack thereof concerning social class and racial backgrounds.

In addition to all these influences are the broad socio-historical factors that become part of the choices that Peter and Mary make after their marriage. These influences largely determine their expectations concerning, for example what Peter is like as a male, Mary as a female, and their expectations of one another as a man and a woman. This becomes essential in their basic roles of husband and wife. Each of them experiences these roles largely as a matter of personal choice, generally remaining blind to the many pervasive cultural, social and historical factors that shape the choices they make.

These are the basic ideas and related behaviour moulds wherein we are immersed from birth and which constantly influence us regarding the ways in which we conceptualise and use space, time, money, work, property, leisure, sex and the behaviours considered proper among other people due to their designated relationships with one another. This idea, of proper relationships among people, becomes part and parcel of our basic orientation of life. We cannot escape these social influences, and they shape our expectations of life; directing not only how we ought to act towards others, but also our fundamental assumptions concerning who we are and, therefore, how others ought to regard, and act towards, us. We might say that these assumptions of relationships become rooted in our social being and that they become a major part of what goes into making us social creatures.

2.4 The dialogical nature of the self
Polischuk (1998) argues that the postmodern approaches to the understanding of the self are focused on metaphorical descriptions, of which the dialogical approach to the self (Taylor 1989 and Taylor 1991) is one of many. In this approach the self is conceptualised as multi-voiced and dialogical (Richardson, Rogers & McCarroll 1998). Hermans and Kempen (1993) explain the dialogical self as a combination of the concepts of “self” and “dialogue” in such a way that their theoretical integration opens up new vistas for the understanding of the social self. The function of the dialogical self can only be understood within the social nature of being human. The self is organized through socialisation in a context of dialogue.

Hermans (1999) points out that our thoughts frequently take the form of dialogue. Someone who thinks does not only experience a fleeting thought, he is also a thinker who perceives the thought, evaluates it, corrects it and reacts to it. At times other persons are involved in this process. Thoughts concerning a happening in the past, or an anticipated future event, are often incorporated in an imaginative discussion with others who ask questions, are of the same mind or differ and react in an agreeable or disagreeable manner. These events constitute the basis of the approach to a thinking self. Crossley (2000) believes that the construction of self is a temporal process during which a person has dialogue with various images of the self in both the future and the past. This construction of the self is mediated by the anticipated response of important and ordinary others. For the purposes of this study the dialogue of self is seen as the
experience of an intercourse of voices which explains the identity of the person. Who, and what, a person is, is seen in the context of the voices which are incorporated in the dialogue of self.

The development of the dialogue of self finds its philosophical foundation in the writings of several scholars who were associated with the paradigm move from modernism to postmodernism in the description of the self. Richardson, Rogers & McCarrol (1998) point out that the conceptualisation of the dialogue of self relies on theorists who visualise the self as a narrator of dialogue within the ambit of constructionism. Herman’s, Kempen & van der Loon (1992) regard theorists such as Giambattista Vico (1968), Hans Vaihinger (1935) and George Kelly (1955) as important pioneers in constructivistic thought, as well as significant founders of the development of the dialogue of self.

The scientific work of Vico, *Scienza Nuova* (New Science) (1968), was originally published in 1744 and is accepted as one of the original works showing how the meanings of historical events are created by people (Hermans, Kempen & van der Loon 1992). Vico is thus generally recognised as the father of constructivism (Hermans & Kempen 1993). The approach of Vico (1968) to knowledge is focused on two important suppositions, namely that language has a body and that knowledge is created in relation to other persons (Hermans & Kempen 1993). He postulates that the relationship between thoughts and reality can only be understood in constructive behaviour—people create their own history. Contrary to the dualistic approach of Rene Descartes (1911), the father of modern philosophy (1596-1650), regarding the human body and spirit, Vico states that the body and the spirit are indivisible. Vico (1968) maintains that mankind, in a continual endeavour to understand the world, from the beginning of time, accepted the human body as a model to facilitate interpretation of the world and the environment. People still, in everyday life, use imagination as an instrument to interpret perceptual elements as significant forms of narrative in terms of which the environment is created and recreated. Vico (1968) calls this creative power in the person *ingenium* (imagination) (Hermans & Kempen 1993).

Hermans, Kempen & van der Loon (1992) state that the contributing work of Vaihinger (1935) sets out that fiction and myths are not reality, but only constructions that are easily formed from empirical elements. Vaihinger (1935) is of the opinion that fiction is a scientific instrument without which the higher development of thoughts would be impossible. According to Hermans, Kempen and van der Loon (1992) the constructionistic alternativism of Kelly (1955) is also of great importance for the development of the dialogue of self. When one wants to make sense of the world it should be interpreted, and alternative interpretations are always available. He views the person as a scientist who evaluates the constructed form by considering similarities and differences. Positive and negative experiences are interpreted and conceptualised as a construct. The individual invents constructs to describe the incident which is being experienced. Theories on life are created in this fashion.

All these pioneering theorists are responsible for challenging the concept of an objective reality, by acknowledging the idea of the subjective experience of a world wherein alternative interpretations may be made by the person.

Vygotsky (1986), James (1890) and Bahktin (1993) are among the theorists who made significant contributions in the conceptualising of the dialogue of self. (Hermans & Kempen 1993).
The dialogical view of self is based on the works of Vygotsky (1986), who creates the idea of thought as an internal discourse, and Bakhtin (1973), who creates the concept of dual voice discourse, as indications of the manner in which others are represented in a person’s discourse and internal discussion (Hermans & Kempen 1993 and Richardson, Rogers & McCarroll 1998). Both theorists describe how external discourse is subjected to a process of internalisation and thus increasingly summarised and refined. It is pointed out by Taylor (1991) that this internalisation indicates that the entire conversation, including the inter-action of the voices therein, is assimilated and united. The contributions of Vygotski (1986) and Bakhtin (1973) focus on the assumption that the ‘thoughtworld’ is socially constructed, that others play an important role in the development of this ‘thoughtworld’ and that the ‘thoughtworld’ then dictates the actions which are taken.

According to Day & Teppan (1996), both Vygotsky and Bakhtin indicate that the thoughtworld of a person is mediated and created semiotically and linguistically in the context of social relationships and interaction. Hermans & Kempen (1993) make the assumption that Bakhtin’s ideas, regarding the dialogical character of the self, is in concord with what Mead (1934) believes is a process wherein the discourse, and the dialogue with others and the self, eventually develops into the reflective self. Mead (1934) points out that the self is not just a slavish experience and a reflection of social influence but rather acts as an innovative agent in a process of re-inspiration to take action personally (Hermans, 1999). Mead distinguishes between ‘me’ and ‘my’ in the experience of the self by pointing out that the social rules and rituals of the generalised others are placed in the ‘my’ while the ‘I’ continues to be innovative (Hermans, 2000). The ‘my’ represents the values and actions of the group, which the ‘I’, on the other hand, does not slavishly follow but rather initiates innovative actions which are contrary to what the group may expect. This interaction between the ‘I - me’ positions, which is described by Mead (1934), gives rise to alternative actions that are unique and different from what is expected from the individual.

Although all these theorists played an important role in the development of the philosophical foundation for the dialogical self, it is especially the concept of Bakhtin (1973) and his multitude of voices in a polyphonic self and the multiple ‘I’ positions concept of James (1890), that led to the conceptualisation of the dialogical self (Hermans & Kempen 1993).

Hermans, Rijks & Kempen (1993) approach their study of the self as a polyphonic narrative. A polyphonic narrative is a narrative wherein different voices, often with a variety of characters and representations of a number of multi-faceted relatively independent worlds, interact with the intention of creating a self-narrative. The idea of a polyphonic narrative is derived from the literary theory of Bakhtin (1923), concerning the poetry of Dostoevsky (Barresi 2002). The theory postulates that the self is, in some or other manner, constituted from a multiplicity of voices, each with its own quasi-independent perspective, and that these voices are related to one another dialogically. The idea of a polyphonic narrative accepts that there are several authors, each relating its own story in its own voice.

According to Barresi (2002), Bakhtin points out that there is a fundamental difference between the self and others. In order to understand a person’s behaviour, it is important that integration takes place between first person (self) information and third person (other) information (Barresi, 2002). In the polyphonic narrative the various perspectives meet one another in time and space, in the narrative (and behaviour), often directed at one another, but never in an attempt to replace or overcome one another. Because no single voice in the polyphonic narrative can entirely agree with the other regarding interpretation of the deeds of one another, the self and the other is in continual discussion (dialogue) with one another. According to Tappan (2005),
Bakhtin (1973) specifically points out that the power which drives the development of the self is the experience of dialogue. Dialogue makes it possible to study the internal world of a single person in the form of an interpersonal relationship (Hermans 1996). When the internal thoughts of a character are transformed into a judgement, the dialogical relationship between this judgement and the judgements of other persons spontaneously come to the fore.

James (1890), according to Barresi (2002), in his theory regarding the self, makes a clear distinction between the two aspects of the self, the self as the subject of ‘I’ (the self as the judge) and the self as the object of ‘my’ (the self as knowable). The ‘I’ organises and interprets experiences in a purely subjective manner and has three characteristics, namely continuity, distinction and desire (Hermans 1996).

Continuity is founded on a feeling of personal identity and stability over time, while reflecting the distinction of the personal experience of existence from that of others.

In his conceptualisation of the self, James, in Barresi (2002) points out that the ‘my’, as the objective experience of the self, can be distinguished as having three distinct facets, namely the materialistic ‘my’, the social ‘my’ and the spiritual ‘my’. The ‘my’ is an empirical self which includes, in the broadest sense, all that the person can refer to as his (Hermans, 1996). The indication of what belongs to the person defines the basic aspect of the self as an extension, the extended self. Barresi (2002) makes a further deduction in stating that the subjective experience of the ‘I’ cannot be postulated in this fashion, but that the thought which is being thought is, in itself, the thinker. The border between what the self is and what the non-self is, lies in what the person’s emotional attitude is regarding a particular object or a thought.

The development of the experience of the self is, according to Crossley (2000), related to a child’s arrival in the world of language and symbols. This world of language and symbols provides a system of etiquette to the child to enable him to distinguish between himself (I and my) and other persons or things (you and it) in the development of an experience of himself. The development of the dialogical self is, for Hermans & Kempen (1993), founded upon two important goals, namely (a) to discover the forerunners to an adult self in closer proximity with the initial appearance of dialogue, and (b) to determine when and how the social environment and institutions form, organise and limit the potential attainability of I-positions in the dialogical self.

Dialogue develops from random routines, which Fogel, De Koeyer, Bellagamba & Bell (2002) refer to as a dialogical framework, which is either creative (it changes and develops continuously) or rigid (it remains unchanged). There is a non-verbal form of the dialogue of self which develops during the infant years. Hermans & Kempen (1993) show that an ability to make a distinction between the self and others (differentiation) develops from birth. This enables a person to establish an own orientation towards others. Differentiation and orientation between the two poles of communication (self and others) is necessary for the development of dialogue.

Lyra (1999) makes the assumption that an analysis of the process of dialogue between mother and infant serves as a microscopic lens which enables one to understand the dynamics which...
regulate dialogue. According to Hermans & Kempen (1993) there are four conditions required for the proper development of the dialogical self, namely:

- interaction between mother and child, where the mother creates the context for dialogue,
- a memory, to facilitate bringing the events from different contexts and relate them to the present moment,
- an imagination which combines actual events to form new significant structures, and
- language, which gives the child the ability to exchange recalled events with the products of his imagination, thus enabling him to relate them to others.

When children reach an age where they have developed the ability to converse and think about themselves (the ‘I’ concerning the ‘my’ dialogue), the community increasingly influences the organisation of their worlds. Because the ‘my’ is also a ‘social my’, it is not possible for children to think, feel or act in isolation from the community of which they are part. Children engage constantly in dialogue with members of the community (for example, father, mother, uncles, aunts) who position them (for example, child, friend) according to different social situations (for example, family, school) wherein the children then function. The feedback which a child receives in this process, whether positive or negative, is interpreted by the child, according to his construction of the self-narrative, from ‘you are…’ statements to ‘I am…’ statements. As the child develops the ability to understand the role of ‘others’ the child begins to speak to others in the same manner that others speak to the child. The child then arranges the spectrum of possible positions in the dialogical self accordingly. During this process certain positions acquire a more powerful or significant place in the dialogical self than other positions do. This domination, as an intrinsic element of dialogue, in placing one position above another, organises and limits the multitude of possible positions in the process of socialisation. In this fashion the child develops, resists or avoids certain positions more than others (Hermans & Kempen, 1993).

Children have a multitude of ‘selves’, but the number of voices increases drastically during adolescence as a result of the enlarging environment and a change in their cognitive capacities (Kunnen & Bosma 2000). These voices remain compartmentalised until they discover contradictions and confrontations in the self during mid-adolescence. This leads to confusion, ambivalence and conflict. It is only during late adolescence that a reflection on the voices, and a purposeful dialogue, takes place between the voices. At this stage the adolescent has developed the cognitive ability to construct higher levels of integration for contrasting and conflicting voices. During the development towards adulthood these voices are organised into more manageable patterns. This construction of an integrated and coherent system of multiple voices is a developmental accomplishment of adulthood. Tappan (2005) shows that identity, even in the development of oppressed minority groups, is a negotiated and dialogical phenomenon.

In order for us to expand our knowledge of socialisation, we need to look at ourselves, and more importantly, at the reality of the self.

3. Reality of the self

Counselling one person is a difficult task; counselling a husband and wife is eminently more difficult, and requires special skills and alertness in the counsellor. Frequently one, or both, of the spouses are filled with scepticism about the value of counselling, and sometimes there is an attitude of resistance or even hostility. It has been said that marriage counselling is “one of the most difficult and sensitive of therapies – filled with psychological traps and surprises”. Before initiating
therapy, and frequently thereafter, counsellors should look at themselves and clarify the understanding of the social components present and examine how they are able to derive a clear understanding of what reality of the self means. Counsellors should ask themselves: (1) What is the reality of the self? and (2) Where does self-knowledge come from?

Let us first pay attention to the question: What is the reality of the self?

Watzlawick, Weakling and Fisch (1974) stress the fact that the ‘real’ is seldom, in psychopathology or counselling, the ‘real’ of a thing in itself (if indeed such a thing can be comprehended), but rather the referent, as it is demonstrated and understood. ‘Real’ is thus made up of opinions, in the example of the meaning the situation has for a group of persons. ‘Real’ is what a sufficiently large number of people have agreed to call real (Watzlawick et al. 1974). Keeping this in mind Watzlawick, in his book ‘How real is real’ (1976), draws a distinction between two types of reality; a first-order reality and a second-order reality. A first-order reality is based on a consensus about perceptions. In other words, it is the physical properties of things such as ‘Gold is a yellow metal’. The first-order reality is thereby based on experimental, repeatable and verifiable evidence. The second-order reality is the attributed meanings, significance, or values that people give things. It is thereby the symbolic or sociocultural value of the events of the first-order reality. To explain these two concepts more simply, we may refer to Watzlawick’s example of gold as referred to by Geisler (1991):

The first-order reality of gold (that is its physical characteristics) is completely known and can be verified whenever necessary. The meaning that gold has had in human life since ancient times and the fact that it is given a value (which is a totally specific aspect of reality) twice a day in the City of London, and that this attribution of worth largely determines many other aspects of our reality – all this has very little, if at all, to do with its physical characteristics. It is however this second-order reality of gold which can make one immensely rich or bankrupt.

The reality of the self consists of various other explanatory concepts, namely social identity, self-schema, self-esteem, self-monitoring behaviour, and self-focusing. An understanding of these concepts will add value to our understanding of the reality of the self.

3.1 Social identity

According to Tajfel, in Taylor et al. (1994), social identity is

…the part of an individual’s self-concept which derives from [his or her] membership in a social group (or groups) together with the value and emotional significance attached to that membership.

The self, or self-concept, is also a collection of beliefs which we hold about ourselves such as: What are our most prominent characteristics? What are we good at? What are we poorly at? What kinds of situations do we prefer or avoid? Therefore, we acquire our self-concept, or self-identity, primarily through our social interactions, and the self with its acquisitions regarding various components.

These social groups, as mentioned above, include one’s family, community, religious or ethnic group, and other groups that highlight or reinforce important aspects of the self.

We are born into a particular family, a particular ethnic group and sometimes a particular religious group. As we get older, the attributes we value in ourselves lead us to pick social groups that reflect and reinforce those values” (Taylor et al. 1994).

Thus the self-concept and social identity mutually determine and shape each other.

If we focus on ethnic identity to enlighten social identity, note must be taken of the complexity of this identity. Carmen Guanipa-Ho and Jose Guanipa (1998) provide us with the following statement:

Ethnicity refers to a specific characteristic of shared unique cultural traditions, and a heritage that persists across generations. Ethnic identification is defined as a real awareness of self within a specific group, which is followed by a great sense of respect and pride, and it constitutes a base for the development of a healthy self-concept.

During the adolescent and young adult years when people are forming their sense of themselves, reconciling ethnic background with mainstream culture can be difficult. An example of this struggle is clearly illustrated by the effect that the Apartheid System had on the South African Black Community. Some of them still live according to traditions which closely resemble those of the pure African style of the past. There are others who resist urbanisation (the so-called migrants) and who, for example, attempt to strictly limit their interaction with people of the town, and who only try to associate with people from their own home areas and visit them in the rural areas as often as possible (Bester 1995).

Taylor, Peplau & Sears (1994) mention that some adolescents are caught between their parent’s ethnic beliefs and values, and that of the mainstream society and therefore they may identify with both mainstream culture and their ethnic group, creating what is called a bicultural or integrated identity. Others may maintain a strong ethnic identity but have few ties to the majority culture, maintaining a separated identity. Individuals who give up their ethnic heritage in favour of mainstream culture are said to be assimilated. Finally, some adolescents and young adults develop only weak ties to both their ethnic culture and the mainstream culture and feel marginal, like outsiders in both cultures. It is important to note that ethnic identity is an identity that develops from within, instead of an image that is imposed by society stereotypes. However, Maldonado in (Guanipa-Ho and Guanipa 1998) states:

It is important to say that the stereotypes that a large society places on ethnic groups can be a great contribution to the adolescent’s sense of pride or shame.

Therefore ethnic identity is an important part of self-knowledge with respect to social identity.

Altogether, the self-concept is a complex collection of diverse information that is somehow held together as if glued in place. If each of us is not just a random collection of information, what then is the ‘glue’ that holds all the information together in a unified self-image? The answer lies in the concept of the schema.

3.2 Self-schema
According to Taylor, Peplau & Sears (1994) a schema is

an organised, structured set of beliefs and cognitions about some concept or stimulus...self-schemas describe the dimensions along which you think about yourself.

Each of us has a self-schema in which our self-knowledge is organised. Self-schemata reflect all our past self-relevant experiences; all of our current knowledge and existing memories about
ourselves; and our conception of what we were like in the past, what we are like now and what we may be like in the future. From this the counsellor must take note. A person’s self-schema is the sum of everything that the individual knows or can imagine about himself or herself (Baron & Byrne 1994).

People hold self-conceptions about their current qualities as well as conceptions of themselves that may become self-descriptive at some time in the future. Taylor, Peplau and Sears (1994) call these *possible selves*. Some of these involve goals or roles to which people aspire. Possible ‘selves’ function in much the same way as self-schemas. They help people to articulate their goals and develop behaviours that will enable them to fulfil those goals. Not all self-schemata are positive. People also hold well articulated beliefs about themselves on negative qualities.

If the self is the centre of our social universe, and if our self-schemata are well developed, it follows that we should do a better job of processing information that is relevant to ourselves rather than any other kind of information. Self-relevant information should be more likely to capture our attention, to be entered into memory, and to be recalled. Taylor, Peplau and Sears (1994) state that this tendency, for information related to the self to be most readily processed and remembered, is known as the *self-reference effect*. Though the self-reference effect has been firmly established experimentally, what is it about relating information to the self that enhances our ability to process it effectively? In an important study Klein and Loftus, in Baron and Byrne (1994), reasoned that the recall of self-relevant information might be facilitated in one of two ways, each of which has been shown to enhance memory. First, self-relevance encourages what is termed *elaborative processing*, or the tendency to think about the meaning of words or events. Second, self-relevance might facilitate *categorical processing*, or the tendency to place stimuli in specific categories. Both mechanisms underlie the self-reference effect, making it easier to recall self-relevant information.

But how do we make use of the self-relevant information or, in other words, how do we evaluate our self-schema? The answer can be found in the concept of self-esteem.

### 3.3 Self-esteem

Self-esteem refers to the self-evaluations each individual makes. Persons expressing high self-esteem believe themselves to be fundamentally good, capable, and worthy. Low self-esteem is a view of oneself as useless, inept, and unworthy. The opinions expressed by others probably help shape these attitudes and an outsider’s opinions may sometimes bring about changes in one’s self-esteem. According to Taylor, Peplau & Sears (1994),

*People with high self-esteem...use feedback in a self-enhancing manner...people with low self-esteem...have more adverse emotional and behavioural reactions to criticism or other kinds of negative feedback.*

Self-evaluations are also affected by the characteristics of others with whom we compare ourselves.

Another aspect of self-esteem, that should be taken into account, is the discrepancy, or difference, between the self and the ideal self. The difference between persons’ perceptions of how well they are functioning and how well they believe they should be functioning is known as a *self-ideal discrepancy*. For example, Michelle sees herself as anxious, a dreamer, and irresponsible, but she would like to be relaxed and responsible. The self-ideal discrepancy indicates the changes a person would like to make in order to achieve their ideal. We can also

make the assumption that the less discrepancy there is between self and one’s ideal, the higher one’s self-esteem ought to be.

Research has consistently shown that having positive self-regard, or self-esteem, is generally beneficial, provided that it is not carried to extremes. For example, people with high self-esteem tend to be less lonely than those whose self-esteem is low, suggesting that a positive self-evaluation is associated with good social skills. If self-esteem represents the characteristic evaluation an individual makes, it would seem to be an internal trait or dispositional variable. If self-esteem can be raised or lowered in response to the evaluations of others, it would seem to be a temporary state that fluctuates with changes in the external situation. In fact, both the trait and state concept of self-esteem are accurate.

When self-esteem is conceptualised as a trait, it is evaluated along a positive-negative scale that indicates where the person measures in relation to others. Dispositional self-esteem does not indicate a totally unchanging characteristic, set in stone, but rather a general tendency to evaluate oneself in a relatively consistent way at different times and in many different situations. If your dispositional self-esteem is higher than the person sitting next to you, you probably feel better about yourself than that person feels about himself, both now and in the future. Most studies of trait self-esteem concentrate on environmental factors that bring about individual differences. A classic example is that of a child whose parents divorce; self-blame follows when the child makes the false assumption that a parent is leaving because the child did something wrong. Such childhood misperceptions may underlie the finding that negative childhood events, such as having a parent enter a mental hospital, divorce, remarry or die, are associated with low general self-esteem as an adult. In contrast to the long-lasting effects of early experiences on dispositional self-esteem, situational effects in later life are likely to be temporary (Baron & Byrne 1994, Taylor et al. 1994 and Fullerton 1977).

Until now we have discussed how our identity is shaped by the societal groups, how we process information, and how we evaluate ourselves. A question that is raised when revising these aspects is: what is the influence of all these aspects on an individual? The answer lies within the concept of self-monitoring behaviour.

### 3.4 Self-monitoring behaviour

Self-monitoring refers to the degree to which individuals regulate their behaviour on the basis of the external situation and the reactions of others, or on the basis of internal factors such as their own beliefs, attitudes and interests. In the original formulation of self-monitoring it was assumed that high self-monitors engage in role-playing in an attempt to behave so as to receive positive evaluations from others. More recently, Schwalbe, in Baron & Byrne (1994), proposed that the high self-monitoring behaviour of some individuals is based not on skilfully tuned role-playing, in response to the reactions of other people, but on relatively permanent images or ‘scripts’ assumed to be appropriate in a given situation.

The ability to regulate our behaviour lies in our ability to become self-aware or self-focused. This is the final concept to be discussed within the reality of the self.

### 3.5 Self-focusing

Self-focusing refers to the centrality of an individual’s sense of the self. The extent to which you are self-focused is indicated by the degree to which your attention is directed inward towards yourself as opposed to outward, towards the environment. Self-focusing is tied to memory and cognition. You can focus on yourself only if you can recall relevant past events and process
relevant current information. Two areas of memory can be identified in respect of self-focusing. Self-focus affects the accuracy of biographical recall, or how well you can retrieve factual information about yourself, and the complexity of self-descriptive judgements. Duval and Wickland, in Baron & Byrne (1994), suggested that a person with a high sense of self-focusing, or self-awareness either acts to reduce any discrepancies between his self-concept and actual behaviour or avoids situations in which such discrepancies occur. In both instances, behaviour is influenced by whether or not attention is focused on the self.

As with self-monitoring behaviour, those whose self-focus is strong would be expected to show consistent behaviour across situations, while a weak self-focus would be associated with behaviour that changes as the situation evolves. Because self-concept contains multiple elements, it is possible to focus on only a portion of it at a time. Many people store positive and negative aspects of themselves separately in their memory. Thus, if the individual focuses on the negative, his mood and subsequent behaviour will be different to what they would be if the focus is on the positive.

Some individuals, however, seem to store positive and negative self-knowledge together; the result is a less negative affect and a higher self-esteem. The most general conclusion is that the organisation of self-evaluations affects self-esteem and mood beyond what could be predicted on the basis of the amount of positive and negative content. Though the self-content, on which a person focuses, influences his mood, mood also affects self-focusing behaviour, and environmental factors in turn affect the individual’s mood. The extent and the content of the self-focusing behaviour, as well as mood, can affect expectations.

The second part of the question, which counsellors should ask themselves, with regard to self-knowledge, is: where does self-knowledge come from? With what has already been said in mind, it is apparent that knowledge of the self comes from many sources, such as receiving and processing information, self-evaluation, self-awareness, and focusing on the internal rather than external aspects. Some of it may be seen to be spontaneous, or a realisation that something is true of the self, without any certainty of where that knowledge comes from. More commonly, however, we can identify the origins of our beliefs about ourselves in specific experiences. To understand this question, one must focus on the process of socialisation as a tool to construct one’s own perceived reality with regard to the marriage or the family. We cannot, however, ignore the complexity of the individual and the internal processes that form the perceptions of each and every person.

We have mentioned several factors which play a critical role in shaping our reality and contribute to our socialisation. What then is the influence of social components on marriage counselling? We answer this question in the following brief discussion.

4. Social components

We need to focus on the social components and their influence on marriage counselling and briefly discuss the various mechanisms that the counsellor should take note of when counselling a married couple. As was mentioned before, socialisation plays an important role in an individual’s perception of reality. The following factors are the main focus: (a) religion, because it teaches the individual the rights and wrongs of dating and of marriage, (b) education, since the opportunity to mix with other social classes or racial groups, or a lack of such opportunity, can influence an individual greatly, and (c) ethnic or cultural background. We can combine these factors to see what influence they have on a married couple, for instance John and Mary, who
present for counselling. John was brought up in a household where weekends were spent on either a rugby or a cricket field. His parents motivated him to participate in these sporting pastimes. He considers himself a sporting person. His parents also took him to church with them. They had a positive, yet strict, outlook on life. He attended a public school with mixed races and social classes and had friends in all spheres. Mary, on the other hand, had a different upbringing. Her weekends were spent with her parents at museums and at the theatre. She considers herself to be a cultured person. She attended the Catholic Church with her parents who were particularly strict regarding dating arrangements. Mary was generally not allowed to date in high school and when consent was given, it had to be with a young man from their church. Mary also attended a private school for girls and had friends that came from the same social class. She barely mixed with persons from another race or ethnic group.

The marriage counsellor has to take these social components into consideration when counselling John and Mary, since most of their conflicts and differences lie within their different social upbringings. The way they view themselves are poles apart and they may experience conflict when giving their respective opinions about each other’s socialised skills. It is safe to say that the way we’ve been socialised differs from person to person.

Personal preference, as well as our perception of marriage, is determined by socio-cultural factors because social components shape our reality of what is expected from us. Thus, depending on our social skills and cultural background, our perceptions of marriage will differ. Again it is important for the counsellor to take note of these different perceptions because they can create an atmosphere where both parties are allowed to share these differences and resolve their conflict. These social components also shape our reality of ourselves, and this aspect emphasises our identity, schema, esteem, behaviour, and focus. We need to take a closer look at the social groups involved because they also provide some of the social components that may influence marriage and the counselling process. These groups determine what we are born into, such as our particular family, particular ethnic group, and particular religious group. All these components make up part of a social package, and each individual belongs to one of them.

5. Conclusion

Each and every individual constructs his or her own reality regarding a marriage or a relationship. With that reality they enter into a relationship or marriage without relating the individual content thereof to their partner. Since each person or spouse has his or her own framework, containing their reality or perception of themselves, others, and of the world, we should rather refer to reality as a ‘perceived reality’. This social construction of reality is the process whereby people assign meanings to social phenomena, such as objects, events, and characteristics, which almost always cause those, who draw upon these meanings, to emphasise some aspect of specific phenomena and to ignore others. These assigned meanings have remarkable consequences for the individuals involved, depending on how they interact with each other, what decisions they make, and what actions they take. Following this perspective, sociologist Jessie Bernard in Schwartz & Scott (1994) argued that men and women are likely to view and experience their marriages differently. During counselling the counsellor must take note of the perceived reality each individual has created for himself or herself through the process of socialisation. This reality must be identified, within each individual, by using narrative therapy, or any other accepted means, and, although it may be subjective, this method will enhance communication significantly during counselling.
References


The illusion of ethics for good local governance in South Africa

S Vyas-Doorgapersad & EP Ababio*

Abstract

Ethics, the legislation and upholding of good conduct by public officials is a *sine qua non* for sustenance of good governance and service delivery. The White Paper on the Transformation of the Public Service 1994 identified the need for a code of conduct in South Africa as an essential element to enhance high standards of ethics and professionalism. In 1996, the Constitution of the Republic of South Africa prescribed the values and principles of Public Administration. Subsequently, the Public Service Commission developed a Code of Conduct in 1997. The legitimacy of local government is based on the same principles of ethics and professionalism as that of the national government. It is imperative to implement an ethical framework for social and economic development at the grass-root level. This article examines the theoretical terrain of ethics in public management and posits that, whereas there exist some state-of-the-art legislation that regulate the conduct of public functionaries at the local government sphere, outcomes of ethics in practice are rather unethical and illusive. There is therefore an advocacy for the need to intensify implementation of ethical guidelines for councillors and municipal employees. The fiduciary, management, operational and accountability framework is further upheld through the implementation of a code of conduct for local officials. Theoretically, the framework should be scientifically accountable and practically feasible in implementation.

The article recommends the need to strategise measurable implementation plans, conduct the on-going fraud risk assessments and sensitise the community through education and training regarding good governance and the code of ethics. The approach used is descriptive, though analytical.

**Keywords:** ethics, corruption, good local governance, code of conduct.

**Disciplines:** Public management and governance, Ethics.

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**Introduction**

The image of a government depends upon the conduct of public functionaries and the perceptions of its citizenry regarding the acceptable standards of services offered by the functionaries. It is, therefore, of fundamental importance that public functionaries act justly and fairly to one and all, not only paying lip service to transparency and openness (Vyas-Doorgapersad & Ababio, 2006: 385), but also ensure that these are manifested based on Batho Pele principles *per se*. It is imperative that each public functionary, upon accepting government employment, takes cognizance of the fact that there is a special duty to be open, fair and impartial in interacting with the public.

Ethical standards and behaviour expectations of public servants are usually spelt out in a code of ethics normally documented in rules and regulations. They are also implicit in the behaviour that may constitute an act of misconduct that may manifest itself in various forms and at different times in the history of the state (Agere, 1992: 39). In order to improve the ethical environment at individual and institutional level, it is imperative to understand and compare the traditional ethical system to the current one. The table below, as identified by Sardar (Raga and Taylor, 2007: 9) is a comparison of public service ethics in the twentieth-century with envisaged public service ethics for the twenty-first century.

**Table 1: Traditional and Modern Public Service Ethics**

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<thead>
<tr>
<th>Twentieth-century ethics</th>
<th>Twenty-first-century ethics</th>
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<tr>
<td>Determinants-ruling elites</td>
<td>Determinants-authentic discourse among all who will be affected</td>
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<tr>
<td>Common ethical code-belief in final solutions</td>
<td>Constantly managing code(s)-based on continuous authentic discourse</td>
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<td>Support guaranteed through coercion</td>
<td>Support guaranteed through consensus</td>
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<td>Dissenters subject to punitive measures</td>
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<td>Western (colonial) ethics</td>
<td>Ethics based on anthropological and sociological pluralism</td>
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<tr>
<td>Corporate accountability (amounts to non-accountability)</td>
<td>Personal accountability</td>
</tr>
<tr>
<td>Exercise of personal morality stifled and discouraged</td>
<td>Exercise of personal morality encouraged</td>
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<tr>
<td>Exercise of personal discretion discouraged</td>
<td>Exercise of discretion encouraged</td>
</tr>
<tr>
<td>Public interest nebulos, determined by governing elites</td>
<td>Public interest(s) disparate but relatively distinct, determined with all involved (authentic discourse), constantly redefined</td>
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The table explores the fact that the new century seems to dawn with a renewed load of ethical and philosophical dilemmas which leave practitioners and academics of public administration alike in a predicament. Whereas at the beginning of the 20th century there seemed to be only answers and convictions, at the beginning of the new century we are surrounded by new questions, uncertainties and doubts resulting from the overarching processes of the globalisation of market economies and information technology as well as the localisation of political conflict, authority systems and culture (Makrydemetres, 2002: 3). This paradigmatic shift furthermore raises debate regarding the exercise of ethics at decentralized levels of authority and how
applicable these ethical codes are in creating an environment of good governance. The following sections are built on the pieces of information searching for measures to avoid ethical dilemmas for moral regeneration of public functionaries at the South African municipal sphere.

**Meaning and nature of concepts ethics and good governance**

Coicaud and Warner (in Walters, 2009:1) commented that ethics is concerned with what is essentially human in our nature. In thinking and acting in an ethical manner, the individual makes himself a witness to what positively distinguishes humans: the quest for dignity. Ethics therefore is not about the self in isolation but fundamentally has a social quality. Freakley and Burgh (in Cranston et al., 2003:1) see ethics as ‘about what we ought to do’. These perspectives imply that an ethical judgement often may need to be made about a given problem or situation (Cranston et al, 2003: 1). There is the inference that functionaries may often be faced with choices that require them to make decisions that have no clear cut resolution and are likely to be highly problematic. That is, they are likely to find themselves confronted with ethical dilemmas. Simply put then, an ethical dilemma, arises from a situation that necessitates a choice among competing sets of principles, values, beliefs, perspectives (Cranston et al, 2003: 1).

In other words, ethics is normative; it is the exercise of a capacity to discriminate among available courses of action on the basis of interpretation of shared values embedded in an ongoing institutional practice and in a broader form of communal life (Jennings, in Sindane, 2009:500).

Good governance includes ten principles as requisites of ethical local governance. These principles are:

- **Participation:** to encourage all citizens to exercise their right to express their opinion in the process of making decisions concerning the public interest, both directly and indirectly;
- **Rule of Law:** to realise law enforcement which is fair and impartial for all, without exception, while honouring basic human rights and observing the values prevalent in the society;
- **Transparency:** to build mutual trust between the government and the public through the provision of information with guaranteed easy access to accurate and adequate information;
- **Equality:** to provide equal opportunities for all members of the society to improve their welfare;
- **Responsiveness:** to increase the sensitivity of government administrators to the aspirations of the public;
- **Vision:** to develop the region based on a clear vision and strategy, with participation of the citizenry in all the processes of development so that they acquire a sense of ownership and responsibility for the progress of their regions;
Accountability: to increase the accountability of decision-makers with regard to decisions in all matters involving the public interest;

Oversight: to increase the efforts of supervision in the operation of government and the implementation of development by involving the private sector and the general public;

Efficiency and Effectiveness: to guarantee public service delivery by utilizing all available resources optimally and responsibly; and

Professionalism: to enhance the capacity and moral disposition of government administrators so that they are capable of providing easy, fast, accurate and affordable services. These principles are imperatives to enhance ethical environment for good local governance (United Nations Development Programme, 2008; Vyas-Doorgapersad, Subban & Pillay, 2008).

The elements of good governance can be hampered by several types of political corruption that occur in local government. Some are more common than others, and some are more prevalent to local governments than to larger segments of government. Local governments may be more susceptible to corruption because interactions between private individuals and officials happen at greater levels of intimacy and with more frequency at more decentralized levels. Forms of corruption pertaining to money like bribery, extortion, embezzlement, and graft are found in local government systems. Other forms of political corruption are nepotism and patronage systems (PoliticalCorruption.net, 2009). Political corruption creates ethical dilemmas at grass-root level. This has been highlighted by ex-President Thabo Mbeki when he laments that

…some of the people who are competing to win nomination as our candidate local government councillors are obviously seeking support on the basis that once they are elected to positions of power, they will have access to material resources and the possibility to dispense patronage.

He added:

These goings-on tell the naked truth that the ranks of our movement are being corrupted by a self-seeking spirit that leads some among us to view membership of our organisation as a stepping stone to access to state power, which they would then use corruptly to plunder the people’s resources for their personal benefit (ANC Today, 2005; DA, 2010: 2).

The factors that can cause corruption in local government are discussed in the next section.

Causes of corruption in local government

The South African Prevention of Corruption Act, 1992, defined the term corruption as

any person deemed guilty of a corruptible offence whenever such a person corruptly accepts,
obtains, or agrees to accept any gift as an inducement or reward for himself/herself or any
other person, the result of such an action leading to favour or disfavour being shown to the
party offering the inducement; and any person who corruptly gives or accepts any gift from a
party as an inducement or reward for rendering services on behalf and in favour of the
designated party.

Corruption therefore symbolize any conduct or behaviour in relation to persons entrusted with responsibilities in public office which violates their duties as public officials an which is aimed at
obtaining undue gratification of any kind for themselves or for others (Department of Public Service and Administration, 2002; Vyas-Doorgapersad, 2007: 286).

Socioeconomic characteristics, size of the population and infrastructure development potential in municipalities are some of the encouraging causes of corruption at grass-root level. The Democratic Alliance (DA) report titled “The rot in ANC municipalities: five case-studies of cronyism, corruption and ineptitude” emphasized that

(A) major problem facing many municipalities is the small revenue base in the poorer areas. This is largely a structural problem that cannot be blamed on councillors and municipal officials. However, all efforts to overcome this stumbling block are being undermined by three key factors that are wholly avoidable: corruption, financial mismanagement and the appointment of senior officials solely on the basis of political connectivity and/or employment equity considerations. Municipal Managers tend to be under qualified, overpaid and consequently do not perform (DA, 2010: 1).

The extract from the DA report reveals the following facts regarding corruption in South African municipalities:

• local government has become virtually synonymous with illegal tendering practices, unauthorised loans to councillors and, in some cases, outright looting. A recent Gauteng-based survey on local government revealed that sixty percent of the residents profiled expressed concern over what they perceived as high levels of corruption in their municipality. Intense rivalries in the ANC have developed for positions in local bureaucracies and seats in councils because of the spoils on offer once appointed or elected.

• the inability of many municipalities to comply with financial regulations set by the Auditor-General is a disturbing indicator of the lack of capacity in many municipalities.

• another indicator of financial misconduct is the failure to collect enough revenue to pay for service delivery.

• it is generally accepted that municipalities should spend no more than 30% of their budget on salaries and the other 70% should go to infrastructure and service delivery. However, the amount paid in salaries to councillors and municipal officials outstrips spending on services by nearly R10 billion – 10% of the total municipal budget. Some Municipal Managers have been known to earn in the region of R1.2 million, although the national average is closer to the R650 000 mark before performance bonuses. The issue with salaries and bonuses is not just the amount of money, but the fact that Municipal Managers are often rewarded despite their failure to run a municipality properly (DA, 2010: 1-3).


There has been a marked increase in unethical conduct and corruption in local government in South Africa in the past five years. The Government has acknowledged that the matter has to be addressed as a matter of urgency in South Africa as it impacts negatively on service delivery. The Republic of South Africa Constitution Act of 1996 provides the constitutional basis for promoting ethical conduct. The Local Government Municipal Structures Act 117 of 1998 has

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ushered in a code of conduct for councillors, while the Local Government: Municipal Systems Act 32 of 2000 has introduced a code of ethics for officials. It is expected that the above-mentioned codes will present challenges to both local politicians and officials in setting up the culture of an ethical and corruption-free environment in local government. Within this framework and the broader context of local government, the community and municipal functionaries will have to seriously take cognisance of the institutional and administrative measures on hand to enhance ethical conduct and counter corruption. The curbing of corruption and enhancing of ethical conduct would, in the final analysis, ensure that the public interest is promoted and protected by addressing the needs and desires of the local citizenry (Democracy Development Programme, 2006).

The subject of ethics in South African local government has always evoked a great degree of interest in our relatively new democracy, particularly, as the local sphere of government is much closer to local communities compared to its provincial and national counterparts. It is also not uncommon for members of the public to view councillors and municipal staff members with suspicion and distrust, which is often attributable to past experiences of improper conduct on the part of certain individuals. It is for this reason that transparency and accountability tend to form the cornerstone of any legislation dealing with local government (Nkosi, 2006). The framework of ethics for good local governance in South Africa, explored in the next section.

**Ethical conduct at the local sphere in South Africa**

The Code of Ethics is a requisite for good local governance in South Africa. The purpose of Municipal Code of Ethics is

> to ensure transparency and ethical conduct by government employees and officials; to restore or foster public trust and citizen confidence in the administration of government; and to demonstrate a formal and codified commitment to ethical behaviour by government officials (Un-Habitat, 2004).

The office of the Public Service Commission initially issued a Code of Conduct for public servants as a Government Notice/Gazette: Regulation Gazette 5947, No. R. 825, on June 10 1997. The code of conduct provides guidelines to both public officials and employers of what type of ethical behaviour is expected of them. The code also gives an indication of the spirit in which public officials should perform their duties; the action to take to avoid conflict of interest; and the terms of public official’s personal conduct and private interest (Cameron & Stone, 1995: 80). A code of conduct for the public service officials at national, provincial and local government levels includes (Public Service Commission, 2010):

**Relationship with the legislature and the executive:** An employee is faithful to the Republic and honours the Constitution and abides thereby in the execution of her or his daily tasks; puts the public interest first in the execution of her or his duties; loyally executes the policies of the government of the day in the performance of her or his official duties as contained in all statutory and other prescripts; strives to be familiar with and abides by all statutory and other instructions applicable to her or his conduct and duties; and co-operates with public institutions established under legislation and the Constitution in promoting the public interest.

**Relationship with the public:** An employee promotes the unity and well-being of the South African nation in performing her or his official duties; will serve the public in an unbiased and
impartial manner in order to create confidence in the public service; is polite, helpful and reasonably accessible in her or his dealings with the public, at all times treating members of the public as customers who are entitled to receive high standards of service; has regard for the circumstances and concerns of the public in performing her or his official duties and in the making of decisions affecting them; is committed through timely service to the development and upliftment of all South Africans; does not unfairly discriminate against any member of the public on account of race, gender, ethnic or social origin, colour, sexual orientation, age, disability, religion, political persuasion, conscience, belief, culture or language; does not abuse her or his position in the public service to promote or prejudice the interest of any political party or interest group; respects and protects every person’s dignity an her or his rights as contained in the Constitution; and recognize the public’s right of access to information, excluding information that is specifically protected by law.

**Relationships among employees:** An employee co-operates with other employees to advance the public interest; executes all reasonable instructions by persons officially assigned to give them, provided these are not contrary to the provisions of the Constitution and/or any other law; refrains from favouring relatives and friends in work-related activities and never abuses her or his authority or influences another employee, nor is influenced to abuse her or his authority; uses the appropriate channels to air her or his grievances or to direct representations; is committed to the optimal development, motivation and utilization of her or his staff and the promotion of sound labour and interpersonal relations; deals fairly, professionally and equitably with other employees, irrespective of race, gender, ethnic or social origin, colour, sexual orientation, age, disability, religion, political persuasion, conscience, belief, culture or language; and refrain from party political activities in the workplace.

**Performance of duties:** An employee strives to achieve the objectives of her or his institution cost effectively and in the public’s interest; is creative in thought and in the execution of her or his duties, seeks innovative ways to solve problems and enhances effectiveness and efficiency within the context of the law; is punctual in the execution of her or his duties; executes her or his duties in a professional and competent manner; does not engage in any transaction or action that is in conflict with or infringes on the execution of her or his official duties; will rescue herself or himself from any official action or decision-making process which may result in improper personal gain, and this should be properly declared by the employee; accepts the responsibility to avail herself or himself of ongoing training and self-development throughout her or his career; is honest and accountable in dealing with public funds and uses the public service’s property and other resources effectively, efficiently, and only for authorized official purposes; promotes sound, efficient, effective, transparent and accountable administration; in the course of her or his official duties, shall report to the appropriate authorities fraud, corruption, nepotism, maladministration and any other act which constitutes an offence, or which is prejudicial to the public interest; gives honest and impartial advice, based on all available relevant information, to higher authority when asked for assistance of this kind; and honours the confidentiality of matters, documents and discussions, classified or implied as being confidential or secret.

**Personal conduct and private interests:** An employee during official duties, dresses and behaves in a manner that enhances the reputation of the public service; acts responsibly as far as the use of alcoholic beverages or any other substance with an intoxicating effect is concerned; does not use her or his official position to obtain private gifts or benefits for herself or himself during the performance of her or his official duties nor does she or he accept any gifts or benefits when offered as these may be construed as bribes; does not use or disclose any official information for
personal gain or the gain of others; and does not, without approval, undertake remunerative work outside her or his official duties or use office equipment for such work.

**Significance of code of conduct/ethics**

Promoting ethical standards in the public sector is a function of implementation and oversight of a code of conduct. Such regulatory practice conforms to specific norms namely (Urban Governance Toolkit Series, 2004):

*Creation:* The process of producing a code of ethics must itself be an exercise in ethics. It must intentionally involve all members of the social group that it will include and represent. This necessitates a system or process of setting out “from top to bottom”, from the sundry to the specific, and constitutes progressive agreements in such a way that the final result is recognized a representative of all the moral and ethical character of the group;

*Determining jurisdiction:* Municipalities need to designate individuals responsible for establishing enforcement guidelines and advisory procedures, and subsequently, including named entity within the code of ethics;

*Disseminating the Code of Ethics:* Municipal employees and officials must understand the rules, obligations and expectations of standards to which they must abide;

*Co-ordinating inter-government support:* The relevant municipal stakeholder needs to strategize enforcement, communication and administrative support; and

*Establishing a library of decisions and opinions:* The transparent element of a code of ethics is best effectuated through cogent opinions and decisions interpreting the various laws and provisions. Understanding the application of the code is an important element for transparent municipal governance.

In addition to a code of ethics, provision is also made among the doctrines of democracy for the conduct of public officials. As pointed out by Cloete (1995: 187-188): it is generally accepted that public officials must promote the general welfare of the public in accordance with policy determined by the legislator; public officials, according to the doctrine of democracy, must in performing their duties, respect the rights and freedom of the population, whose rights and freedom can only be infringed upon directly by the legislator; the public should always be able to demand public officials to give account of their activities; in a democratic state, every member of the population has the right to insist on fair and reasonable treatment; and the activities of public officials can meet the ethical norms only if they fulfil their activities effectively without wasting the resources of the community.

**Lessons learnt**

A number of countries implement some effective tools to enhance good local governance. The strategies and tools to support good governance at local level are specified in the table below (Un-Habitat, 2004):
Table 2: Strategies and tools to support good governance at local sphere

<table>
<thead>
<tr>
<th>STRATEGIES</th>
<th>Assessment and Monitoring</th>
<th>Access to information and public participation</th>
<th>Promoting ethics, professionalism and integrity</th>
<th>Institutional reforms</th>
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<tr>
<td>TOOLS</td>
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<td>The Municipal Checklist</td>
<td>e.g. Namibia, Greece</td>
<td>Public Meetings e.g. Wisconsin</td>
<td>Conflict of Interest Laws e.g. USA</td>
<td>Complaints and Ombudsman Office e.g. Northern Ireland, Canada, Germany</td>
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<td>The Urban Corruption Survey</td>
<td>e.g. Kenya, Brazil</td>
<td>Open Meeting Laws e.g. United States, Arizona</td>
<td>Disclosure of Income and Assets e.g. USA</td>
<td>Municipal Front Office e.g. Kosovo</td>
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<td>The Municipal Vulnerability Assessment</td>
<td>e.g. Washington, DC</td>
<td>Access to Information Laws e.g. South Africa</td>
<td>Lobbyist Registration e.g. USA</td>
<td>One Stop Shop e.g. Australia, UK</td>
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<td>Participatory Corruption Appraisal</td>
<td>e.g. Indonesia</td>
<td>Records Management and Computerization e.g. India, New Guinea</td>
<td>Whistle Blower Protection e.g. USA</td>
<td>Oversight Committees e.g. USA</td>
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<td>Report Cards</td>
<td>e.g. India, Filipino, Bangladesh</td>
<td>E-Government e.g. Korea, Ecuador, Finland, United States, India, South Africa</td>
<td>The Integrity Pact e.g. Argentina, Pakistan, Nepal</td>
<td>Independent Audit Function e.g. Vienna, Namibia</td>
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<td>PROOF (The Public Record of Operations and Finance)</td>
<td>e.g. India</td>
<td>Media Training e.g. Malaysia</td>
<td>Code of Ethics e.g. South Africa, Australia, Ethiopia, India</td>
<td>Independent Anti-Corruption Agencies e.g. Botswana</td>
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<td>Public Education Tools: <strong>Media Campaigns</strong>, <strong>School Programmes</strong>, <strong>Public Speaking, Engagements, Publications</strong> e.g. Lebanon, Peru, United States, Botswana, Baltimore</td>
<td>Ethical Campaign Practices e.g. USA, Azerbaijan</td>
<td>Participatory Budgeting e.g. Brazil, Serbia, Cotacachi</td>
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<td>Public Participation: <strong>Public Hearings, Study Circles, Citizen Advisory Boards, Government Contacts Committees, Public Watchdog Groups</strong> e.g. South Africa</td>
<td>Ethics Training e.g. Germany, USA</td>
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*TD, 6(2), December 2010, pp. 411-427.*
South African municipalities have also implemented a code of conduct for councillors to enhance the environment of ethics. For that matter, city councillors for all municipalities in South Africa have to abide by a code of conduct which requires them, among other things, to declare their financial interests, and to report back to the constituencies at regular intervals. Below is the full text of the code, in Schedule 5 of the Municipal Structures Act. Councillors are elected to represent local communities on municipal councils, to ensure that municipalities have structured mechanisms of accountability to local communities, and to meet the priority needs of communities by providing services equitably, effectively and sustainably within the means of the municipality. In fulfilling this role councillors must be accountable to local communities and report back at least quarterly to constituencies on council matters, including the performance of the municipality in terms of established indicators. In order to ensure that councillors fulfil their obligations to their communities, and support the achievement by the municipality of its objectives set out in section 19 of the Act (City of Johannesburg, 2010: 1), the following Code of Conduct is established (City of Johannesburg, 2010: 1-8):

**General conduct of councillors:** A councillor must perform the functions of office in good faith, honestly and a transparent manner; and at all times act in the best interest of the municipality and in such a way that the credibility and integrity of the municipality are not compromised.

**Attendance at meetings:** A councillor must attend each meeting of the municipal council and of a committee of which that councillor is a member, except when leave of absence is granted in terms of an applicable law or as determined by the rules and orders of the council; or that councillor is required in terms of this Code to withdraw from the meeting.

**Sanctions for non-attendance of meetings:** A municipal council may impose a fine as determined by the standing rules and orders of the municipal council on a councillor for: not attending a meeting which that councillor is required to attend; or failing to remain in attendance at such a meeting. A councillor who is absent from three or more consecutive meetings of a municipal council, or from three or more consecutive meetings of a committee, which that councillor is required to attend, must be removed from office as a councillor. Proceedings for the imposition of a fine or the removal of a councillor must be conducted in accordance with a uniform standing procedure, which each municipal council must adopt for the purposes of this item. The uniform standing procedure must comply with the rules of natural justice.

**Disclosure of interests:** A councillor must disclose to the municipal council, or to any committee of which that councillor is a member, any direct or indirect personal or private business interest that that councillor, or any spouse, partner or business associate of that councillor may have in any matter before the council or the committee; and withdraw from the proceedings of the council or committee when that matter is considered by the council or committee, unless the council or committee decides that the councillor’s direct interest in the matter is trivial or irrelevant. A councillor who, or whose spouse, partner, business associate or close family member, acquired or stands to acquire any direct benefit from a contract concluded with the municipality, must disclose full particulars of the benefit of which the councillor is aware at the first meeting of the municipal council at which it is possible for the councillor to make the disclosure.

**Personal gain:** A councillor may not use the position or privileges of a councillor, or confidential information obtained as a councillor, for private gain or to improperly benefit another person. Except with the prior consent of the municipal council, a councillor may not be a party to or beneficiary under a contract for the provision of goods or services to the municipality; or the
performance of any work otherwise than as a councillor for the municipality; obtain a financial interest in any business of the municipality; or for a fee or other consideration appear on behalf of any other person before the council or a committee. If more than one quarter of the councillors object to consent being given to a councillor, such consent may only be given to the councillor with the approval of the MEC for local government in the province.

Declaration of interests: When elected or appointed, a councillor must within 60 days declare in writing to the municipal manager the following financial interests held by that councillor: shares and securities in any company; membership of any close corporation; interest in any trust; directorships; partnerships; other financial interests in any business undertaking; employment and remuneration; interest in property; pension; and subsidies, grants and sponsorships by any organisation. Any change in the nature or detail of the financial interests of a councillor must be declared in writing to the municipal manager annually. Gifts received by a councillor above a prescribed amount must also be declared. The municipal council must determine which of the financial interests must be made public having regard to the need for confidentiality and the public interest for disclosure.

Full-time councillors: A councillor who is a full-time councillor may not undertake any other paid work, except with the consent of a municipal council which consent shall not unreasonably be withheld.

Rewards, gifts and favours: A councillor may not request, solicit or accept any reward, gift or favour for voting or not voting in a particular manner on any matter before the municipal council or before a committee of which that councillor is a member; persuading the council or any committee in regard to the exercise of any power, function or duty; making a representation to the council or any committee of the council; or disclosing privileged or confidential information.

Unauthorised disclosure of information: A councillor may not without the permission of the municipal council or a committee disclose any privileged or confidential information of the council or committee to any unauthorised person. For the purpose of this item "privileged or confidential information" includes any information determined by the municipal council or committee to be privileged or confidential; discussed in closed session by the council or committee; disclosure of which would violate a person's right to privacy; or declared to be privileged, confidential or secret in terms of law. This item does not derogate from the right of any person to access to information in terms of national legislation.

Intervention in administration: A councillor may not, except as provided by law interfere in the management or administration of any department of the municipal council unless mandated by council; give or purport to give any instruction to any employee of the council except when authorised to do so; obstruct or attempt to obstruct the implementation of any decision of the council or a committee by an employee of the council; or encourage or participate in any conduct which would cause or contribute to maladministration in the council.

Council property: A councillor may not use, take, acquire or benefit from any property or asset owned, controlled or managed by the municipality to which that councillor has no right.

Duty of chairpersons of municipal councils: If the chairperson of a municipal council, on reasonable suspicion, is of the opinion that a provision of this Code has been breached, the chairperson must authorise an investigation of the facts and circumstances of the alleged breach; give the councillor a reasonable opportunity to reply in writing regarding the alleged breach; and

report the matter to a meeting of the municipal council. A report is open to the public. The chairperson must report the outcome of the investigation to the MEC for local government in the province concerned. The chairperson must ensure that each councillor when taking office is given a copy of this Code and that a copy of the Code is available in every room or place where the council meets.

**Breaches of Code:** A municipal council may investigate and make a finding on any alleged breach of a provision of this Code; or establish a special committee to investigate and make a finding on any alleged breach of this Code; and to make appropriate recommendations to the council. If the council or a special committee finds that a councillor has breached a provision of this Code, the council may issue a formal warning to the councillor; reprimand the councillor; request the MEC for local government in the province to suspend the councillor for a period; fine the councillor; and request the MEC to remove the councillor from office. Any councillor who has been warned, reprimanded or fined may within 14 days of having been notified of the decision of council appeal to the MEC for local government in writing, setting out the reasons on which the appeal is based. A copy of the appeal must be provided to the council. The council may within 14 days of receipt of the appeal make any representation pertaining to the appeal to the MEC for local government in writing. The MEC for local government may, after having considered the appeal, confirm, set aside or vary the decision of the council and inform the councillor and the council of the outcome of the appeal. The MEC for local government may appoint a person or a committee to investigate any alleged breach of a provision of this Code and to make a recommendation on whether the councillor should be suspended or removed from office. The Commissions Act, 1947 (Act No.8 of 1947), may be applied to an investigation. If the MEC is of the opinion that the councillor has breached a provision of this Code, and that such contravention warrants a suspension or removal from office, the MEC may suspend the councillor for a period and on conditions determined by the MEC; or remove the councillor from office. Any investigation in terms of this item must be in accordance with the rules of natural justice.

**Application of Code to traditional leaders:** The above items must be applied to the traditional leader in the same way they apply to councillors. If a municipal council or a special committee finds that a traditional leader has breached a provision of this Code, the council may issue a formal warning to the traditional leader; or request the MEC for local government in the province to suspend or cancel the traditional leader’s right to participate in the proceedings of the council. The MEC for local government may appoint a person or a committee to investigate any alleged breach of a provision of this Code and to make a recommendation on whether the right of the traditional leader to participate in the proceedings of the municipal council should be suspended or cancelled. The Commissions Act, 1947, may be applied to an investigation. If the MEC is of the opinion that the traditional leader has breached a provision of this Code, and that such breach warrants a suspension or cancellation of the traditional leader’s right to participate in the council’s proceedings, the MEC may suspend that right for a period and on conditions determined by the MEC; or cancel that right. Any investigation in terms of this item must be in accordance with the rules of natural justice. The suspension or cancellation of a traditional leader’s right to participate in the proceedings of a council does not affect that traditional leader’s right to address the council.

Assessment and Monitoring tools (as stated in the table 2) are required to review the implementation of code of conduct at municipal level and further assist to develop the environment of accountability and transparency at the municipal level. The Access to Information tool is a requisite to enhance public participation. The Ethics and Integrity tools
create a boundary of acceptable actions and behaviour. The Institutional Reforms tool simplifies and clarifies the procedures of good local governance.

The following considerations have to be borne into mind as far as the ethical behaviour of municipal employees is concerned (obtained from Matovu in Plessis, 2003):

**Attitudes of local government managers:** The focus of local government managers should no longer emphasize managing of financial and material resources only but should also place emphasis on their human capital. One important implication of this attitude would include ensuring improved levels of communication.

In terms of the codes of conduct, for councillors and officials a simple but relevant question revolves around the extent to which the codes are communicated to people...that information dissemination on the code of conduct should form an integral part of the induction process to which new councillors/employees should be subjected. It would in the case of officials also require active involvement of organised labour as representative of employees.

**Increased dialogue between communities and the authorities:** There is an increased need for local authorities to be participatory especially in the light of the emphasis on developmental local government ...This requires continuous dialogue between authorities and the community. In a country like South Africa the majority of citizens were in the past isolated from issues of governance. There is thus a need to involve and educate local communities on how the authority operates and what they can reasonably expect. In this way the public can also positively impact on councilor and official behaviour if they are aware of the rules applying to those in positions of authority.

**Attracting professionals to local government:** Emphasis should be on portraying involvement in local government as a professional business. Politicians and officials alike should realise that they have a professional obligation to render services in the best possible ways to the community, their clients.

**Integrity within local government:** There are increased concerns about corruption in all government spheres. Activities of municipalities should be characterized by openness and honesty towards all stakeholders concerned to ensure the establishment of sustained relations of trust between the authorities and local communities.

The code of conduct is a requisite to avoid maladministration and unethical behaviour at the local sphere of governance. Though there are several factors that underpin the notion of good governance, viz. corruption. Klitgaard (1997: 2) proposed a formula for analyzing the tendency for corruption to exist: $C = M + D - A$ (Corruption = Monopoly + Discretion –Accountability).

There is a need to implement ethics in order to rectify the above formula for good governance. Moor (2004) further observed that the missing element from the formula is the sense of community, of responsibility for the common good and of ethics.

*If...examine the pattern of existence of corruption in different societies, it might support a modified formula: $C = (M + D - A) / E$, where the denominator $E$ is the ethical ambiance (Moor, 2004).*

*TD, 6(2), December 2010, pp. 411-427.*
Concluding remarks

The following policy points are recommended to further help enforce ethical requirements of public officials:

- Education and training are undoubtedly the backbone of sensitizing and creating awareness of a policy issue. This calls for regular and mandatory training of public officials on issues of ethics. In a number of Commonwealth countries, there exists the parallel institution of South African Management Development Institute (SAMDI, presently known as PALAMA) but which makes it mandatory for every public official to be trained for a Diploma in Public Administration. A prerequisite would be for each candidate to submit research essay on combating unethical conduct.

- The United States of America (USA) legislative system requires all political appointees to be vetted by a Senate Appointments Committee. Considering the gravity and rate of conducts on ethics in South African public service, it is appropriate that South Africa borrows such practice into its system. Such a committee scrutinises the entire fabric and life history of a prospective appointee, and once he/she is recommended, there is a hope that an ethical hurdle has been cleared. The existence of such a committee serves as bloodhound on unethical conduct.

- Further to the policy issue on Appointments Committee should be a policy on Declaration of Assets, on initial appointment, by officials from Director rank upwards. To be administered by the Public Service Commission, officials’ social standing would be periodically reviewed.

- Specific functional areas in the public service tend to be prone to unethical conduct. This may be true of tender and bidding functions. A rotation system where tender committee members are announced on the day of tender decisions will help close opportunities for unethical conduct in the process.

- Performance Contracts of Accounting Officers should include degrees of commitment to unearthing unethical conduct; to declare periodically issues that were tackled and rooted out.

- Ultimately, a market-related remuneration may help thwart unethical conduct. The public service is not a profit oriented service institution. Yet, a policy on attractive remuneration is needed for purposes of creating committed and dedicated public officials.

For South Africa, there were a number of lessons learnt with regard to the readiness of municipalities to develop and implement anti-corruption measures. Most notable was that although some municipalities, especially the district municipalities and metropolitan municipalities, have anti-corruption and fraud policies and structures in place, those have proven to be inadequate to effectively fight corruption (Department of Provincial and Local Government, 2008). Consequently, the Local Government Anti-Corruption Strategy (LGACS) developed by the Department of Provincial and Local Government stresses on the following principles: creating a culture within municipalities which is intolerant to unethical conduct, fraud and corruption; strengthening community participation and relationships with key stakeholders. For example, South African Local Government Association, employee representative unions and communities are strategic partners necessary to support the actions...
required to fight corruption in municipalities; deterrence of unethical conduct, taking appropriate action in the event of such irregularities, e.g. disciplinary action, recovery of losses, prosecution, and applying sanctions, which include redress in respect of financial losses (Department of Provincial and Local Government, 2008). In order to fulfil these objectives of good governance, there is the need to strategise measurable implementation plans, conduct sustainable fraud risk assessments and to sensitise the community through education and training regarding good governance and code of ethics.

The article offers recommendations to help promote ethical conduct in local government viz. through research (survey, opinion polls). There is a need to identify the underlying factors that cause corruption in local government. Transparency and accountability are most important to the legitimacy of local officials hence there is a need to form coalitions with stakeholders to stop corruption locally. Much publicity is needed to be given to the art of municipal financial reporting. The hearings at PROPACS (Provincial Public Accounts Committees), of Audit Committees, need to be in the public domain. Auditor-General road shows could be conducted to enlighten municipal public on audit findings and soliciting public partnership in unearthing municipal unethical conduct.

The public sector, according to Lynch (in Raga and Taylor, 2007: 4), like individuals, is constantly changing through new leadership, environmental influences and socio-political development. Government and society cannot promote and enforce ethical behaviour solely through the utilisation of ethical codes of conduct or through the promulgation of a plethora of legislation. Social mindsets are often entangled in a micro-ethic paradigm. People tend to equate moral values and moral norms, which apply only to personal relations structures within which they interact. South Africa needs an organisational culture that not only supports ethical behaviour, but also defines and underpins right and wrong conduct at an individual and institutional sphere.

The Code of Conduct is a requisite to regulate the environment of transparency and accountability. The cases of misconduct which are not expressly provided for in terms of either Code of Conduct may be further regulated by each municipal council in terms of Section 160 of the Constitution, which deals with the internal procedures of a municipal council. For instance, the council would be entitled to incorporate into its standing rules and orders any act of misconduct which is not expressly provided for in the Code of Conduct for Councillors. It may be argued that the general prohibition contained in item 2 of the Councillors’ Code of Conduct is wide enough to cover any type of misconduct which may have the effect of compromising the credibility and/or integrity of the municipality (Nkosi, 2006). It appeared that the phenomenon of ethical conduct in public activities and all the circumstances surrounding them could be subjected to scientific investigations, in order to analyze the implications thereof. This serves as a motivation for the study, in order to research the phenomenon of good local governance within the context of ethics.

References


Nkosi, V. 2006. ‘Ethics and Codes of Conduct in Local Government (Councillors and Municipal Staff Members)’. http://www.ddp.org.za


Viewing ‘the other’ over a hundred and a score more years: South Africa and Russia (1890–2010)

I LIEBENBERG*

Abstract

Whether novel is history or history is novel, is a tantalising point. “The novel is no longer a work, a thing to make last, to connect the past with the future but (only) one current event among many, a gesture with no tomorrow” Kundera (1988:19). One does not have to agree with Kundera to find that social sciences, as historiography holds a story, a human narrative to be shared when focused on a case or cases. In this case, relations between peoples over more than a century are discussed. At the same time, what is known as broader casing in qualitative studies enters the picture. The relations between the governments and the peoples of South Africa and Russia (including the Soviet Union), sometimes in conflict or peace and sometimes at variance are discussed. Past and present communalities and differences between two national entities within a changing international or global context deserve attention while moments of auto-ethnography compliment the study. References are made to the international political economy in the context of the relations between these countries.

Keywords: Soviet Union, South Africa, Total Onslaught, United Party, Friends of the Soviet Union, ideological conflict (South Africa), Russians (and the Anglo-Boer War), racial capitalism, apartheid, communism/Trotskyism (in South Africa), broader casing (qualitative research)

Subject fields: political science, sociology, (military) history, international political economy, social anthropology, international relations, conflict studies

Introduction

The abstract above calls up the importance of “‘transnational’ and ‘transboundary’ theories and perspectives” and the relevance of the statement that,

Worldwide, the rigid boundaries that once separated disciplines have become less circumscribed; they are no longer judged by the static conventions of yesteryear (Editorial, Journal for Transdisciplinary Research in Southern Africa, 2009: iii-iv).

Such developments in the human sciences have potential to expand our horizons of knowledge.

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The terms ‘viewing’ and ‘the other’ call up contending and complementary world views. These terms relate to ideology, political socialisation, conflicts, peacemaking, past memories, international relations and projected futures. Such discourse also calls up social identities and political dynamics – concepts deployed in various social science disciplines. And in this case, also involves long standing relations between two peoples and their governments. Tapping into social sciences such as sociology, political science, international political economic insights and qualitative approaches, this contribution is interdisciplinary in nature. Terms such as power elite, mobilised societies, symbolic politics, ideologies, groupthink, and the phenomena of stereotyping and labelling play a role. Contending paradigms of economic thinking (international political economic interests) also enters the picture.

In South Africa and Russia (previously the Soviet Union), viewing ‘the Other’ preceded and outlasted the Anglo-Boer War (1899–1902), the 1917 overthrow of Tsarist rule, two world wars, demise of the Berlin Wall, the ‘border war’, the fall of minority rule in South Africa and beyond. Russia saw the departure of the last Tsar, a communist revolution and the rise of new authoritarianism, its decline and a relatively failed attempt to establish liberal democracy.

Both countries saw regime changes, mutation of political structures and evolving ideologies. South Africa experienced the demise of the Boer Republics, the becoming of a union, the apex and decline of the British Empire, the rise of a whites-only republic with a unique brand of authoritarian rule and transition to a dominant party system under a negotiated constitution in an attempt to establish a (liberal-) democratic system. In 2010 while South Africa hosted the FIFA World Soccer Cup, Namibia commemorated its 20th year of independence from South African dominance after an election won by the South West African Peoples Organisation (SWAPO) which some claim would not have happened if it were not for Soviet support. Others argue it came about by the voluntary withdrawal of apartheid forces from first Angola, then Namibia.

A century and a score more are not an arbitrary choice. South Africa became a union in 1910, and Russia was shaken by two revolutions in 1917. Amongst the Englishmen who visited Russia in 1897/1898 was John Hammond, an American Rhodes admirer who was involved in the unsuccessful anti-Boer conspiracy in Johannesburg in 1895. Two years after the Jameson raid Hammond was a guest of the Russian minister of finance, Sergei Julievitch Witte (Davidson, 2003: 27–28). In 1895, Hammond described Rhodes as “undoubtedly the greatest Englishman of the century” (Davidson, 2003: 28). In contrast, Lenin mentioned Rhodes as an example of how the ravenous British bourgeois viewed the economic advantages of naked imperialism (Davidson, 2003: 29), while Jan Smuts and Olive Schreiner became staunch critics of Rhodes before the turn of the previous century (Spies and Nattrass, 1999:14). International (strategic) views influenced developments. The political elite, what C. Wright Mills, sociologist, calls the power elite, in both societies were at odds at times.

There are no recent contributions by South African academics from an interdisciplinary perspective who investigate relations between the two powers over the past century. This article addresses the topic.

A methodology rather than ‘The Methodology’

The permanent flux of social developments and political dynamics frequently introduce a level of analysis that makes objective writing problematic. In sociology, anthropology, political science and (lately) history and theology (most) approaches are paradigmatic. Multiple research
approaches can add to insights by providing a more fluid *digm*. The interdisciplinary scholar contributes to *intersubjectivity* rather than objectivity (read: “Objectivity”). Historiography plays a role but other subject disciplines provide the feeding grounds.

Jan Romijn reminded us that the writing of any/all history should not and could not be divorced from the subjectivity of the author – perhaps for the better. Wright Mills in turn pointed out that a researcher cannot divorce him or her from their work and pretend to be all-knowing (Wright Mills, 1977: 18, 184ff, 223). In human understanding and action in context (*vrijheid als historie*), existence as the temporary (*de tijdelijkheid eist eert*) and the links to history in a strict sense (*historie in strikte zin*) the author as human subject enters a discussion with others in view of the others and him-/herself. It then stands to reason that:

> Zo treed hij (the author) voortdurend in gesprek met zijn medemensen, so blijft het verleden leven in de hedendaagse wereld en wordt het geprojecteerd naar een toekomst. De mens is nooit ‘af’ en zijn/de wereld is nooit ‘af’ …” (Luijpen, 1980: 226). Ad Peperzak in his work *Vrijheid* echoes this view (1977).¹

In this contribution, the author argues for *intersubjectivity* and dialogue rather than the static truths of objectivity or subject disciplinary constraints in this contribution when reading the relations between the two countries.

The research utilises an ongoing literature review and qualitative research approaches. It combines insights born out of various social science disciplines. Research reflects secondary and primary reading, and since 1987 contact with Soviet/Russian citizens as well as South African cadres and students trained in the Soviet Union/Russia. The latter represents a measure of qualitative research. Personal perspectives and experiences of the author or auto-ethnographic moments observed or participated in also inform this contribution.

As a qualitative research approach the strength of auto-ethnography is that it provides a collage to context and experience at a particular moment in time (Bryman, 2004:301, 315; Ellis and Bochner, 2000:733–734, 739; Schwandt, 2001:13). Some criticise the auto-ethnographic approach as limited, and those not well-disposed to auto-ethnographic approaches may argue that it is “personalistic” (Liebenberg, 2008: 63ff). Despite criticism against it, the auto-ethnographic angle adds value to other research approaches and complements available data such as archival sources, literature studies and comparative approaches, while contextualising it within human and personal experience and interaction with other social agents (Schwandt, 2001: 13; Quelette, 2003: 13ff, Ellis, 2004: 31–32; Sparks, 2002: 2–5; Bryman, 2001: 299ff). Such added value justifies the use of auto-ethnography to complement other approaches in a contribution such as this.

Auto-ethnography as qualitative research angle provides a view rich in data about an era, personal experiences, social interaction and observations in a particular context (Etherington, 2006:141; Josselson, Lieblich and McAdams, 2003). It throws a unique light on socio-political developments and outcomes in combination with other sources of data (Blenkinssop, 2006; Crang and Cook, 2007:13; Philaterou and Allen, 2006:65,67ff). For this reason, auto-ethnography is combined with other human science discipline insights.

¹. This contribution, while valuing the work of Peter Gay, *Freud voor historici* (1987) does not take its views on history or social sciences as far as Gay.
Review of literature and sources

Archival sources played a role within identified areas. In addition, personal archives collected by the author over more than twenty years were utilised.

The United Party Archives housed at the University of South Africa (Unisa) were more than useful. So did consulting the Archival Group: Communist Party and Russia, 1922–1975 at Unisa. Documents in this group include pamphlets, correspondence and press cuttings donated by Prof. W.A. Kleynhans to the Unisa Archives.

A number of other earlier historical sources were also used. These consisted of publications to which could be referred as historical Afrikaans and English works (Africana). The author used these for illustrative purposes, as such works relate the atmosphere of the time so closely, albeit not objectively.

The monthly newsletter of the Institute for Democracy in South Africa (IDASA), Democracy in Action, as well as occasional papers brought out by IDASA between 1987 and 1992 were valuable. The work of IDASA as a democracy advocating body and advancing the notion of a negotiated settlement in a deeply divided South Africa touched on internal as well as external relations in its workshops, international exchanges and its publications. IDASA publications covering such initiatives, where applicable, to relations between South Africa and the Soviet Union contributed to the literature review.

The Russian embassy kindly provided useful documentation and archival photographic material during April/May 2005. Issues of Die Matie, a student newspaper of the University of Stellenbosch, between 1980 and 1990 and available in the media compendium in the Kosie Gericke Library, proved relevant. Valued colleagues and friends in the Soviet Union and Russia and inside South Africa made their contribution in sharing solicited and unsolicited documents and experiences.

To an extent, the author also drew on insights gained from interviews done in the course of his D Litt et Phil studies (2005–2008) and ongoing interviews for a project on the war in Angola.

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2. The author of this article joined IDASA in 1987 and served as regional and student coordinator, research consultant and later Director of Research (1986–1990) which provided for some auto-ethnographic moments related here.

3. The Institute for Democracy in South Africa, initially known as the Institute for a Democratic Alternative for South Africa (IDASA), was established in late 1986. Following the resignation of the leader of the official opposition, the Progressive Federal Party (PFP) in the white chamber of the parliamentary system, IDASA was born. Van Zyl Slabbert, as opposition leader, resigned in order to pursue an agenda that would bring extra-parliamentary organisations such as the United Democratic Front (UDF), the exiled African National Congress (ANC) and South African Communist Party (SACP) into the mainstream discourse of transition from authoritarian rule to democracy. Alex Boraine, a leading member of the PFP, followed Slabbert’s example.


TD, 6(2), December 2010, pp. 428 – 460.
Strengths and limitations of the contribution

Relations between South Africa and Russia have been studied before. Currently few South Africans are researching the relations between Russia (then Soviet Union) and South Africa. Where current research takes place, it is mostly published in Russian and not English or Afrikaans. Current research does not combine insights from various social sciences in this area or provide an overview of the period in question. This is done in this contribution.

This contribution is exploratory. It adds to the work of Russian academics in the field of social-historical studies such as Apollon Davidson, Irina Filatova, Vladimir Shubin, Andrei Pritvorov and Andrei Ignatenko and work done in South Africa in the 1980s. A younger generation of Russian researchers such as Gennady Shubin, Veronika Usyachova and others are also noteworthy. The historical works of Elisaveta Kandyba-Foxcroft (then at Unisa) and others were pioneering and cannot be ignored. More recent work relates to linguistic and cultural studies by Irina Garmashova-Du Plessis at the University of South Africa (Unisa) during 2002–2007.

An obvious limitation of the article is that the author is not Russian-speaking and had to rely on English, Afrikaans and in some cases German sources.

On authors, auto-ethnography and being participant-observer

The 1990s are seen as the “end of communism” and minority rule/apartheid in South Africa. In witty quips, some observed that Pretoriastroika followed the example of Perestroika. These societies parted with authoritarian rule in an attempted transition to democracy, as transition theorists refer to it. Large segments of the power elite of both societies aspire currently to the ideal world of liberal capitalism or the stage in history that apologists for capitalism such as Francis Fukuyama call “the end of history”; victory for the free market. Others seem more critical (see current debates between the trade union Cosatu and members of the SACP in South Africa, Sunday Independent, 22 August 2010: 15). In discussing South Africa and Russia, one cannot speak about relations between the two countries without discussing South Africa’s peculiar transition to democracy. Some of these observations should perhaps be confined to the reflections of a participant-observer or of auto-ethnographic reflections. For example, how did the author experience some political developments in South Africa?

Divisions between South Africans deepened substantially during the 1980s. Children born in the 1960s were to hear at a young age over South African radio that a revolutionary (the term to equal “terrorist” or “anarchist”), Che Guevara, was gunned down in a far-off Latin American country called Bolivia. They would hear that South Africa’s northern neighbour Rhodesia was under threat from a communist and terrorist onslaught. Portuguese colonies were under threat from the same evil forces, they heard. So was Suidwes-Afrika (South West Africa – later Namibia) where SWAPO, a terrorist movement backed by the Soviet Union, fought the order and stability that white rule and Christianity brought to that backward region and its irreconcilable tribes. It was said that the state of Israel fought valiantly against the Egyptians and the Syrians who had massive “Soviet support”. Less was said about massive US support for Israel, or US and French/Belgium support for Mobutu of Zaire, or apartheid South Africa and Israeli defence cooperation (Sunday Independent Life, 22 August 2010:16). Little was said about economic exploitation, neo-colonialism, nationalist movements as driving sources of liberation struggles or that the UN general assembly resolved way back in 1948 (when the apartheid state was born) that Palestinians deserve their own independent state. The message was ad nauseam repeated that
Communist China and the Soviet Union were aiming at total control of Africa with the help of puppet states, and that these evil forces aimed at the destruction of Western civilisation. Cuban people deployed in Africa (also Angola) ostensibly had no mind or strategy or loyalty to African people. They were simply mindless puppets of a godless state in Moscow.

If they were white and male, South African children were “registered” at the age of sixteen through the help of the apartheid Department of Education for military service (Afrikaans: Nasionale Dienstplig). Apart from conscription of whites, the cadet system at school prepared young men (boys) for military life. More than 600 cadet units were established and functioned countrywide. Two years after registration, white males were conscripted – since 1979 for two years and further years for part-time call-ups. Should any of these (young) men refuse military service they were liable for prison sentences of six years.

At a symposium at the University of Pretoria held in 1977, one of the speakers, Prof. John Ericson, had, amongst others, to say that Russian influence is growing in Africa as part of a “pincher movement” and classic “satellitesation” (*Armed Forces*, 1977: 20). Prof. G.C. Olivier at the same symposium argued that

(M)any Communist states pursue with vigour both domestic and foreign propaganda programmes (sic), something that democratic states do not pursue as vigorously (See *Armed Forces*, 1977: 20).

At the same time, others were called up for such ideas to occupy Namibia and destabilise Angola.

Many of the apartheid conscripts were from white working class families drafted directly from school and thereafter returned to working class jobs. Strangely, neither the South African Truth and Reconciliation Commission (TRC) nor the new post-apartheid government recognised that such people were thereby drafted permanently into workers class status and yet, frequently they are still counted as “privileged whites”. Some of these ex-conscripts are psychologically scarred and can be seen wandering in South African streets reduced to begging, like many other South Africans. At the same time, President Thabo Mbeki and his elite followers insisted rather fleetingly that there are two “nations” in South Africa: a rich white one and a poor black exploited one. The implication was that all whites are rich and as past oppressors still racist, and all black people are poor and non-racist in their attitudes. Such attitudes can perhaps be termed “post-apartheid nation building through discrimination and stereotyping”.

During the 1980s, military units were established at universities and technical colleges. In the case of the university where the author studied, the University of Stellenbosch Military Unit (USME) was established to retain and redeploy those who finished their first two years of conscription. Critique against the system was vilified and speakers from, amongst others, the Angolan rebel movement Unita were organised to speak on the Stellenbosch campus (*PSA Bulletin*, 1986: 9). Students were told that terrorism should be unmasked, that Bishop Tutu,

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5. Not only white ex-conscripts are discriminated against. The new democratic government in its first years failed largely in the compensation and re-integration of ex-cadres and guerrillas into civil society while rationalising out scarce skills because of colour/race (Liebenberg, Roefs and Ferreira, 2000). Conscript veterans tired of generals talking on their behalf, after years of silence are now increasingly writing against the madness and manipulative nature of their then political leaders and political generals (See Batley, 2007).

*TD*, 6(2), December 2010, pp. 428 – 460.
Alan Boesak and the South African Council of Churches were Communist, that the SACP controlled the ANC and that

Unita was making a lasting contribution to Angola’s future” (PSA Bulletin, 1986: 2, 3, 7 and 8).

As an infantry officer in the SADF, before the author objected to further military service, he was to hear from a company commander that Scandinavian nurses in northern Namibia where SWAPO and that the SADF were at odds were “Finnish whores”. At a command information session in Oshivelo in 1979, a major suggested that those who supported SWAPO and Communism were “slegte kaffers” (bad caffirs). Those who supported the locally (RSA) run political government in Namibia were “goeie kaffers”. On objecting to this terminology, a few of the servicemen were admonished by the information officers with the words: “Julle sal nog grootword” (You’ll still grow up). Critical thinking at the time certainly was not seen as part and parcel of professional military men/women. This particular officer was rather blunt in socio-political thinking and sharp with sword, not a professional armed with sword and thought, it seemed to him – even in a Cold War context.

Needless to say that critics of apartheid and racialism were called “naïve”, “people who flirted with the terrorists”, “gay” (Afrikaans: moffies), traitors, etc. In the PSA Bulletin of November 1986 the chairperson (chairman), Nic Myburgh, of the Popular Student Alliance (Populêre Studentealliansie) that was aligned and sponsored together with the National Student Federation by government (read: Military Intelligence) spent a whole page attacking and slandering persons for their involvement with “terrorist gangs” and “feel-good trendies”. The fact that some (including the author) met earlier on with an ANC delegation in Harare and refused further military service, some commissioned officers were not welcomed, to say the least (PSA Bulletin, 1986: 7).

The Director of the Institute for the Study of Marxism (ISMUS) whose institute was partly funded by Military Intelligence spoke on the position of religion in the Soviet Union at a meeting of the Christian Association (Christenvereniging) in Stellenbosch (See Dinamiek, 1987: 8). The Director of ISMUS, after it became known that he collaborated with Military Intelligence, moved to the Department of Political Science at the Stellenbosch University. The Institute (ISMUS) became known as the Centre for Soviet Studies. The above illustrates the complexities, if not contradictions, in the politics of the time for those caught up in it.

Notes on politics, social being and subjectivities

The National Party victory in 1948 saw growing antagonism between the ruling elite as incumbents of the state and its political contenders because of segregation as official policy. Inherited ethnocentric attitudes from the Dutch colonisers and subsequent impositions by the British led to a deeply divided Southern African society in the age of modernity. ‘Ethnic’ divisions were to deepen substantially after the National Party’s election victory in 1948. The National Party and its cohorts like the Afrikaner Broederbond (AB),

6. Afrikaner Broederbond: A cultural society for Afrikaans-speaking, white, male, Christian (Protestant) persons established in 1917 to achieve a white ruled Republic independent of Britain. Creë 1920 it became a secret society. The Broederbond operated in conjunction with several organisations such as the National Party and the Federasie van Afrikaanse Kultuurverenigings (FAK). Their control was challenged by some smaller
United Party, engineered top-down ‘separateness’ of races (apartheid). The fear for ‘the other’ also nurtured an antagonism towards the Stwart Gevaar (Black danger). In Afrikaner ideology, Communism, as threat and scapegoat increasingly featured since 1933, became pronounced by 1938 and ten years later, the word Communism became “crime thought” under the apartheid regime.\(^7\) Political rule in apartheid South Africa became increasingly hard-handed and the rise of an authoritarian state inevitable.

Race, ethnicity and social identities were exploited and manipulated for financial and political gain by Dutch mercantilists, the British colonisers and subsequent Boer rulers (Zegeye, Liebenberg and Houston, 2000). After the ravaging war between Britain and the Boer Republics, South Africa was to become the land of Boer and Brit. Under the Union of South Africa voting rights for the few indigenous people who still had it as well as the land owned by them, were whittled down. Some radical theorists referred to this as colonialism of a special type (CST) (Compare Kotze, 1994: 48–49).

The Soweto rebellion took place in 1976. Following these upheavals an increasingly militarised (white) society that approached the status of a praetorian or garrison-state developed. Rather than relying on police support as under the rule of BJ Vorster, the laager mentality that marked Afrikaner Nationalist thinking evolved into an authoritarian state or bunker society (Grundy, 1987; Davis, 1987). Richard Leonard refers to this era as “from police repression to military power” (Leonard, 1983: 3ff). For a short while after 1948, South Africa had the characteristics of a (whites-only) democracy. After DF Malan had left the political scene, Hans Strijdom introduced the term Baaaskap (Herrenschaf). Following the reign of Verwoerd, the Vorster regime increasingly relied on police assistance. The latter was eclipsed under PW Botha by a security-focused regime under an executive presidency relying on military support. The loci of power moved away from the (whites-only) parliament to the military. The State Security Council (SSC), established by the Security Intelligence and State Security Act, No. 64 of 1972 to combat “any particular threat to security in South Africa”, played no small role (Horrel, 1982: 245).

Earlier the author argued that South Africa could perhaps be described as an example (perhaps the only one) of a Third World country that reflected an authoritarian political system with totalitarian elements during the zenith of apartheid rule (Liebenberg, 1990: 135–136). This was organisations since 1967 such as the Herstigte National Party, a breakaway group when Vorster came to power, Die Volkswag and the Conservative Party, two other breakaway groups following the introduction of the multi-racial tricameral parliament under PW Botha. Some Broeder-/Afrikanerbonders post-1994 closely aligned themselves with the new ANC regime with others staying “neutral” and some highly critical of the new government’s policies. Following the 1990 elections the Afrikaner Broederbond (AB) changed its name to the Afrikanerbond (AB). Various erstwhile Broeder-/Afrikanerbonders pragmatically became advisors to, or members of the African National Congress (ANC). Other conservatives formed groups such as the Group of 63 and PRAAG that mobilised around language politics. Others tried to “reform” the so-called Federasie van Afrikaanse Kultuurverenigings (FAK) to include Afrikaans-speaking people from other than white backgrounds. In the new parliament those who held culturally conservative perspectives from the white African side (the Afrikaners) aligned themselves under the Vryheidsfront Plus. The latter accepted in principle a liberal democratic constitution achieved through a negotiated settlement but remained distrustful of non-racialism, populism and the cultural relativity implied in the new constitution, yet produced a cabinet member serving under ANC rule.

The notion is derived from George Orwell’s 1984. For an application of Orwell to South Africa, see B. Itterbek (1984: 20). What Orwell communicated through his work about totalitarian communist governments was as applicable to an authoritarian apartheid government with its sophisticated technical abilities to suppress the democratic movement.

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made possible by the relatively high state of industrialisation that South Africa achieved as well as technological capacity that evolved since the end of the Second World War (the latter provided an industrial “take off” stage for a previously mostly agrarian society). South Africa’s high-levelled development compared to other “Third World” countries endowed it with a vast bureaucracy to bolster the apartheid state. C. Wright Mills attuned readers to the fact that bureaucracies play an immense role in strengthening the state (Wright Mills, 1977: 114–115).

To discuss the political role of bureaucracies in developing societies and what happens when a highly mobilised ideological society and its incumbent state focus on control rather than inclusion is beyond the scope of this article. It suffices to mention that in such a case bureaucratic power in developing areas may clearly inhibit, perhaps preclude, the development of a democratic polity (La Palombara, 1971: 22).

At the time, South Africa and the Soviet Union shared some similarities, especially if one reflects upon the previous sentence. The lack of other parties as opposition and a one-sided/partisan bureaucracy in an industrialising state subverted potential for nurturing democracy and inclusive political ethos. Authoritarian elements in the Soviet Union before Chernenko/Andropov – and to an extent Brezhnev – and South Africa’s power elite shared similarities such as an elite deciding on behalf of the others and oppression of political opposition. Sadly enough, frequently the academic discourse under apartheid and the Soviet Union lost the critical impetus by cow-towing government thinking. As Wright Mills so correctly observes: “The practicality of ‘social problems’ … (became) overshadowed by newer conservative uses of a managerial and manipulative sort” (Wright Mills, 1977: 100). Academic activity in South Africa, especially at Afrikaans universities, seemed to gravitate towards ‘abstracted empiricism’ that represented a ‘bureaucratic’ development (Mills, 1977: 101) which led to academic institutions such as the Human Sciences Research Council (HSRC) acting as a consultant to the state, and so assisted bureaucratic forms of domination (Compare again Wright Mills, 1977: 101. See also Van Vuuren, 1985: 47ff; Van Vuuren, 1987: 15ff; Van Vuuren and Liebenberg, 1998: 95).

Despite this, the positive and the negative elements of reciprocal views between Russia, later the Soviet Union, were not always shared by all sides within the respective societies. Views were sometimes confined to certain minority groups or sectors of society, and the power elite depending on their material and political interests. Soviet observers critical of apartheid warned as early as 1973: “A slowdown in economic growth and sharpening of racial, political and social contradictions are characteristic of South Africa” (Butlitsky, 1973: 80). As ever, the highs of political power may not coincide with perceived economic strengths. Soviet economists correctly predicted tension and socio-political violence three years before the Soweto rebellion.

The Second World War days of comrades in arms under the Smuts government were past. Associations such as the SA Society for Peace and Friendship with the Soviet Union were easily forgotten under the new National Party regime. It started earlier: Following the end of the Second World War, the leader of the United Party, Jan Christiaan Smuts, became suspicious of the Soviet leadership and the ideology of Marxism-Leninism under Stalin’s rule.

One marked difference between the Soviet government and the apartheid government was that the communist regime strived for greater inclusiveness by top-down measures and the apartheid regime to maintain exclusion by the same measures. Since 1948 South Africa tried to impose an exclusivist racial and ethnic programme of social engineering or “ethnicity from above” – with or without success, depending on the political orientation of the observer (Zegeye, Liebenberg and Houston, 2000). In sharp contrast, the Soviet Union, through social engineering, attempted to
steer away from class, racial, sexual, religious and ethnic differences after their revolution – again with or without success in the view of the observer. The Soviet attempt at social engineering was aimed at *inclusion* and consequently the ideal of an equal society rather than apartheid’s order of *inequality* and *exclusivity*.

In the South African political structure, *racial capitalism* was in favour of white control over the economy, white privileges and socio-political control (Alexander, 1985: 43). Alexander, in reference to the structural violence of apartheid, argues: “(In South Africa) the national bourgeoisie came to consist of a class of white capitalists. Because they could only farm and mine gold and diamonds profitably if they had an unlimited supply of cheap labour … they found it necessary to create a split in the labour market – one for cheap (unskilled) black labour and another for (semi-skilled), mainly white labour … made easier by the fact that in the pre-industrial colonial period white-black relationships had essentially been master servant relations” (Alexander, 1985: 43). Racial domination was modernised to make apartheid look more acceptable (See Adam, 1971). In the labour field, the same happened. While black workers were forced to be a-political through the Wiehahn Commission Report, in reality capital restructuring and the modification of racial elements in the world of work took place without compromising power for the white economic elite (Davies, 1978).

Over all these years, Irina Filatova remarks: “But no one can claim with assurance that all these contradictions notwithstanding, there is (or rather; *was* at the time) a common element in Soviet perceptions of South Africa. Soviet people rejected race discrimination and sympathised with the struggle the majority wage against the apartheid regime. … (Yet) they have never harboured hostility towards the white minority as such; they denounce the regime but not the people” (Filatova, 1988: 7).

**Changing epochs and contexts**

A century is a short time. This contribution focuses on the linkages between these issues while the topic is in need of much more concerted research, and research cooperation between South African and Russian (and then Soviet) historians, sociologists and economists.

The following eras are discussed:

1. Before and during the “Second Boer War” [also known as the *Anglo-Boer War*, *die Angola-Boeroorlog*]
2. The First World War to the end of the Second World War;
3. The post-Second World War and the apartheid era;
4. The post-apartheid era.

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8. For this reason, some refer to the liberation struggle against apartheid as the “third war for liberation” or for that matter the “third republic”.

*TD*, 6(2), December 2010, pp. 428 – 460.
1. Before and during the “Second Boer War”/Anglo-Boer War

Refugees from the Kamchatka in eastern Siberia rounded the Cape in 1771. Two of the first Russians to visit South Africa were a junior officer, Yuri Lisiansky, and a musician, Gerasim Lebedev. The latter conducted some recitals in the British occupied South Africa in 1798 with the permission of the then governor (Filatova, 1988: 3). Captain Vasili Golovnin’s ship was confiscated and held in Cape Town during the British-French war of 1808-1809 when Russia was an ally of France. Golovnin describes the settlers and their languages, the Malay people, the Khoikhoi and slavery as institution (Filatova, 1988: 3). His memoirs were published in South Africa in the 1960s (Filatova, 1988: 3).

During 1853 Ivan Goncharov spent time in the Cape Colony and interviewed Xhosa leaders jailed during the Wars of Dispossession (pejoratively known by the colonialists as Kaffir Wars). Another illustrated book by an artist, Vysheslavtsev, followed Goncharov’s five years later (Filatova, 1988: 4). Filatova argues that “the formation of grass-roots conceptions” by Russians took place during the Anglo-Boer War (Filatova, 1988: 4). The work of Sophia Izyedinova, A few months with the Boers: The war reminiscences of a Russian nursing sister, was published in South Africa in the 1970s. Russian military attachés were deployed before the Anglo-Boer War to the Zuid-Afrikaansche Republiek (ZAR). According to Shubin:

*The Russian Empire sent six official military agents to the South African War theatre in 1899-1900* (Shubin, 2000: 13ff).

One may assume that the Tsar and the Russian Foreign Office were well-informed about developments in the far-off Republics. The Russian populace and the elite clearly saw the Boers as “the good people” and had sympathy with them in their struggle against British Imperialism (Davidson, 2003; Davidson & Filatova, 1998: 177ff; 207ff; Scheepers-Strijdom, 1970; Gedenkalbum van die Tweede Vryheidsoorlog, 1949: 338). “Boer Mania reached such a pitch” and the authors noted that “[w]herever you go these days, you hear the same stories, the Boers, the Boers, the Boers” (Davidson and Filatova, 1998: 177). Church services were held for the health of Paul Kruger in St. Petersburg and Moscow. Orchestras played on request the Republican Anthems of the Transvaal and the Free State (“Kent gij dat Volk vol Heldenmoed …” and “Kom’t Burgers, heft de lied der Vrijheid aan …”). Sarie Marais, a Boer folksong (volksliedjie) was translated in Russian, and sung in Moscow and St. Petersburg (to become Leningrad after the Revolution). A popular song at the time, composed by a female poet, called Transvaal, Transvaal, My Own True Land was sung. Funds were collected for the Boer wounded (Davidson, 2003: 27).

Political groupings such as the Social Democrats felt that the Boers stood for democracy against a system of oppressive monarchism. Amongst others, Vladimir Illich Ulyanov (Lenin), then a young social democrat, spoke out in the favour of the Boers in Iskra. So did some Russian conservatives (Davidson and Filatova, 1998: 190). In this case the radical factions and the conservatives in Russia were of one opinion.

Olive Schreiner, a famous South African author who first was pro-Rhodes like the young Christiaan Smuts, felt betrayed after the Jameson Raid and started writing feverishly pro-Boer and anti-imperialist works. Schreiner’s works were published widely in Russia (Davidson & Filatova, 1998: 190, 191). Maxim Gorky wrote on Olive Schreiner in 1899 in Nizhegorodsky listok (Davidson & Filatova, 1998: 274). Her works were translated and published in Russia as early as 1893. Paul Kruger’s and General De Wet’s memoirs were also translated. Later on works by Uys Krige, Breyten Breytenbach, André Brink, Ingrid Jonker and Barend Toerien, amongst others, were translated into Russian. Soviet/Russian students at the Moscow State
University studied Dutch-Afrikaans (Afrikaans-Nederlands), and read South African poetry and novels up till today. I was fortunate to meet with some postgraduate students during a visit to the Soviet Union in 1990. At occasions since then I met with some of the dedicated Afrikaans-Dutch such as Andre Ignatenko. A member of the Institute for African Studies spoke at length to the author in Afrikaans in 2000 during a march commemorating the October Revolution. Amongst others, he enquired about the clicking sounds found in Oranjervier-Afrikaans. He was informed on the work of Ponelis and interested in the work of Prof. Gawie Nienaber. Filatova, however, reminds us that not all was well in the then state of “Pretoriana” (ZAR). Russian observers commented on the treatment of blacks and their interpretation of Black people’s lives as victims rather than participants in history (Filatova, 1988: 4).

Whether novel is history, or history is novel, is a point to contemplate. One could “read” history, even if between the lines, as becoming unfixed discourse (Bleicher, 1980: 257–259; Thompson, 1982: 145–146). One does not have to agree with Kundera to find that being human holds surprises. The same applies to Russian-South African relations. Interesting anecdotes (yet well confirmed in archives) are worth mentioning. Gennady Shubin relates the story of the Russian volunteer, Prince Mikhail Yengalishiev, an aristocrat with Tartar ancestors, who served the Moscow princes in the 15th century: “On his return from the Boer War he did not enlist for military service again. But later in Saratov in 1907 he was sentenced for an attempt (to) create a terrorist organisation among local peasants” (Shubin, 2003, e-mail correspondence, 2005). The aim of this would-be terrorist is both intriguing and a surprise: to stage a plot against the Tsar, to assassinate him and establish a Republic in Russia based on the Boer model of the Transvaal! For his newfound democratic zeal and progressive avant garde-ism the activist was arrested by the Tsar’s secret police for subversion, sentenced to death and then reprieved. Needless to say that he spent the rest of his life under continued surveillance of the Tsarist secret police (Shubin, 2003; e-mail). As history has shown time and again the one person’s terrorist is the freedom fighter for the other.9

9. Gert van der Westhuizen in Beeld, an Afrikaans daily newspaper, article Miskien is die VSA die terrorist? (English: Maybe the USA is the terrorist?), Beeld, 2003 addresses this issue with reference to the conflict in the Middle East.

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What about international politics during the Anglo-Boer War? The dream of a great intervention besieged the Tsar. Realpolitik was to prevent this. Davidson refers to the “Emperor’s dreams” versus “the harsh realities” (Davidson & Filatova, 1998: 208; 220). Osten-Sacken, a Russian diplomatic representative, enquired from Von Bulow of Germany in 1900 about possible joint action. The diplomatic representative explained that his country and the Kaiser were hesitant in view of the hesitant position of France (Boeseken, Kruger & Kieser, 1953: 185–186). From the plans to challenge the Brits and by the consequences of that perhaps assisting the Boers in their hour of crisis very little materialised. In *Drie Eeue* we find a perspective on why Russia could not go to war against Britain at the time – even if the Tsar may have dreamt of it. References are made to the then geo-strategic position and the power politics of the great nations in Europe. While the Tsar and his followers may have considered challenging the might of the British Empire, *die Grosse Politik der Europa* made it impossible.

Outside South Africa some people conjectured that Russia was to intervene. One of South Africa’s great authors, the late Jan Rabie, during his stay in Paris in the 1950s relates an interesting story: He comments that in 1954 he found a small book in a flea market entitled *Le Président Kruger en France*. The publication dated 1901 informs us that during Kruger’s visit to France some French journalists visited the fortune-teller Madame Julia Layfonvielle. On their question whether the Boers will win or lose the war she made a statement: 

> *The Boers will not lose the war. They will receive help. In 1901 Russia will intervene* (See a publication by Kannemeyer compiled on Jan Rabie by Kannemeyer [(2003: 64)].

Rabie mentioned that the French daily paper, *Le Gaulois*, reported on this incident. Amongst others *La Vie Illustree* also reported on the Madame’s statements. Was the soothsayer wrong? Or was she expressing a sentiment? Or was she perhaps, by saying this, trying to influence public opinion and political decision-makers? (In political science jargon: Was she involved in *agenda setting* or *influencing the political agenda* through her intervention?) At the same time her opinion was that France would not intervene directly, but would provide monetary assistance. Was this an attempt to influence the French politicians, knowing that she was widely quoted by French newspapers? France already sold artillery pieces and expertise to the Boer Republics and not too well disposed to an international rival, Britain. It seems that either in opinion or agenda setting the soothsayer was wrong – at least for that moment.

Her reference to French-South African relations may have been based on her knowledge of an arms deal between the French and the Boer Republics. At least in terms of military equipment sold, this happened again seventy years later with the Republic of South Africa importing French armament such as Allouette, Super Frelon and Puma helicopters, Mirage aircraft, Panhard armoured cars and Daphne submarines.

Boer leaders remained optimistic that Russia may intervene. Leyds informed President Steyn from the Oranje Vrijstaat that Russian intervention in India may be a possibility, but added that it was “a probability, not a certainty” (Pakenham, 1979: 388). Help would not be forthcoming.10 A delegation of Boers (afvaardiging or delegatie) consisting of Fischer, Wessels and Wolmarans went to Holland, the United States, Germany and St. Petersburg, Russia (St. Petersburg later became Leningrad and the name was again changed to St. Petersburg under the Yeltsin regime). The Afrikaner historians reported that “Die Tsaar was simpatiek” (The Tsar had

10 For more detail, see Walker (1941: 485, 473, 482 and 492).
sympathy with the cause). Alas, given the international situation, little help was forthcoming (Boeseken, Kruger & Kieser, 1953: 190). Pakenham points out that President Steyn of the Oranje Vrijstaat for public consumption spoke about possible ‘favourable news’ from Europe. Pakenham, however, reminds us that Steyn at the time already knew that it was a forlorn hope. Even if the rumour about Russia about to take Herat close to the border of Afghanistan was true, that did not mean that British-India was at threat (Pakenham, 1979: 388). At no given time the British Empire was to come under serious geo-strategic pressures. The German Kaiser’s telegram much earlier on (following Starr Jameson’s less-fortunate foray into the Transvaal, 1895/1896) was of little value and few other observers posted hope on it.

Russian volunteers took on the long voyage to the ZAR and Pretoria, while German and Russian government pleads to negotiate a settlement fell on deaf ears in London (Boeseken, Kruger & Kieser, 1953: 187). Together with others from Ireland, Germany, France and the United States of America (the latter mostly Irish) the Russians departed to the Zuid-Afrikaansche Republiek (ZAR). Many of the Russian volunteers came without the permission – or in some cases knowledge – of their government. Some others resigned their military ranks before their departure in order not to embarrass the Tsar. The Boers saw the majority of volunteers as loyal and admirable friends (Gedenkalbum, 1949: 279). “Die Boere het nie alleen gestaan toe hulle in hul uur van nood hulle toevlug tot ‘God en Mauser’ geneem het nie. Van heen de en ver het vreemdelingvriende hulle na die oorlogstoneel gehaas om die Afrikaners in hul tweede vryheidstryd met woord en daad behulpsaam te wees” (Van Niekerk, 1949: 279). A Russian corps of about sixty men was established according to one Afrikaans historian (Van Niekerk, 1949: 296). The Russian military attaché to the Boer Republics at the time, Rumeiko-Gurko, compiled a list of twenty-five Russian volunteers of whom the majority were officers (Davidson & Filatova, 1998: 46–48). Davidson and Filatova concluded in their research that at least 225 Russian volunteers came to the Transvaal (Davidson & Filatova, 1998: 45). A number of Russian Jews also served in the Dutch volunteer corps, we are informed (Davidson & Filatova, 1998: 51). Two of them became renowned scouts under the Boer Generals Hertzog and De Wet, with the endearing nicknames of “Jakkals en Wolf” (The Fox and the Wolf). Others were killed, one of them an elected Kommandant (commanding officer). Another Russian, Yevgeni Fiodorovitch Augustus, an infantry officer, served in and fought with the Krugersdorp Commando, the Russian Detachment and the Johannesburg Police Commando. In June 1900 he was wounded by the British and taken prisoner. He was released on condition that he pledges “on his word of honour” that he would not serve under arms for the Boers. This did not prevent Yevgeni to write extensive memoirs on the war and his participation therein before again fighting in the Russo-Japanese war (1904–1905). He was later killed in the First World War then holding the rank of Captain (2nd Class) (Shubin, 2000: 25).

The Prince Nikolai Georgiivitch Bagration-Mukhransky was nicknamed “Niko the Boer”. Lieutenant Colonel Yevgeni Yakovlevich Maximov joined the Boers as an experienced officer. After being wounded near Thaba N’chu in the Free State, he received a hero’s welcome in Pretoria and was elected general (Veggeneraal) – the highest rank to be awarded in Boer military structures. Paul Kruger, while in exile in Switzerland, wrote a personal letter to thank Maximov for his contribution. Only one other foreigner was bestowed the same honour as Maximov. That was the Frenchman, Colonel De Villabois-Mareuil, who was appointed in the field to the rank of general (Veggeneraal). Mareuil died early in 1900 when his corps was routed near Boschof by General Methuen’s superior forces.

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Russian officers and fighting men found the Boer strategies and tactics bewildering (Discussion with Gennady Shubin, 2005 and consequent e-mail correspondence. See also Shubin and Shubin, 2005 in Snyman et al.). This is not the place for an extensive discussion, as it belongs more in the realm of comparisons between regular and citizen armies, different approaches to war by European armies and African armies, and irregular tactics used in war against a better armed and larger enemy force (asymmetric war tactics). Despite valiant efforts the Republics would eventually surrender under the pressure of the British army in one of the most costly wars Britain had ever fought.

Russian empathy remained. The Bratina, as a sign of honour, empathy and respect (Boeseken, Kruger & Kieser, 1954: 203) accompanied by 70 000 signatures were handed to the Boer delegation when they visited Russia. The Bratina is to be seen in the Transvaal Museum (today the Gauteng Cultural Museum) in Pretoria, Tshwane.

2. The First and the Second World Wars and between

By 1910 the land where Boer and Brit fought against each other in one of the first modern resource wars\(^{11}\) was to become the land of Boer and Brit as the new ruling elite.\(^{12}\) But resistance was brewing. In 1904 the black people in Natal embarked on the failed Bambate rebellion. The South African Native National Congress (SANNC) – later to become the African National Congress (ANC) – was established in 1912. In the following year the discriminatory Land Laws that were to oust thousands of black people from their land into “reservations” were passed. The Bondelswarts people in Namibia, then South West Africa (Suidwes-Afrika), embarked on an ill-fated and desperate rebellion against the Union government of South Africa. The South African military and air force defeated the small force of Bondelswarts people and vanquished further efforts from Namibians to resist for a while.

In 1921 the Communist Party of South Africa (CPSA) followed the establishment of the Socialist League that came into being in 1915. The 1922 mineworkers strike influenced by, among others, communist sentiments took place on the East Rand with names like Boksburg and Benoni soon to be carved out in South Africa’s history. Drie Eeue refers: “Duisende mense het deur die strate gedrom en ’n ware skrikbewind het losgebars … dit was feitlik die begin van ’n rewolusie wat baie mense herinner het aan die bloedige Russiese omwenteling van 1917. Die kapitaliste het dit ook werklik so beskou, veral omdat die kommunistiese elemente hulle nou laat geld het. Die rewolusionêre lied, die ’Rooi Vlag’ is gehoor en daar is gepraat van die stigting van ’n swart republiek.” The author in Drie Eeue over-interpreted. Few social scientists, including historians, would argue that the 1921 strike was about establishing “a black republic” today. Communist ideals played a role in the strike but few of the strikers had been involved in order to establish a black government. The spectre of a Russian-like revolution under the red banner caused extreme disconcert amongst the white ruling elite, financial bosses and mine magnates.\(^{13}\)

\(^{11}\) Some historians prefer the term “the last of the (great) colonial wars” (Discussion: Greg Cuthbertson, 07/04/2005).

\(^{12}\) On modern resource wars, see Pritvorov & Liebenberg, 2000: 75ff.

\(^{13}\) This golden thread of the ‘threat’ of the Red Banner was found sixty years later when elements of the South African Communist Party (SACP) and student groups also sung The Red Flag at meetings during the third liberation struggle.
DF Malan, the Nationalist Afrikaner leader, had sympathy with the actions by the striking miners. He likened the National Party to the Bolsjewiste (Bolsheviks) in one of his orations (Talk by Apollon Davidson, National Research Foundation, Pretoria, 2001). Two decades later the very same party of Malan frequently referred to The Communist Danger masterminded by Moscow. History, like short stories or novels, is filled by the odd irony. So are economic realities and politics.

Fearing a communist revolution and debilitating industrial unrest, the Smuts government unleashed the police, the military and the newly established South African Air Force in force against the strikers with devastating effects (Fokkens, 2006). The strike was broken at the loss of at least 230 lives, fifty of them policemen (Krüger, 1978: 125. Some strike commanders were captured. Some were sentenced to death. Others committed suicide when the strike collapsed. More than 4 600 people were detained for questioning. By 1923, 425 people were awaiting trial while 608 had already been sentenced. Eighteen persons were sentenced to death for murder. Instead, prison sentences were given, though a few were hanged (Krüger, 1978: 125–126; Oberholster, 1982: 190–191; Fokkens, 2006; Visser & Fokkens, 2003 150–153).

“The SACP has always played an important theoretical role in its own right and in the context of the wider national democratic struggle. The Party and all its members should collectively seek to continuously develop and deepen the ideas of Marxism-Leninism and in particular seek to develop its application in our own society” (Quoted in Kotze, 1994: 47). Joe Slovo was later to plead for a more pragmatic approach in order to maintain the “inextricable link” to the ANC (Kotze, 1994: 50). Yet, Slovo remained convinced that “ultimately South Africa will arrive at a socialist system”. Existing socialism, he argued, failed because it was divorced from democracy, that democratic socialism is the only rational future for humankind and that it can be realised in a future South Africa (Slovo, 1994: 41 in Liebenberg et al.). His words echoed the approach of Gorbatchov: “Vele jaren geleden was alles heel wat eenvoudiger. Er waren een paar macht die vaststeden wat hul belangen waren …wij hebben een oog open voor wat gaande is (Gorbatsjov, 1988; 157, 156, 161 – Dutch translation). Gorbachov and Slovo’s arguments boiled down to ‘newfound realities’. Did they now, after years of Marxism-Leninism, return to Marx’s idea of the future socialist state as “a direct democracy in which the task of governing would not be the preserve of the state bureaucracy”? (Slovo, 1989: 11). Arguably history will finally put the blame or absolve.

While some South Africans admired communism (and the Soviet state), others feared and loathed the “new Russia” and its ideology. Schisms and fault lines developed that were to mark future relations between the two countries for the greater part of the 20th century. The Left in South Africa at the time became deeply divided between Stalin supporters and Trotsky supporters (Hirson, 1994; Liebenberg, 1990; Liebenberg et al., 1994). The “lunatic left” or Trotskyite tendency was consistently vilified by the SACP in South Africa as “reactionaries” – very much as happened in the Soviet Union during the rule of Stalin. Those who persisted were

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14. Also referred to as the national democratic revolution.


16. For an intellectual engagement with Slovo’s “new” approach, see Heribert Adam (1990). Adam is correct; the SACP led many into the negotiation process – and Thatcherite/Reaganomics if viewed a decade, two and more later.

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drummed out of the Marxist-Leninist vanguard represented by the communist parties in both countries.

*The Trotskyist groups that broke with the CPSA and the Comintern voiced their anger at what was happening in the USSR in 1932 … but squabbled, split and … retreated into self-righteous sectarianism* (Hirson, 1994: 52).

While the Trotskyites were essentially anti-war at the outbreak of the Second World War, Hirson remarked that they also heeded “Trotsky’s call for the unconditional defence of the USSR”. One of the historical ironies of the Marxist movement in South Africa at the time was that while internally the Marxist-Leninists and Trotsky followers fought each other, belittled each other and implied treachery, they nevertheless had agreement on the necessity for the defence of the USSR against racism and Nazism. But then again, the irony of the time could be a form of visionary focus.

The Trotskyites in South Africa had newspapers *The Spark* (derived from *Iskra*) and the *Torchlite*. They cooperated with the young radical Hashomer Hatzair (the young guard), a Sionist group, before internal strains and different views on the USSR, China, Spain and the Spanish Civil War divided them, and rendered further cooperation impossible (Hirson, 1994: 59, 63). These debates would influence South African liberation politics for years to come, perhaps even today.

Debates initiated by Martin Legassick and the Marxist Workers’ Tendency of the ANC (Legassick, 1994: 173ff) lasted up to the 1980s – at least at the two universities where the author studied (Stellenbosch and the University of Western Cape). Jaco Malan, then chairperson of the Stellenbosch branch of the National Union of South African Students (Nusas), was ousted because of his sympathies for the Marxist Workers Tendency (MWT) and the political philosophies of Leon Trotsky. After he had been drummed out of Nusas, Mark Behr was elected chairperson of Nusas being more ‘mainstream’. Behr was later identified as being in the pay of the South African Security Police and made a submission in this regard to the Truth and Reconciliation Commission (TRC). Given the ever fluid nature of Western Cape politics, such debates were not unknown at the University of Western Cape, which then was known as the “intellectual home of the Left”. (At the time Jakes Gerwel was the Rector of *Bush.*) Again, the influence of debates and tensions following from different interpretation and application of Marx’s theory had an effect. Perhaps as much as the deep routed racism advanced by the white power elite one may argue …

The Suppression of Communism Act in the 1950s before South Africa became a white republic, declared communism unlawful. The Act stated that “Communists were those following the teachings of Marx, Engels, Lenin and Trotsky”. Names like Antonio Gramsci, Palmiro Togliatti and Rosa Luxemburg were not mentioned – otherwise the apartheid regime would have had to add plenty more names to their list. Following the Suppression of Communism Act, Marxist groups were driven underground and the Marxist-Leninists dealt with their banning more successfully than the Trotskyites. Some of the latter group aligned themselves with the Committee of Liberation or African Resistance Group (ARM). ARM “counted amongst its members a bewildering array of political tendencies” which became involved in amateurish sabotage and the infamous Harris bomb, and soon thereafter predictably rounded up by the

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17. The names of anarchists such as Bakunin and Peter Kropotkin were relatively unknown to the security agencies in South Africa at the time. If so it would have struck fear into their harts and enhanced their angst about a revolution substantially.

South Africa was to join the Allies, inclusive of the Soviet Union, in the war against Fascism and Nazism. War was declared on 1 September 1939. On 4 September the pleas for neutrality of the then South African prime minister, JBM Hertzog, were defeated in the South African parliament with thirteen votes. The United Party of Smuts argued for entering the war on the Allied side (Oosthuizen, 1942: 4). Hence, South Africa was on the side of, amongst others, the Soviet Union against the Axis Forces of Herr Adolf Hitler and Il Duce Benito Mussolini, and later on by implication, at war with Japanese militarism.

The Labour Party, the Dominium Party, the Naturelle-verteenwoordigers (representatives for black people in parliament) and some of the Hertzogites supported Smuts (Muller, 1980: 450–451). Many South Africans within the National Party and two major right wing movements, namely the Ossewa Brandwag headed by Hans van Rensburg and the New Order Party headed by Oswald Pirow were supportive of the Nazis. Internally the government saw movements sympathetic to nationalism and socialism as a threat. Ossewa Brandwag leaders were interned.

Many South Africans may be aware that the Soviet Union lost around 20 000 000 citizens and soldiers during World War Two. They are well aware that the “Russians” – in other words, the Soviet Union – sacrificed people, material and their future to defeat Fascism and Nazism. The number of people that the “Russians” in war (the Soviet people) lost in comparison with others, for example the United States of America, the UK, France and other allies fade to insignificance. History tells us that those who suffered the greater losses were Jewish people and the Soviet people, the latter more than the former. (Sadly South African historiography does not sufficiently inform us about Chinese or for that matter, civilian losses in the East in the same war).

South Africans supportive of the war against Fascism and Nazi-nationalism in their own way tried to support Allied forces and the Soviet Union. An organisation called Medical Aid for Russia (Afrikaans: Mediese Hulp vir Rusland), following a request from the Soviet Red Cross, acted on the call to provide “ten thousand bottles of human blood serum” for the “soldiers of the Red Army”. Among others, members from Kimberley, Bloemfontein, Port Elizabeth, East London, Pietermaritzburg, Durban, Johannesburg and Pretoria contributed. The mobilising slogan simply read: “Give your blood that they shall not die!” (Unisa, Archival Group: Communist Party and Russia, 1922–1975).
A letter dated 16 October 1942 from the Minister of Posts and Telegraphs and Public Works to the Consul General of the USSR in Pretoria, Nicolai Demianov, read:

"This meeting of the United Party wishes to express its admiration and gratitude to the heroic Russian Armies who with so much valour fight against the Nazis."

It continues:

"(I)t is our earnest prayer that the awful struggle will soon be brought to a successful conclusion and that every Nazi may be chased out of Russia."

Smaller acts of solidarity deserve attention. The workers of Eskay Shirts (Pty Ltd) in Salt River, Cape Town gave a donation to the Medical Aid for Russia. The covering letter for the donation is dated 17 December 1943. It is likely that this gift was to be an offering to coincide with Christmas 1943. The Cash Cycle and Motor Works Wholesale and Retail at 345 Pretorius Street, Pretoria, donated 50 pounds. The manager, A. Wolson, signed the letter (Unisa, Archival Group: Communist Party and Russia, 1922–1975).
The South African Medical Aid for Russia, apart from cash donations totalling roughly £800 000, also supplied antigas gangrene serum, antibacterial dysentery serum, antityphus vaccine, 7 452 bottles of human blood serum, 600 000 yards of bandage, 5 000 000 vitamin B (complex) tablets and 80 tons of tuna fish. Correspondence from the Medical Aid for Russia dated January 1945 addressed to the Soviet Consulate, Mr. Snagerev, proves that by 1945 deliveries continued.

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South African seamen also served on board naval vessels in the operations to relieve Leningrad during 1941/42. In 2005, the Great Patriotic War commemorations in South Africa took place in Cape Town in order to honour some of the seamen who were still alive and back then took part in the “Arctic Convoy” (Photo compliments, Andrey Sharashkin and Fiodosiy Vladyeshevskiy, Embassy of the Russian Federation in Pretoria, 2005).

An illustration of the divisions within the white community in South Africa at the time can be seen from a letter from the Afrikaans Reformed Churches. In a letter addressed to the Smuts government the Afrikaans Reformed Churches appealed to the Smuts government about the “dangers of Communism” (die gevare van die Kommunisme) and “the pressures of communist propaganda” (die druk van kommissistiese propaganda). The letter, signed by eight Reformed Church leaders delegated to do so, mentioned by name the unacceptability of “communist principles that are materialist, godless and unchristian”. The Trade and Labour Council, the trade unions and the Friends of the Soviet Union are mentioned by name. The letter appealed to the government to ban all communication between the Soviet Union and unions (Unisa, United Party Archives, Division of Information, “Church and Politics”). At the time the Dutch Reformed Church members were mostly Afrikaners. The Afrikaans Reformed Churches (the
Nederduits Gereformeerde Kerk, die Gereformeerde Kerk and the Hervormde Kerk) were penetrated by members of the secret Afrikaner Broederbond. The Afrikaans churches were to a degree also sympathetic to the authoritarian national-socialist movement, the Ossewa Brandwag, of which many members were interned by the Smuts government. In the Western Transvaal institutions of higher education were supportive of the Ossewa Brandwag.

In 1948 the international community accepted the Universal Declaration of Human Rights, a direct result of the horrific effects of racial supremacy that led to the Second World War. The National Party and its Broederbond cohorts came to power with the slogan Apartheid (Separateness) soon to be transformed under the premier Hans Strijdom to Baasskap (Herrenschaft). It speaks for itself that, compared to the Universal Declaration of Human Rights, the white power elite’s idea of racial separatism for South Africa was not received well. In the Soviet Union and the rest of the civilised world that saw the effects of extreme nationalism whereas they tried to eradicate class, religious and ethnic differences, apartheid was abhorrent.

In the Soviet Union the attempt to eradicate class, religious and ethnic differences happened through authoritarian strategies. At the same time the new South African government under the Broederbond and National Party power elite in tandem with the Afrikaans churches installed racial exclusivity, ethnic differences and racial-class divisions by authoritarian means. The paths between erstwhile comrades would split.

3. Apartheid, liberation struggle (and a Cold War)

The Smuts government was defeated in the general election of 1948. The National Party came to power – a reign under one dominant white party that was to last 40 years. In the Soviet Union the reign of the Communist Party was to last roughly 70 years. Did this perhaps happen because at least theoretically Communism aimed at inclusion and some benefits were redistributed under communist rule, while apartheid in theory and practice aimed at exclusion and exploitation of a perceived ‘inferior’ other and hence caused earlier alienation from its subjects?

The period 1948 to 1988 can, perhaps from the South African (elite) side, be described as grudging admiration turning into fear, if not hate, for the Soviet Union. It was the beginnings of apartheid social engineering, legalised racialism, the Red Bear syndrome and paranoid fears for Communism as ideology. The Cold War mythology also played a role. South Africa was to align itself with the “Christian West” and in tandem their free market ideology.

Geldenhuys, with reference to the Afrikaner power elite, argues that in 1949 the South African Minister of Justice, CR Swart, referred to “Communism as a snake in the backyard which had to be killed before it bites” (Geldenhuys, 1988: 8). Geldenhuys points out that from the days of DF Malan, the first National Party prime minister, to the times of Verwoerd and Vorster “… the Soviet Union was regarded as the source of (all) communist evil” (Geldenhuys, 1988: 9). He also

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18. Northwest-University (previously the Potchefstroom University for Christian Higher Education) houses a comprehensive archive of Ossewa Brandwag literature and history worth consulting.

19. John Vorster and later BOSS Chief, Hendrik van den Bergh, were internees, among others.
points out that for a brief period John Vorster, who succeeded Verwoerd, singled out Communist China as the most serious threat facing South Africa. This happened especially during the time when China financed and built the Tanzam railway line between Tanzania and Zambia in 1970–1975. However, the Soviet Union remained in the scope and would be the dominant focus of anti-Communism.

“Jy kan ’n Kommunis vertrou om ’n Kommunis te wees” became the slogan used by National Party/Broederbond leaders from the late 1950s in order to mobilise whites and “moderate” (“responsible”) black people against internal and external resistance which was presumed to be orchestrated from the Soviet Union. For many Moscow became a loathsome word, in contrast to the time of the Anglo-Boer War and partially the period up to the end of the Second World War. Schisms became pronounced and different sections of the population in South Africa and presumably the Soviet Union viewed each other with feelings that varied from admiration, grudging respect, shear adulation, scepticism and hate/fear. Needless to say, the political elite (and their faithful media) played a major role in influencing opinions on both sides.

Vale (2008: 22) observes that “South Africa was a cause célèbre in the life and times of the Cold War … a rich white majority seemed to enjoy the support of the West while an impoverished black majority looked towards the Soviet Union and its allies as a source of support”. Many white elite viewed the picture as such. Vale quotes Verwoerd: “South Africa is unequivocally the symbol of anti-Communism in Africa. Although often abused we are still a bastion in Africa for Christianity and the Western world” (Vale, 2008: 22).

In 1950 the Suppression of Communism Act (Act No. 44 of 1950) was passed. It also applied to occupied territories such as the then South West Africa (today Namibia) (See Horrel, 1982: 201). The official definition was wide open to interpretation and (ab)use. It covered anyone or anybody or any group, institution or association that expounded the teachings of Marx, Lenin or Trotsky. In an ironic twist the law condemned any scheme or action that aimed at “despotic rule or dictatorship of the proletariat”, any action aimed at “bringing about political, industrial, social or economic change within the Union”, “political disturbance” or “the encouragement of feelings of hostility between European and non-European races in the Union” (Horrel, 1982: 202). Following the Sharpeville shootings on 21 March where 83 black persons lost their lives and many were injured, the Unlawful Organisations Act (Act No. 24 of 1960) followed. Hence, the PAC and ANC were banned. In 1961 South Africa left the Commonwealth and declared herself a republic.

Between 1962 and 1966 the General Law Amendment Act (Act No. 37 of 1963) were passed, outlawing various organisations. (For a full list consult Horrel, 1982: 204–205.) The Affected Organisations Act of 1974 and the Internal Security Amendment Act, Act No. 79 of 1976, were to follow. Between 1960 and 1975 several organisations were banned. Following the Internal Security Amendment Act another eighteen organisations followed. Amongst them were Parents and Teachers Organisations, Youth and Black Journalist Organisations and various Black Consciousness Movement related organisations. Several publications and the Christian Institute headed by Beyers Naudé followed the same path (Horrel, 1982: 205–207). The newsletter of the Christian Institute, Pro Veritate, was amongst the publications banned.
The Afrikaner political elite led their followers into the psychosis of a presumed Total Onslaught. South Africa’s minority, due to increasing international criticism and later isolation in their view, stood alone – much like the Smith regime in the then Rhodesia did before Zimbabwe’s independence in 1980. The South African regime felt betrayed by the United States of America which temporarily withdrew its initial support to South Africa and the rebel movement Unita after the 1975/1976 invasion of Angola by three South African battle groups. Geldenhuys argues that a “complex love-hate relationship” developed between South Africa and Western powers (Geldenhuys, 1988: 9). Such feelings of betrayal can perhaps be traced back to the comparisons, similarities (even mirror images) that the South African white people shared with the American South. The intertwining of religion, especially Puritanism, elements of Calvinism, a belief in a God-given right to rule over and to decide on the life and death of the underlings of a different race, had a major influence. Romanticism also played a role. In the South African case ideas – amongst others, Herder – brought in by Dutch immigrants after the Anglo-Boer War also played a role. South African theologians who studied in Nazi-Germany such as the brother of the then prime minister John Vorster also played a role in advancing ethnocentrism and authoritarian attitudes. The Stellenbosch Dutch Reformed Church theologian FJM Potgieter, a committed Calvinist, who studied in pre-war Germany later became known for his insistence that “apartheid was God’s will”. Cash (1971: 93–106, 127ff, 216 ff, 346, 382ff) in referring to the mind and mentality of the American South discusses Romanticism’s role at length. For more on romanticism in South Africa, see the late Dawid Bosch on the roots and fruits of Afrikaner civil religion.

Notwithstanding a complex love-hate relationship with the West, South Africa did cooperate with France on nuclear energy and security issues, and imported military transport aircraft via Morocco from Western states. South African scientists studied nuclear physics in the USA without restrictions. Major oil companies such as Shell and British Petroleum exported oil to South Africa, and South Africa continued to work closely with USA/Western supported states at the time. German companies exported soft skin vehicles to the RSA of which many found their way into the SADF. Covert nuclear cooperation with the USA, France and Israel (and some say Germany) continued. Pro-Western countries and US proxies with which RSA colluded at the time, included Argentina, Chile, Uruguay, Paraguay, Israel and Taiwan. In the Latin-American cases these countries were all authoritarian regimes. In Africa the relationships with US-backed states like Zaire of Mubutu SeSeseko remained warm. Outspoken anti-Communist statesmen on the continent like President Banda of Malawi (who happened to be an authoritarian leader) were hailed in South Africa. Likewise, socialist leaders such as Julius Nyrere of Tanzania were vilified. Even Kenneth Kaunda of Zambia that frequently pleaded for a peaceful settlement of conflict in southern Africa was frequently scoffed at.

Inside South Africa tensions increased as political oppression deepened through a cynical judicial mix of repressive acts and marginal reforms. Southern Africa, especially Angola, was to see an escalation of war fuelled by apartheid involvement. Following the support for the South Africans

20. Compare Marthinus van Schalkwyk’s sudden conversion to the ANC that resulted in a cabinet post for the “leader” of a nearly non-existent party. The “miracle” conversion since 1998 of the ex-National Party leaders such as Pik Botha and others falls in the same category.

21. Bosch coined the term an “Afrikaner Civil Religion”. In this regard a book, The Puritans in Africa, by WA de Klerk is also notable. So is Debroey’s, Zuid-Afrika: Naar de Bronnen van Apartheid published in the early 1970s.
and Unita by the CIA, East Block countries, including the USSR, supplied military advisors, weapons/arms to Angola’s MPLA government. Cubans were dispatched to Angola to bolster the new government’s defences against the increasing destabilisation of Southern Africa by the apartheid regime. South Africa was becoming increasingly militarised by the likes of PW Botha and general Magnus Malan. Some observed that the South African state transformed from a state backed by police to a militarised state (Frankel, 1980, 1984). Under the rule of BJ Vorster the South African state depended heavily on the South African Police (SAP), more specifically the Security Police and the Bureau of State Security (BOSS). Following the ascendancy of PW Botha and Magnus Malan the state became more dependent on the military for its survival.

As a member of the Afro-Asian Solidarity Committee, Vladimir Shubin practically engaged in the South Africa/Soviet Union/Africa arena during the struggle for liberation in close association with the African National Congress (ANC) and its armed wing, Umkhonto we Sizwe (“The Spear of the Nation”). Subsequently Vladimir Shubin published extensively on South Africa. So did members of the Afro-Asian Solidarity Committee such as Slava Tetekin. Afro-Asian Solidarity Committee members worked closely with members and leadership of the exiled movement. In the 1980s Vladimir Shubin, being closely involved with the liberation struggles in Southern and South Africa, wrote a book entitled Social Democracy that was clandestinely distributed amongst South African activists (especially students at the University of the Western Cape). The author used the pseudonym Vladimir Bushin at the time. Vladimir and Slava were aware of other Afrikaners who joined the struggle against apartheid, albeit from different points of departure in South Africa (1963–1990) such as Abraham Fischer, Beyers Naudé (Oom Bey), Hein Grosskopf, HW van der Merwe, Van Zyl Slabbert and various others.

English-speaking whites involved in the struggle such as Joe Slovo, Ronnie Kasrils and Rocky Williams were also known to Shubin and colleagues. At various stages Shubin, Tetekin and others worked closely with especially the former two persons during the resistance (Shubin, 2008a: 192, 364; 2008b, 239ff). Closer links and loyalties between ANC/SACP and Soviets developed. Vladimir Shubin in The ANC: A View from Moscow deals in great detail with this. The Afro-Asian Solidarity Committee played a major role. The name Slava Tetekin may ring a bell for many here. ANC cadres went for training in Russia. Many of them still speak the language. Many students from Third World countries went to study in the USSR at the People’s Friendship University, amongst them many South Africans. Others went for military training. A few stayed behind in the Soviet Union while the majority returned home. In South Africa, following the transition to democracy, the newly created South African National Defence Force

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22 With tacit or not so tacit USA/CIA support. See amongst others Moorcraft and McLauchlan (2008: 186–188, 189–190).

23 Tetekin’s views on the USSR’s foreign policy towards Southern Africa may be read in an IDASA Occasional Paper (No. 15, 1988: 7–10).

24 In April 2005 Vladimir Shubin received the Order of the Champions from Oliver Tambo (Silver) for his contribution to the struggle against apartheid and colonialism in Southern Africa (Pretoria News, 27 April 2005).

25 In Russia there is an association catering for fathered or mothered children who were left behind when the “Third World” trainees and cadres returned to their countries then already liberated or involved in struggles for liberation. One would presume that this also applies to cadres, guerrillas and students from Southern Africa and perhaps South Africa. The organisation is known as the Inter-racial Children’s Fund (French: Enfants inter-raciaux Fond Humanitaire (“Metis”).
(SANDF) incorporated, among others, MK cadres trained in various arms of service in the Soviet Union.

During these years the South African regime had apologists, if not advocates, outside South Africa. In 1988 (the same year that Gorbachev’s Perestrojka – in Dutch – saw its 10th impression in The Netherlands) a Dutch scholar, M de Haas, wrote Sovjetbeleid ten aanzien van Zuidelijk Afrika. De Haas spent much of his work pointing out that the Soviet Union was delivering arms, not food, to Sub-Saharan Africa. Like South African magazines of the time such as Die Huisgenoot, Scope, Paratus and Armed Forces (earlier also Newsweek) De Haas listed the perceived quantities of Soviet equipment delivered to African countries. The work aimed at pointing out the Soviet Union’s attempt to isolate South Africa through Soviet propaganda (een propagandacampagne) against South Africa (De Haas, 1988: 33). De Haas, for example, referred at the time without qualification to the African National Congress (ANC) and South West African People’s Organisation (SWAPO) as terrorist organisations (De Haas, 1988: 34ff). While a variety of Dutch organisations such as the Kairos Werkgroep fought apartheid, others like the Nederlands Zuid-Afrikaansche Werksgemeenschap supported the apartheid philosophy. Others such as the Nederlandsch Zuid-Afrikaanse Vereeniging (NZAV) remained “liberal” (verlig) in orientation, pledged political neutrality and believed in “racial reform” in South Africa, and maintained cultural links with South Africa in a time of increasing calls for international isolation.

In 1981 we see a person Ronald Reagan: “Can we abandon a country that stood behind us in every war we fought, a country (that) strategically is essential to the free world in its productions of minerals that we must have and so forth?” (Shubin, 1999: 234). Reagan’s attitude would eventually lead to the policy of constructive engagement that prolonged South Africa’s aggression in Angola. In sharp contrast Oliver Tambo, President of the ANC, responded: “We stood together with the Soviet Union and the Allies in fighting Nazism in the Second World War … the Soviet Union and other socialist countries stand with us to this day fighting the apartheid system and its leaders … of Nazi ideology and practice” (Shubin, 1999: 234). Interestingly enough, at this time the People’s Republic of China, having made a shift in policy, tried to make closer contact with the ANC and the SACP. The “Chinese question” was to be discussed with the CPSU during a visit by Moses Madhiba, SACP representative, when he attended Brezhnev’s funeral (Shubin, 1999: 233). In 1982 the SACP Secretariat discussed the issue in Maputo and decided that “we should be cautious about the issue but should not reject the overtures” [by the Chinese]. Shubin argues that the decision was an example of SACP and CPSU relationships. “The Soviet did not dictate their position to the SACP, nor did they prevent the SACP from developing relations with Beijing” (Shubin, 1999: 234). It should be mentioned that, following Rivonia and the infamous Treason Trial in the early 1960s, some cadres of Umkhonto we Sizwe (MK), the armed wing of the ANC, did military training in China. Earlier on relationships between the ANC and China were most cordial.

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26. See for example magazines between 1967 and 1988, inclusive of Nou magazine. Many of these pro-government magazines also (before 1980) regularly reported on the struggles by Rhodesians to maintain minority rule (See for example Nou, 08 August 1975 or Armed Forces, May 1977).

27. The first edition of this work sold out in a short while. After numerous delays, the second edition of Shubin’s work was published in 2008 by Jacana Media, Auckland Park. It is a sad reflection that such a work did not find a publisher (or rather a suitable publisher found it) for its second edition. Among others, the University of South Africa undertook to publish it but publication were delayed.

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4. Post apartheid: contradictions and transition to democracy

In 1990 the author acted as coordinator for a visit of young scientists to the Soviet Union. Hermien Kotze, Zorah Ebrahim, Khehla Shubane, Nic Borain, Mark Swilling and the author undertook an extensive ten day visit to the Soviet Union. The visit, needless to say, was less scientific and more political in nature. The group met with a whole range of political parties, and political and economical experts. The group had freedom of movement, and also interacted with working people and those on collective farms. Supporters and critics of the system spoke freely. Some such as Khehla Shubane and Nic Borain became disillusioned with what they saw in the Soviet Union. On return, Nic Borain (no relationship with Alex Boraine) wrote an article in the monthly newsletter of the Institute for a Democratic Alternative for South Africa (IDASA) titled “Ten days that shook my world” (Democracy in Action, 1990: 1–6). Borain resigned from all activist positions and entered the literary world. Perhaps Nic was more honest than many other SACP members of then. They remained in office and since 1997/98, together with the new ANC leadership, led their followers into a new macroeconomic strategy (GEAR) that was to lead to the jettisoning of a Reconstruction and Development Program (RDP). Despite lip service to equality they seem to have embraced liberal “equity” and the free market that led to “jobless growth” and increasing poverty and corruption.

By 2000 the Reconstruction and Development Program (RDP), a social democratic initiative based on growth through redistribution during Mandela’s rule, was jettisoned. The alliance partners, the trade union COSATU and the SACP paid lip service to government and followed Mbeki diligently into a macroeconomic programme that was to be based on “redistribution” through capitalist growth. The “trickle-down effect” of this programme resulted in jobless growth and job reduction in South Africa. Mbeki was jettisoned at the Polokwane conference in South Africa. The new leadership after Polokwane’s youthful decisions follow the motto of “Do not challenge us. We are right”.

It seems to the observer that the elite in new Russia and the new elite in South Africa share a common characteristic. They changed from one system to the other for reasons of material benefit and opportunism without missing a single goosestep (with apologies to a South African poet). In the meantime critics of the government from the left (or if white) are told that they are unpatriotic, racist and against progress or transformation. Or, as in governments obsessed with security those speaking their mind have become enemies of the people. This notwithstanding that many of these people formed part of the resistance movement and at home destroyed apartheid. History is seldom without irony …

During one election the Independent Democrats were called “traitors” when the party was established. In 2008 another breakaway party, the Congress of the People (COPE), whose leadership, together with the ANC, oversaw the introduction of a very peculiar democracy was called “snakes” by some ANC members. An ANC youth movement leader recently claimed that fellow South Africans that differ from him are less than rats at best insects. Among others this young man referred to the leader of the opposition as a cockroach, a term used to describe political enemies during the Rwandan genocide (Die Burger, 04/11/2010). Interesting how history and social dynamics brought us around to the time when National Party leaders referred to their opposition as a snake in the backyard.
The road to democracy is no easy one. Another long march to transform an emerging democracy to a non-racial equal society will have to continue in which all sectors of society will be involved without fear or prejudice ...

Conclusion

The people of “old South Africa” and the Russian people experienced times of affinity and adversarial relationships. This can be related to bi-lateral agreements (or the dislike of it) driven by nationalism, the nature of government, the vision of an equal society and views on the desirability of racialism or the struggle against racism and economic inequality. Economic pathways chosen and advocated by governments in power (western aligned capitalism/free market versus socialisms of various sorts) exacerbated tensions.

Political antagonisms (1948 – 1990) between respective governments relate to the effects of the Cold War mythology perpetuated by US leadership and their loyal journalists. “Cold War” mythology deeply influenced the (white) South Africans caught up in a northbound gaze. The rift between Cold War warriors between 1950 and the 1980s and those that resisted racial capitalism on a non-racial basis was a given. “The Cold war discourse came as Gods Grace to the apartheid politicians and their hawkish generals” to paraphrase a thoughtful retired SADF colonel.

Oppressed people in South Africa as elsewhere in the world found countries like the Soviet Union and China more receptive of their needs for liberation and economic equality. With countries that aligned themselves with the West, this caused political tensions; not because of the Soviet Union or China but because of the perceived and projected sympathy for national liberation movements and those in favour of a socialisation of economies. Frozen relations post 1948 between the South Africa and the Soviet Union thawed only after the fall of the Wall of Berlin and South Africa’s negotiated transition (1990–1996).

Both post-authoritarian governments embarked on the liberal-capitalist course. Both countries seem to reflect tolerance for white collar corruption. The elites of both countries seem to have warmed up substantially to the ways of exploitation that they once fought. The idealised vision of the liberal-capitalist society as logical outcome at the end of history now awaits both countries. In reality joblessness, crime and exclusive tendencies increase in both countries and the political elite gains while citizens experience the converse (Compare Van Tonder, Rapport, 11 January 2009). The rich-poor gap grows in South Africa and Russia while the elites empower themselves more and more at the cost of the citizenry. In both countries white collar corruption and crime in general are accepted social problems, if not the norm. In both countries the evolution of a consolidated left opposition seems remote or at least fuzzy. Following “transition to democracy” all may not be well in Tshwane and Moscow.

28. Name withheld.
What does the future hold for the relations between the people of Russia and South Africa? We can only speculate. Time, economic developments and political dynamics will tell.

**SOURCES**

**Archives**


**Africana**


**IDASA publications**


**Books/Articles/Chapters to books**


*TD*, 6(2), December 2010, pp. 428 – 460.


**Theses/Dissertations**


**Webliography**


**Newspapers, bulletins, newsletter and journals**


*Democracy in Action*, July/August 1990.

*Die Burger*, 04 November 2010.


*Dinamiek*, Jaargang 7, 14 April 1987.


*Sunday Independent*, 22 August 2010.

The psychosocial well-being of orphans in Southern Africa: the perception of orphans and teachers

MW DE WITT* AND AC LESSING**

Abstract

The escalation in numbers of orphans in Sub-Saharan Africa has become a human catastrophe. If governments do not deal with this phenomenon as a priority it might spiral beyond control. Very few studies have been done to investigate the psychosocial impact of orphanhood on children and communities in developing countries. Very little is known about the life world of orphans in developing countries and even less is known about factors in these children’s lives which can affect their mental health. The researchers decided to undertake research in three areas in Southern Africa to investigate the psychosocial well-being of orphans and to compare the findings with existing research findings. A survey was done in three rural areas to determine the perceptions of orphans regarding their own personal experiences and emotional feelings which may reflect on psychosocial well-being, as well as the perceptions of teachers working with these orphans. Except for depression, the findings with regard to most of the psychosocial aspects were in accordance with the literature. The most important findings were that bereavement practices and approaches fit for developed communities might be of little value in developing settings. We are, however, more than aware that orphans from developed counties or even urban settings might differ from those of developing or deep rural areas.

Key words: Orphans, psychosocial well-being, bereavement, poverty, stigmatisation.

Introduction

The escalation in numbers of orphans in Sub-Saharan Africa has become a matter of great concern. Already in 2005, an estimated 13.7% of South African children were maternal or double orphans of whom both parents passed away (Cluver & Gardner, 2007, p. 318). It is estimated that by 2010, in 11 countries in Africa with a combined population of 109 million, 20-37% of children under 15 years of age will have lost one or both parents (Foster, 2002, p. 502).

It seems as if most research regarding this dilemma focuses on the physical and medical needs of the children left behind, and lesser studies have been done to investigate the psychosocial impact of orphanhood on children and communities in developing countries like Southern Africa (Foster, 2002, p. 502; Makame, Ani & Grantham-McGregor, 2002, p. 460). Makame et al. (2002, p. 459) found that many orphans did not function as well as could be

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expected even when their material needs were adequately met and suggested that psychological problems may be responsible.

Looking at psychosocial development implies looking at the relation of the individual’s emotional needs to the social environment. In his theory Erikson provided “a framework for the understanding of the psychosocial needs of young people in relation to the society in which they grow up, learn and later make their contributions” (Woolfolk, 2010, p. 83). The emergence of the self, the search for identity, the individual’s relationships with others and the role of culture throughout life are important aspects in psychosocial development. Temane and Wissing (2008, p. 106) indicate that various conditions in the environment within which a community exists play a role in the experience of well-being, “... well-being in rural communities is multidimensional arising from ecological, social, political, economic, and institutional factors.” “They interpret well-being as the interrelated and interdependent structural and functional conditions of a community, including individuals and their interactions within their environment”.

Social scientists predict that HIV/AIDS will not only restrict psychosocial development but also contributes to psychosocial distress like depression, anxiety and low self-esteem, due to the shock that results from the parent’s death (Cluver, Gardner & Don Operario, 2007, p. 757, 758; Ebersöhn & Eloff, 2002, p.77, 82; Nyamukapa, Gregson, Lopman, Saito, Watts, Monasch & Jukes, 2008, p. 133-134). The changes due to a parent’s death may also be subtle and take place over time resulting in orphaned children developing “a sense of relative deprivation as their poorer circumstances coupled with stigma and discrimination result in their continually having reduced access to services and material resources” (Nyamukapa, et al. 2008, p. 134).

Psychosocial distress may result in increased insecurity, with future generations being brought up with limited social attachment to significant others. These adolescents seem to be caught between their fear of being found out and their wish to feel connected and to feel a sense of ‘sameness’ with their peers. Having to be protective of self and others may become barriers to constructing a healthy sense of intimacy (Reyland, Higgins-D’Alessandro & Mcmahon, 2002, p. 291). This may also contribute to major impairments to their cognitive, social behaviour and moral functioning (Pharoah, 2004, p. 94). In their need for emotional security, the HIV/AIDS orphans may lack the ability to explore and make choices and may show signs of aggression, helplessness, sadness, depression and negative self-concepts. They may also present with disciplinary or behavioural problems (Nyamukapa, et al., 2008, p. 134).

It seems that although the occurrence of emotional and behavioural disturbances due to orphanhood have been tacitly acknowledged it have been ignored (Foster, 2002, p. 503). The crisis of children left behind is a humanitarian, developmental and human rights challenge of unprecedented proportions (Foster, 2005, p. 107).

Despite this looming crisis, the knowledge and skills related to child and adolescent mental health and their psychosocial needs have not been incorporated to the full in previous research on such orphans in developing countries. The potential value of such knowledge has largely been overlooked (Earls, Raviola & Carlson, 2008, p. 296). Very little is known about the lifeworld of orphans in developing countries and even less is known about factors in these children’s lives which can affect their mental health (Cluver & Gardner, 2007, p. 318). Whatever happens with orphans after the death of their parents, the new structure and quality of children’s living arrangements influences their future development (Hynes & Dunifon,
Psycosocial well-being of orphans in Southern Africa

Nyamukapa, et al. (2008, p. 134) hypothesise that the death of a parent may result in short-term consequences like chronic trauma, adjustment problems, low future expectations, poor health, reduced school attendance and performance, school drop-out, and even living on the streets.

The existing literature deals mainly with the psychosocial needs of orphans in developed countries which includes poverty, social skills, social cultural needs and psychosocial well-being, psychological problems and needs, self-esteem, emotional needs, loneliness, social withdrawal bereavement and stigmatisation (Cluver & Gardner, 2007, p. 319; Foster 2005, p. 72; Karim & Karim, 2005, p. 357; Robson & Sylvester, 2007, p. 266; Waweru, Reynolds & Buckner, 2008, p. 119; Zhao, Li, Fang, Zhao, Yang & Stanton, 2007, p. 1075). Adolescents who do not have the requisite contexts and experiences for healthy identity development or who, because of severe stress and burdens fail to take on this task, may experience self-doubt and engage in self-destructive behaviours to relieve the anxiety associated with confusion (Reyland et al., 2002, p. 292). Psychosocial development implies amongst other aspects, the following: preparation of children for their entry into society and their constructive participation in social life and adherence to the evaluative norms that apply within their society; support to make independent choices and decisions, dealing with stress and managing their fears; the development of healthy mutual relations and dealings characterised by intimacy, attachment, caring, warmth, understanding, good humour, happiness, security and satisfaction; the development of awareness of the larger world outside the home and the encouragement of children’s efforts to explore and control that world; assistance of children to develop self-discipline; assisting children to develop their own identity, which includes role models, gender role identity, group and cultural identity and career identity (Gerdes, 1988. p. 68; Louw & Louw, 2007, p. 307; Mwamwenda, 1995, p. 429; Reyland et al., 2002, p. 286; Robson & Sylvester, 2007, p. 266; Santrock, 2000, p. 345, 427; Smith, Bem & Nolen-Hoeksema, 2001, p. 365; Wadeley, Birch & Malim, 1997, p. 44).

Since very little is known about the psychosocial domain of orphans in Southern Africa the researchers decided to undertake research in three rural areas to investigate the psychosocial well-being of these orphans, as perceived by themselves and by teachers. The question can be asked: What is the perception of orphans and teachers of the psychosocial well-being of orphans and how do the findings concur with the literature?

Research design and method

A predominantly positivistic approach was followed to conduct a survey to determine the perceptions of teachers and orphans of the psychosocial well-being of orphans (Dash, 2008). The conceptual framework that guided the critical and integrative aspects of this cross sectional research (Earls et al., 2008, p. 296) was derived from research on orphans in developed countries as reflected in literature. Although in-depth interviewing would probably have provided rich descriptions and explanations of situational influences regarding lived experience of orphanhood (McMillan & Schumacher, 2006, p. 197), the researchers decided to use questionnaires because of the large number of orphans in the target areas. In this way information about the perceptions of orphans as well as the perceptions of teachers working with these orphans could be obtained.

The researchers administered two different questionnaires to gather data on the participants’ perception of their own feelings and situation with regard to psychosocial well-being as well as the perceptions of teachers regarding orphans’ well-being (Cohen, Manion & Morrison,
Following an in-depth literature study, the researchers compiled the questionnaires to seek answers from teachers and orphans on psychosocial-related questions. A thorough literature study was done to establish how the orphans experienced their world and perceived their psychosocial well-being. Broad categories of factors contributing to psychosocial well-being were identified and included in the questionnaire. The results of the study will be discussed under these categories and compared with existing literature. The categories are poverty; social skills and socio-cultural needs and psychosocial well-being; self-esteem, emotional needs and psychosocial well-being; psychological problems and needs; bereavement. The nature of the questions was diverse, including biographical, physical, psychological and emotional issues. Open-ended questions were added to both questionnaires not only to gain rich descriptions and explanations of specific perceptions but also to understand from an epistemological perspective how the orphans made meaning of their world (Gall, Gall & Borg, 2005, p. 28; Neuman, 2006, p. 110; Scheurich, 1997, p. 61) and an explorative, interpretive approach was used for the open-ended part of the questionnaire. The researchers realised that their own perceptions of reality do not only vary, but also differ greatly from the perceptions of the participants.

The one questionnaire investigated inter alia the perception of teachers of psychosocial aspects while the other questionnaire looked into the perception of the orphans. The questionnaire that addressed the orphans entailed three sections, namely A) biographical information, B) 24 questions on the psychosocial well-being with regard to psychosocial aspects, values and risk factors and C) three questions with regard to their future vision. The second questionnaire, aimed at the perception of the teachers and entailed four sections: A) biographical information, B) five questions to determine the physical needs of the orphans as well as seventeen questions to determine the psychosocial needs of the orphans, C) seven questions aimed at the role of the school to support the orphans and D) four open-ended questions with regard to the culture and norms of the specific community. This article does not reflect on all the information gathered by the questionnaires.

Thus, the researchers chose a mixed-method mode of inquiry, involving a combination of quantitative and qualitative methods (De Vos, 2005, p. 346; Neuman, 2006, p. 110). The nature of the questions was diverse, ranking from structured to open-ended questions. A four-point Likert scale was used in the structured questions to determine the perceptions of the participants. Our questionnaire was constructed as an exploratory instrument to establish trends and has not been designed for extensive numerical treatment of data (Mouton, 2003, p.100). In order to identify potentially unclear instructions and items, the questionnaire was evaluated by an expert in research methods. Items that were unclear because of formulation as well as technical implications regarding data capturing were identified, and the formulation of a number of items was amended. The fieldworkers piloted the questionnaires in their areas with teachers and orphans and unclear items that arose because of formulation or structure, as well as those with technical implications regarding data capturing, were amended.

The necessary measures were taken to ensure validity and reliability of the questionnaires. Two measures of validity were considered when compiling the questionnaire, namely content validity and face validity (Delpot, 2005, p. 161). The questionnaire measured what it was supposed to measure and the questions were adequate to be representative of the phenomenon. Steps had been followed to ensure the content validity of the questionnaire and
included an extensive literature study and various experts checked the phrasing and assignments of items to fields.

**Aim of the empirical investigation**

The survey was developed to improve understanding of and describe the perception of teachers and orphans of the psychosocial well-being of orphans. The aim of this article is, however, not to compare whether orphans in developing countries have the same responses regarding their psychosocial well-being than orphans in developed countries, but rather to describe how orphans in a rural setting in the different areas perceive themselves. To answer the research question on the psychosocial well-being of orphans the following sub questions were formulated and served as the basis of the investigation: Do the orphans experience particular socio-cultural or psychological needs? Do they lack in social skills? What does their self-esteem look like? Do they have emotional needs because of their situation? Do they experience stigmatisation because of the fact that they are orphans? Do they experience physical or psychosocial needs? The answers to these questions were combined in the discussion to attend to: self-perception; risk factors; the children’s view of the future and their perception of adulthood. The answers by the teachers were interpreted to understand and facilitate the questions asked to the orphans.

**Sample selection**

A convenient sampling was done, as the fieldworkers administered the questionnaires in the areas where they were working as the research was only done in certain areas in the Limpopo Province, North-West Province and Swaziland and thus the findings cannot be generalised. The group consisted of 637 orphans and 274 teachers. The researchers made use of three fieldworkers (one person with a doctorate in Psychology of Education and two doctoral students in Psychology of Education. All of them held senior official positions within the different departments of education in the three areas where the research took place. The fieldworkers did not know one another neither did they have any contact with one another while they were fieldworkers. Two of the three areas, namely Limpopo Province and the North-West Province, were in South Africa. The third area was in Swaziland. In collaboration with the officials of the Departments of Education, a number of schools were identified where the questionnaires could be distributed to all the orphans (Mouton, 2003, p. 100; Rossouw, 2003, p. 114). The following areas were included: **Swaziland**: Shiselweni, Manzini, Lobombo, Hhohho which include the whole of Swaziland; **Limpopo**: Mandlakazi and Leneyney; **Rustenburg**: the Bojanala region. The fieldworkers informed the orphans as well as the teachers working with the orphans how to complete the questionnaires. They also trained the teachers on how to complete the questionnaires on behalf of the young learners who could not read or write yet, and for some respondents in that area who had only functional literacy or were not able to read or speak English. The fieldworkers also fulfilled the role as interpreters, where necessary.

The number of schools involved, as well as the number of teachers and orphans, is presented in Table 1.
Tables: Orphans in developing countries: What do their responses indicate?

Table 1. Number of schools, teachers and orphans involved

<table>
<thead>
<tr>
<th>Limpopo</th>
<th>North-West</th>
<th>Swaziland</th>
</tr>
</thead>
<tbody>
<tr>
<td>School</td>
<td>Teachers</td>
<td>Orphans</td>
</tr>
<tr>
<td>1</td>
<td>21</td>
<td>29</td>
</tr>
<tr>
<td>2</td>
<td>10</td>
<td>16</td>
</tr>
<tr>
<td>3</td>
<td>13</td>
<td>70</td>
</tr>
<tr>
<td>4</td>
<td>14</td>
<td>28</td>
</tr>
<tr>
<td>5</td>
<td>18</td>
<td>27</td>
</tr>
<tr>
<td>6</td>
<td>16</td>
<td>27</td>
</tr>
<tr>
<td>7</td>
<td>19</td>
<td>31</td>
</tr>
<tr>
<td>8</td>
<td>17</td>
<td>26</td>
</tr>
<tr>
<td>9</td>
<td>7</td>
<td>0*</td>
</tr>
<tr>
<td>Total: 5</td>
<td>n76**</td>
<td>n170**</td>
</tr>
</tbody>
</table>

* Although there were orphans in the preschool, they were not selected.

** The “n” totals for the different areas will be the same in all the tables to follow.

Regarding professional ethics, the researchers considered the following as important for this research (Mouton, 2003, p. 238): objectivity and integrity regarding the research; the way the data was recorded; the ethical principles underlying publication of the findings; participants’ awareness of the purpose of the findings although the survey was anonymous. Participants also had the choice to participate and could withdraw whenever they wanted to (Gall et al., 2005, p. 136; Pellegrini, Symons, & Hoch, 2004, p. 34).

According to Guba (in Poggenpoel, 1998, p. 331) and Mouton (2003, p. 107), the trustworthiness of the results of the qualitative section of the research can be increased by using appropriate fieldworkers. This was facilitated by using dependable and reliable qualified fieldworkers, specialising in Psychology of Education. The fieldworkers were familiar with the areas, cultural beliefs and languages (Tsonga, Pedi, Tswana and Swazi) used by the participants. The relationship of trust between the fieldworkers and the participants was a high priority set by the researchers.
Discussion of the literature and findings of the research

A thorough literature study was done to establish how the orphans experienced their world and perceived their psychosocial well-being. Broad categories of factors contributing to psychosocial well-being were identified from the literature and included in the questionnaire. The results of the study will be discussed under these categories and compared with existing literature. The categories are poverty; social skills and socio-cultural needs and psychosocial well-being; self-esteem, emotional needs and psychosocial well-being; psychological problems and needs; bereavement.

Poverty

Literature on the physical state of orphans stresses the fact that poverty is a key cause of distress (Cluver & Gardner, 2007, p. 219). The effect of parents’ death and the financial situation of the children left behind is one of the major risks associated with childhood bereavement. It includes witnessing not only the traumatic death of their parents but also the subsequent financial instability of the children (Cluver & Gardner, 2007, p. 319).

Poverty as a risk for emotional and behavioural distress, lack of food and resultant starvation is a concern for those working with orphans (Cluver & Gardner, 2007, p. 321; Foster, 2002, p. 503). The lack of assets and material things make these children so obvious in the community and the school that they experience a sense of social exclusion and differentness (Cluver & Gardner, 2007, p. 322). The fact that most orphans are not able to afford school fees, resources, uniforms and transport to school distresses them and makes them angry (Cluver & Gardner, 2007, p.322). It is, however, evident that relatives or the community go to considerable lengths to find money to keep orphans in school and to maintain the children’s socioeconomic status (Foster, 2002, p. 503).

The information presented in Table 2 regarding children’s grants and foster care grants was part of the biographical information gathered during the survey.

Table 2. Orphans who receive a grant

<table>
<thead>
<tr>
<th>Area</th>
<th>Children’s grant R210.00</th>
<th>Foster grant R550.00</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Limpopo</td>
<td>40.6%</td>
<td>20.6%</td>
<td>71.2%</td>
</tr>
<tr>
<td>Northwest</td>
<td>48.8%</td>
<td>8.0%</td>
<td>56.8%</td>
</tr>
<tr>
<td>Swaziland*</td>
<td>1.8%</td>
<td>11.5%</td>
<td>13.3%</td>
</tr>
</tbody>
</table>

* School fees are paid for all learners in Swaziland by the Premier

Though the children’s grant of R210.00 is available for all children in South Africa, some orphans do not receive the grant because no adult (guardian) applies for it. Discussions with community leaders revealed that in many cases these grants are used for the whole family in whose care the orphans are, and not solely for the orphans themselves. From this information it is clear that a large number of orphans do not have any income or do not contribute financially to the family where they live. Access to the foster grant of R550.00 is often made
difficult because the orphans do not have some family member (adult) who can or are willing to apply. The fact that some of the orphans do not have identity documents complicates matters.

The responses from the survey indicated that an average of 81% of orphans had identity documents. However, it seems as if the lack of parents’ death certificates might be a problem, as only 61.1% of orphans were in a possession of death certificates of their deceased parents. These documents are prerequisites for applying for the foster grant.

The teachers who worked with orphans gave the following responses regarding the orphans’ financial state (see Table 3):

**Table 3. Teachers’ perception of orphans’ poverty expressed in lack of commodities**

<table>
<thead>
<tr>
<th>Area</th>
<th>Lack of food</th>
<th>Lack of clothing</th>
<th>Lack of personal hygiene</th>
<th>Lack of school funds</th>
<th>Lack of school material</th>
</tr>
</thead>
<tbody>
<tr>
<td>Limpopo</td>
<td>82.1%</td>
<td>87.7</td>
<td>85.0%</td>
<td>83.6%</td>
<td>76.7%</td>
</tr>
<tr>
<td>North-West</td>
<td>93.4%</td>
<td>85.0%</td>
<td>80.8%</td>
<td>89.1%</td>
<td>81.6%</td>
</tr>
<tr>
<td>Swaziland</td>
<td>92.0%</td>
<td>89.7%</td>
<td>66.6%</td>
<td>94.3%</td>
<td>75.9%</td>
</tr>
<tr>
<td>Average</td>
<td>89.1%</td>
<td>87.4%</td>
<td>77.4%</td>
<td>89.0%</td>
<td>71.4%</td>
</tr>
</tbody>
</table>

The frequencies of responses of the teachers (n274) to all the different factors resulting from poverty were very high. The effect of poverty on the psychosocial well-being of orphans cannot be ignored. Poverty surely contributes to low self-esteem and a feeling of being different from others who are better off. The relevant departments of social development will have to place some process of assuring that grants be distributed to orphans on their agenda.

**Social skills and socio-cultural needs and psychosocial well-being**

A number of researchers voice the concern that orphanhood may result in antisocial behaviour because the absence of role models makes it impossible for orphans to be socialised appropriately. According to Henderson (2006, p. 304), this is a debatable issue: because of the nature of family life and childcare in Southern Africa, children in this region have long been involved in fluid and extended family networks of care (Henderson, 2006, p. 311).

The loss of a parent will inevitably change the life of the child, and it will most likely bring about changes in roles and responsibilities (Murthy & Smith, 2005, p. 4). The child might become the replaced parent for a number of siblings in child-headed households.

The theory of self-efficacy (Bandura 2004, in Earls et al., 2008, p. 299) allows for dynamic bidirectional interactions between the child and social actors, and spaces in the ecological surround. Therefore the orphan can be integrated into a system of psychological and social factors that can be observed, and are amenable to remedial and beneficial interventions that
Psychosocial well-being of orphans in Southern Africa

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can address an orphan’s own sense of efficacy and achieved psychosocial well-being (Earls et al., 2008, p. 299). In this sense the orphan can contribute to his/her own psychosocial well-being.

Though a lack of family contact is seen by many researchers as a risk factor, in the African context positive values are attached to the range of kin and even neighbours upon whom a child may call as role models and for support (Cluver & Gardner, 2007, p. 321; Henderson, 2006, p. 306). As Africa places less emphasis on the individual and greater emphasis on extended families and communities, facilitators working in an African context will have to admit that western psychosocial treatment models used inappropriately in non-western settings do not necessarily work (Foster, 2002, p. 504).

One can assume that factors promoting psychosocial well-being would, as in developed countries, include universal safety and security: sympathetic caregivers; familiar routines and tasks and interaction with other children. However, Foster (2002, p. 504) gives the following worthwhile advice: a community-based approach encourages self-help and builds on local resources, culture, realities and authentic perceptions of child development. Psychological support in an African context should be strategically integrated into community-based programmes that provide support to children.

Table 4. Responses on how orphans experience their own situation regarding the death of their parents

<table>
<thead>
<tr>
<th>Area</th>
<th>I feel lost because I do not have parents.</th>
<th>I blame myself for my parents’ death.</th>
<th>I feel afraid that I will be removed from my home.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Limpopo</td>
<td>57.6%</td>
<td>41.2%</td>
<td>41.8%</td>
</tr>
<tr>
<td>North-West</td>
<td>42.8%</td>
<td>24.8%</td>
<td>41.6%</td>
</tr>
<tr>
<td>Swaziland</td>
<td>35.5%</td>
<td>20.8%</td>
<td>41.9%</td>
</tr>
<tr>
<td>Total</td>
<td>45.3%</td>
<td>28.9%</td>
<td>41.7%</td>
</tr>
</tbody>
</table>

Orphans in the Limpopo Province ranked the highest (57.6%) in feeling lost because they did not have parents, and 41.2% blamed themselves for their parents’ death. An average of 41.7% orphans felt afraid that they would be removed from their homes. These feelings may contribute to psychosocial distress and result in depression (Nyamukapa, et al., 2008, p. 134).

Psychological problems and needs

A study done by Foster (2002, p. 503) found substantial evidence of reduced psychological well-being, with most orphans showing psychological impairment, especially internalised changes in behaviour, such as depression, anxiety and low self-esteem. Makame et al. (in Foster 2002, p. 503) goes even further by claiming that children living in child-headed households or with grandparents have the most serious psychological problems. Cluver et al. (2007, p. 758) found that when controlling for age and female gender, orphanhood by AIDS
was significantly related to higher depression scores while orphanhood due to other causes was not necessarily associated with depression.

Other researchers highlighted anger and grief for teenage heads of child-headed households (Cluver & Gardner, 2007, p. 21). Makame et al. (in Foster 2002, p. 503) state that it is difficult to determine the severity of orphans’ psychological problems and that many orphans had not grieved or come to terms with the death of their parents. The presence of caring and supportive families support orphans and enable them to withstand severe psychological stress (Foster 2002, p.503). Table 5 depicts the perception of teachers regarding orphans’ feelings of stress and depression.

Table 5. Teachers’ perception of orphans experiencing depression

<table>
<thead>
<tr>
<th>Area</th>
<th>Feelings of sadness</th>
<th>Feelings of depression</th>
<th>Feelings of helplessness</th>
</tr>
</thead>
<tbody>
<tr>
<td>Limpopo</td>
<td>80.8%</td>
<td>76.7%</td>
<td>80.9%</td>
</tr>
<tr>
<td>North-West</td>
<td>9.2%</td>
<td>19.1%</td>
<td>9.2%</td>
</tr>
<tr>
<td>Swaziland</td>
<td>39.1%</td>
<td>40.2%</td>
<td>36.7%</td>
</tr>
<tr>
<td>Total</td>
<td>43.0%</td>
<td>45.3%</td>
<td>42.2%</td>
</tr>
</tbody>
</table>

Once again the variance between the three localities was very big. In the Limpopo Province teachers interpreted orphans’ feelings as experiencing excessive stress and depression because of their situation. It was the contrary in North-West Province, where teachers were under the impression that orphans experience very little stress and depression because of their parents’ death. There is no logical clarification for this except that the communities in the Limpopo area are desperately poor. Furthermore, it is important to attend to orphans’ feelings of sadness, depression and helplessness even if only few learners are perceived as experiencing problems, as these feelings hamper the psychosocial well-being of the learners.

Table 6. Teachers’ perception of orphans manifesting behaviour problems

<table>
<thead>
<tr>
<th>Area</th>
<th>Experience behavioural problems</th>
<th>Experience aggression</th>
<th>Experience disciplinary problems</th>
</tr>
</thead>
<tbody>
<tr>
<td>Limpopo</td>
<td>80.9%</td>
<td>61.6%</td>
<td>64.4%</td>
</tr>
<tr>
<td>North-West</td>
<td>28.3%</td>
<td>24.1%</td>
<td>28.3%</td>
</tr>
<tr>
<td>Swaziland</td>
<td>40.2%</td>
<td>52.9%</td>
<td>45.9%</td>
</tr>
<tr>
<td>Total</td>
<td>49.8%</td>
<td>46.2%</td>
<td>46.2%</td>
</tr>
</tbody>
</table>
Once again it is interesting that there is quite a variance in the perceptions of the teachers in the different localities regarding orphans’ behavioural problems and aggression. It seems as if teachers in Swaziland and those in the North-West Province experienced orphans as being far less aggressive and as demonstrating less problem behaviour than teachers in the Limpopo Province did. It is, however, important to note that stressors of utmost poverty in the Limpopo area might have caused the difference. Teachers need to attend to unacceptable behavioural patterns of the orphans as the behavioural problems may negatively influence the social relations and interaction of the learners.

**Self-esteem, emotional needs and psychosocial well-being**

The lack of material possessions surely contribute to low self-esteem within orphans (Foster, 2002, p. 503). The death of loved ones and the resulting grief amplifies and complicates the typical strains of a happy childhood and careless early adolescence (Murthy & Smith, 2005, p. ix). It is human for children to become depressed when their parents fall ill and all signs are there that they are going to die. The bleak future and the fear of not getting a job and living a normal life influence orphans’ outlook on the future (DeVane Fair, 2006, p 357; Foster, 2002, p. 503).

Like any other children, orphans value being loved, getting attention, commanding respect, being wanted, and having fun with caregivers who set boundaries for them (Cluver & Gardner, 2007, p. 321). Research has shown that orphans feel unhappy when they are treated differently from their siblings in the new family (Cluver & Gardner, 2007, p. 321). Tables 7-10 reflect the responses of orphans regarding their own happiness and interpretation of their future, which are important factors in reaching psychosocial well-being.

**Table 7. Orphans’ responses regarding their own future and feeling of happiness**

<table>
<thead>
<tr>
<th></th>
<th>Limpopo</th>
<th>North-West</th>
<th>Swaziland</th>
<th>Average</th>
</tr>
</thead>
<tbody>
<tr>
<td>I want to become a grown-up.</td>
<td>92.4%</td>
<td>88.0%</td>
<td>96.3%</td>
<td>92.2%</td>
</tr>
<tr>
<td>I cope with my present situation.</td>
<td>70.6%</td>
<td>62.8%</td>
<td>68.7%</td>
<td>67.3%</td>
</tr>
<tr>
<td>I have hope for my future.</td>
<td>88.2%</td>
<td>82.0%</td>
<td>95.4%</td>
<td>88.5%</td>
</tr>
<tr>
<td>I can influence my own future.</td>
<td>88.8%</td>
<td>70.0%</td>
<td>79.7%</td>
<td>79.5%</td>
</tr>
<tr>
<td>I am happy about the future.</td>
<td>62.4%</td>
<td>74.8%</td>
<td>89.0%</td>
<td>75.4%</td>
</tr>
<tr>
<td>I am experiencing an inner feeling of happiness.</td>
<td>71.8%</td>
<td>58.4%</td>
<td>71.9%</td>
<td>67.3%</td>
</tr>
</tbody>
</table>

On questions related to the future as well as to personal happiness the responses of the orphans in the survey were quite positive. From this survey it is clear that most of the orphans are not necessarily negative about their future and do experience inner feelings of happiness. Though there were orphans who indicated negative feelings the overwhelming responses were positive which is quite contrary to what is expressed in the literature.
In the open-ended questions orphans indicated that most of them see themselves as having a profession, earning a decent salary, getting married and having their own family. Occupations like policemen, nurses, social workers and teachers ranked high in the list of preferred occupations. In spite of their problematic situation orphans indicated a view for the future.

Bereavement

Bereavement in the African context might be totally different from what is experienced in developed countries. The taboo of discussing death has been noted by researchers working in developing countries and communities (Cluver & Gardner, 2007, p. 319). This might result in a different approach for facilitators to build a culture of mutual aid or experience within the bereavement support group (Murthy & Smith, 2005, p. xi). The feeling of not being alone and knowing that others experience the same thoughts and feelings as they do, might help them to deal with the sorrow (Murthy & Smith, 2005, p. xi). However, Henderson (2006, p. 306) finds it preferable in the African context for children and young people to choose at what point they deem it appropriate to speak of such things, if at all.

Although orphans’ anecdotes as quoted by Cluver and Gardner (2007, p. 320) reflect their sorrow and distress as a result of the death of both parents and other family members (Cluver & Gardner, 2007, p. 319), as well as their guilt at feeling responsible for the death of their parents, they also felt that happiness would come from “having parents alive to take care of me” and “[i]f I see my dead parents again”’. It would be of great importance to know if the stages of bereavement, namely, shock, grief, guilt and acceptance (Kübler-Ross, (no date)) would apply to orphans in developing countries.

The following tables give the responses of the orphans regarding their experience of their situation and their own feelings.

Table 8. Orphans’ responses on how they deal with their circumstances

<table>
<thead>
<tr>
<th>Area</th>
<th>I am afraid in unfamiliar situations</th>
<th>I am angry about my situation</th>
<th>Other people understand my feelings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Limpopo</td>
<td>55.9%</td>
<td>63.6%</td>
<td>76.5%</td>
</tr>
<tr>
<td>North-West</td>
<td>61.3%</td>
<td>50.4%</td>
<td>60.8%</td>
</tr>
<tr>
<td>Swaziland</td>
<td>58.0%</td>
<td>50.3%</td>
<td>70.1%</td>
</tr>
<tr>
<td>Average</td>
<td>58.4%</td>
<td>54.7%</td>
<td>69.1%</td>
</tr>
</tbody>
</table>

An average of 54.7% of orphans experienced a feeling of anger regarding their situation. It is not clear whether the feeling of anger can be seen within the theoretical framework of bereavement as postulated by Kübler-Ross (no date). Caregivers should attend to the grief of orphans as Cluver et al. (2007, p. 761) suggest that “AIDS-related parental bereavement can contribute to heightened levels of internalizing and some externalising distress”.

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There is quite a variance between the responses of orphans in the different areas. Orphans in Limpopo indicated that the majority (88.2%) could share their feelings with others while in the North-West province only 53.6% could do so. An average of 61.6% of orphans still grieved about the death of their parents during the research.

**Stigmatisation**

Campbell, Foulis, Maimane and Sibiya (2005, p. 808) see stigmatisation as an effective form of "social psychological policing" by punishing those who have breached unequal power relations of gender, generation, and ethnicity. Surely stigmatisation is one of the major problems for orphans nowadays. Literature reflects a very negative experience by those affected by the death of relatives (Brown, Macintyre, & Trujillo, 2003, p. 51). The sources of stigma may include factors like fear of illness or contagion as well as fear of death (Brown et al., 2003, p. 51). Orphans experience gossip and stigma as a great problem and talking about the death of parents and spreading rumours about the reasons for the death is a burden for those staying behind (Cluver & Gardner, 2007, p. 323). Children drop out of school not only because they do not have school fees, or money to buy books and uniforms, but very often because of stigma (Ebersöhn & Eloff, 2002, p.79; Foster 2005, p. 72).

To address the problem of stigmatisation, community networks will have to become part of the solution. This point of view is endorsed by Campbell et al., (2005, p. 811) who indicate that much has been written about the roles of "civic engagement" and "local solidarity as key assets in poor communities" to find solutions to their own problems as united communities.

Questions to underpin the issue of stigmatisation were formulated and the responses of orphans are reflected in Table 12.
Table 10. Orphans’ responses on their experience of stigmatisation

<table>
<thead>
<tr>
<th>Area</th>
<th>People think I am different because I don’t have parents</th>
<th>I prefer to keep it secret that I do not have parents</th>
</tr>
</thead>
<tbody>
<tr>
<td>Limpopo</td>
<td>45.3%</td>
<td>43.6%</td>
</tr>
<tr>
<td>North-West</td>
<td>46.0%</td>
<td>45.2%</td>
</tr>
<tr>
<td>Swaziland</td>
<td>40.6%</td>
<td>36.4%</td>
</tr>
<tr>
<td>Total</td>
<td>43.9%</td>
<td>41.7%</td>
</tr>
</tbody>
</table>

The responses regarding stigmatisation were not alarmingly high. Orphans in the North-West Province were the highest, with 46.0% agreeing that they experience a feeling of differentness and 45.2% saying that they would like to keep it a secret that they do not have parents. Silence is encouraged primarily because HIV infection has been socially constructed as a product of moral or character deficiency. Especially adolescents may feel guilty as result of the disclosure of their mother’s HIV status, resulting in feelings of shame and anger (Reyland et al., 2002, p. 286).

Conclusion

Caution reflected by different researchers that can be supported by us is that one needs to distinguish which factors are specific to orphanhood, or to poverty in general (Cluver & Gardner, 2007, p. 324; Henderson, 2006, p. 305). The research was done in very deep rural areas in which poverty is rampant. The authorities will have to assist the communities in addressing this issue of poverty as a matter of urgency.

As very little literature or research findings are available regarding orphans in developing countries, we did not have any statistical findings against which we could reflect our findings. We are, however, more than aware that circumstances as well as outlook on life of orphans from developed countries or even urban settings might differ from those of developing or deep rural areas.

When working with these children, facilitators, caregivers and researchers should pay special attention to the context and cultural beliefs and practices of the communities in which they work. Bereavement practices and approaches fit for developed communities might be of little value in developing settings.

One of the assets of the African context is surely the role of the extended family and the community in supporting those who are left behind. Even the way the dead are closely folded into the living world through their burial in homesteads, and through rituals that transform them into ancestral followers who, it is believed, continue to take a keen interest in the affairs of the living, cannot be denied (Henderson, 2006, p. 322).

It is interesting that within a Southern African perspective an average of 41.7% orphans feel afraid that they would be removed from their homes. This once again emphasises the fact that institutional options for orphans are not necessarily the answer in this context.
The findings from this survey are a clear indication that findings from research done in rural areas should not necessarily be the same for orphans living in developed countries or urban areas. People working with orphans in these areas will have to do thorough, authentic research before they intervene in the lives of members of these communities. The strong presence of mutual and cultural support systems needs to be interrogated by those who want to help.

**Bibliography**


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De Witt & Lessing


Natural disasters in African countries: what can we learn about them?

MT LUKAMBA*

Abstract
Problems posed by disasters have become increasingly important for all African governments. Every year a variety of disasters occur in Sub-Saharan Africa and these are becoming more prevalent. This article presents an analysis of statistical surveys for natural disasters in different regions of Africa over a 30-year period from 1974 to 2003. It shows that disaster frequency is increasing on the continent. The investigation of the data demonstrates that the East Africa region is under the greatest threat from natural disasters. In 2008, climatological disasters, notably droughts, claimed many victims in the eastern part of Africa, with more than one third of the population affected in Djibouti, Eritrea, and Somalia. The region has experienced the highest recorded number of disaster events for the past 30 years, followed by the West Africa region. The Southern Africa region is placed third as far as the frequency of disaster events in sub-Saharan Africa is concerned. The least disaster prone region is central Africa. The observations made in this analysis relate to the economic losses in different regions from the impact of natural disasters. In some instances, recovery from economic loss could not be recouped because of stunted growth and other internal problems in these countries. In addition, this article suggests some strategies to mitigate the problem of natural hazards in sub-Saharan Africa.

Keywords Flood; drought; volcanic eruptions; political governance; climate change; specialised capabilities.

1. Introduction
Natural disasters occurring in African countries undermine the economic survival of poor communities. Many populations in countries throughout the continent have suffered under the impact of such hazards, which have killed thousands and caused injuries to many others. For example, the flood in Algeria in 2001 killed around 900 people and adversely affected approximately 45,000 others. In eastern Africa in 2002, heavy rain brought floods and mudslides that forced people to evacuate their homes in Tanzania, Uganda, Kenya, Burundi and Rwanda (Huq et al: 2007). Moreover, Homan (1996: 138) argues that contemporary research shows ...

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exposure to such disasters are far from “natural”, and that power inequities may often explain differences in loss sustained and recovery time.

Perception studies reveal that people tend to view such events as an exaggeration of the natural world. Further, the UN-Habitat (2003) argues that developing nations, particularly those residents in major cities, face greater risk of economic and social catastrophes because of a relative lack of resources to adapt to the situation. This problem is exacerbated by the rapidly increasing urban population in most African countries.

Disasters create serious disruption and economic loss which impair the ability of communities (particularly the poorer people) to recover. Government assistance in such situations is often limited due to the already grave financial burdens they face. According to the International Strategy for Disaster Reduction (ISDR) (2004: 149), the African continent is exposed to disaster risk from various natural causes, particularly those arising from hydrometeorological hazards. One reason for this increase in disaster risk is the vulnerability of many communities; the risk to the livelihoods on which they depend, remains high. This vulnerability is also influenced by endemic poverty in many African countries, such as Malawi, Mozambique, and Zimbabwe. Another problem is recovery planning because not every national government is able to assist all poor communities. Furthermore, increased population growth in most African countries has become an additional problem. It is argued by Pelling and Wisner (2009) that the population of Sub-Saharan Africa is increasing, and that in 2007 it had risen to 800 million. The escalating urban population in African cities and towns poses a real challenge to managing disaster risk.

This article analyses 30 years of statistical data on natural disasters in Africa. It looks at various regions of the continent, and covers different types of hazards, such as floods, earthquakes, wildfires, drought and volcanoes. The 30 years (1974 to 2003) of statistical data focuses on different sub-regions of the African continent. In its analysis, the paper will also provide some suggestions on how to manage natural disasters in Africa.

1.1 Methodology
The researcher has used secondary statistical data covering 30 years of natural disasters on the African continent. This research is based on data gleaned from the Centre for Research on the Epidemiology of Disasters (CRED) at the University de Louvain in Belgium. Additional information has also been collected from various other international organisations including the World Bank, the United Nations’ Children Fund (UNICEF), and the International Strategy for Disaster Reduction (ISDR). Other important documents and relevant statistics were found, inter alia, in the library at North-West University (Potchefstroom Campus).

Another point the paper highlights is that there are as yet very few scientific journals that publish information on disasters on the continent. Disaster risk management in Sub-Saharan Africa is still a relatively new field of study. This is one of the reasons why the paper makes use of many reports from international organisations that have collect data on different types of disaster occurring in Africa.

2. Natural disasters in Sub-Saharan Africa
It is obvious that with the increase of disaster risk in Africa, more people are adversely affected. Disaster events have substantially increased the economic loss of poor communities – so much so that the impact of disasters on the African continent has had a negative impact on sustainable
Development (Africa Union: 2006). The African Union claims that hydrometeorological hazards, such as floods, drought, windstorms, wildfire, and tropical cyclones have accounted for loss of life, widespread damage and economic loss and that in 2000 and 2001 almost 35 million people in Africa were affected by these disasters.

Furthermore, the International Strategy for Disaster Reduction (2008:4) predicts that drought will continue to be a major concern for many African communities. The frequency of weather and climate related disasters has increased since 1970 and the Sahel region and Southern Africa have become drier during the past three decades. Following this argument, in the future the African continent could face a reduction in water and this would impact on the agricultural sector. From an economic point of view, most countries affected by disasters have had their economic development severely interrupted. For example, the flood in Mozambique in 2000 displaced approximately 4,000 people in Maputo alone and destroyed the road network which linked the city with other provinces (Christie and Hanlon; 2001). The economic recovery took years to overcome. There is also the case of a volcanic eruption in 2002 at Mount Nyiragongo in Goma, in the eastern part of the Democratic Republic of Congo, which destroyed the tourist town of Goma. Another example is the droughts in Kenya and Ethiopia, which had a devastating effect on the agricultural production of these countries. There are many cases in the Sub-Saharan Africa the list is long.

2.1 West Africa

Adger and Brooks (2003: 27) argue that the Sahel drought of 1972 and 1973 was the culmination of a downward trend in rainfall that began in 1950, despite regionally high rainfall. By 1972, a large number of Sahelians had already suffered the effects of several years of drought. The only previous year in which the average rainfall for the entire region was similarly deficient was in 1913. Current information shows that the Sahel region is still experiencing floods, desertification and drought. It is also pointed out by World Health Organisation (WHO) (2004: 1) that the Sahel region continues to be affected by a range of natural disasters which have caused various health problems in the region.

For example, in 2004 there were a number of epidemic diseases which spread across West Africa such as cholera, yellow fever, meningitis, and HIV/AIDS. The WHO considers the proliferation of these diseases as a new configuration of hazards (UNDP: 2004). The reason is simply that these epidemics are decimating communities in Sub-Saharan African countries.

Furthermore, in 2001, Ghana experienced torrential rain, which caused widespread floods in the capital, Accra. More than 100,000 homes were destroyed. Roads in the city were under water; others were completely washed away (BBCNews: 2001). Moreover, Songsore et al (2008) maintain that floods in Ghana are more frequent in the rainy season but that flash flooding is prone to happen at any time. During the rainy season, between May/June and August, severe flooding of large areas of Accra has become a predictable seasonal occurrence. This situation has arisen because the capital was built on a flat terrain, and its drainage system is currently inadequate.

In 2007 there was a similar situation in the neighbouring country of Nigeria where floods destroyed housing and other infrastructure, especially in poor areas. Disaster events were registered in nine federal states of Nigeria, namely Lagos, Ogun, Plateau, Sokoto, Nasarrawa, Bauchi, Yobe, Borno and Kebi. Other factors that contributed to the flood problem were poor drainage systems in those states and an overflow of water from a dam, which caused a major impact (Red Cross: 2007).
The analysis presented by ENDA (2008: 198) shows that the West African region is associated with hazards such as drought, desertification, flood, spread of disease and various other hazards. These occur not only in West African countries but are also found in other parts of Sub-Saharan Africa. In addition, in 2004 and 2005, Mali, Niger and Senegal registered drought, all of which caused extensive economic loss.

Burkina Faso, like other countries of the West Africa sub-region faces similar hazards. According to the International Federation of Red Cross and Red Crescent Societies (2007: 1), in 2007 Burkina Faso registered one of its heaviest rainfalls, which caused havoc throughout the country. The government reported that over 40,000 people were severely affected and were forced to live in miserable conditions. Together with international organisations, the government intervened, but economic losses and damage to housing and other infrastructure was extensive. According to government sources in Burkina Faso, no less than 8,412 houses were damaged. It is unclear whether these houses were ever rebuilt. The observation is that West African countries are exposed to natural disasters virtually every year.

Another argument the paper suggested was that the growing incidence of hazards in the West Africa region could be linked to climate change. According to Nyong and Fiki (2005: 8) it is anticipated that climate variability and change in West Africa will have an overwhelming impact on agriculture and land use; the ecosystem and biodiversity; human settlements; diseases and health; hydrology and water resources. They suggest that the region should have a better mechanism in place to try to combat the effect of climate variability.

2.2 Central Africa

The countries of this region have also suffered similar hazards. Since 2006 the region has registered significant floods in most countries in Central Africa (Red Cross; 2008: 1). For example, according to Ayanji (2004: 4) in Cameroon the extensive and prolonged rainfall caused severe flooding in 2001. In the municipality of Limbe the heavy downpours destroyed not only large areas of agricultural land but also urban property and homes in the surrounding suburbs, especially dwellings inhabited by the poor. The floods thus had a direct and indirect impact on human, environmental, and economic losses.

The Republic of Congo experiences flooding virtually every year. According to the Red Cross Bulletin (2007: 1) Brazzaville, the capital city of Congo, registered torrential rain which caused flooding in the central city area in 2007. One reason for the flooding phenomenon is the situation of the city on the banks of the Congo River, the boundary between the Democratic Republic of Congo (DRC) and the Congo Republic. Another reason is the poor drainage in Brazzaville, which makes it very vulnerable to flooding.

The DRC is considered one of the countries most affected by floods. It is at the mercy of the Congo River, which crosses it from East to West. The flooding of the river presents a serious threat to riparian communities, including the 12 million inhabitants of Kinshasa, the capital. The water level of the Congo River has been increasing steadily. This is a threat that the DRC government needs to take very seriously because a combination of cholera (which is recurrent in the country) and floods would complicate the situation immeasurably (Red Cross Bulletin; 2007). Beside the flood situation in the western DRC, in the eastern part of the country there is also the danger of volcanic eruptions.
According to the United Nations Disaster Assessment and Co-ordination (2008: 3) the East African rift valley system is one of the most seismically active regions on the African continent. The Lake Kivu basin is among the most active areas in this rift and earthquakes frequently damage villages and towns situated there. The earthquakes also generate landslides on mountain slopes and hills surrounding Lake Kivu. Seismic studies and field observations indicate that since 1997 the Lake Kivu basin has become more active than usual. In 2007 the country experienced another earthquake registering 6.1 on the Richter scale, which struck the province of Sud Kivu (UNDAC; 2008: 3). Significant damage was caused in Bukavu, the capital city of the province and in surrounding districts. Other countries of the central Africa region such as Gabon, Central African Republic and São Tomé and Príncipe also registered floods and landslides. According to the Red Cross Bulletin (2007: 2), flood is registered as a disaster when occurring annually in these countries.

2.3 East Africa

The eastern part of Africa is recognised as one of the regions which has suffered severe drought for a number of years. Countries well known as being at high risk of drought conditions include Kenya, Ethiopia and Sudan. The drought has had a particularly negative impact on the poor because of lack of food. According to CRED (2009: 4) climatological disasters in the form of drought have claimed many victims in the eastern part of Africa, with more than one third of the population affected in Eritrea, Djibouti, and Somalia. Then too, Kenya has suffered drought conditions for the past decade. In 2000, it experienced one of its worst droughts in 37 years. According to IFRC (2005) the Kenyan government needed international assistance in terms of food supplies for more than 2 million of its people.

It is argued by Gadain et al (2005: 165) that an impact analysis of the El Nino flood event clearly shows that the Kenyan government is inadequately prepared to mitigate the adverse effects of such disasters. The government has neither a flood disaster management policy nor an institutional framework to monitor and manage flood related disasters. Floods registered a significant impact in the West Kenya region and destroyed crops over a wide area. The country also registered a high death toll at that time. In the wake of this disaster the Kenyan government decided to strengthen its disaster capacity, and placed a major focus on preparedness and risk management. In April 2009, the government realised that there was another severe drought in western Kenya where a pastoral community had lost many head of cattle and crops had failed. Most of the inhabitants of that part of Kenya needed government assistance.

Turning now to Ethiopia, according to the National Policy on Disaster Prevention and Management (1993: 2) this country is severely threatened by disasters induced by drought and other natural hazards. In the last 20 years, disasters have, in varying degrees, occurred every year. These have cost the Ethiopian government heavily in terms of both human lives and resources. The Ethiopian government is determined to take every possible precaution to eradicate these persistent droughts. This is why the government decided to draw up the National Policy on Disaster Prevention and Management.

The reality is that Ethiopia has faced drought conditions for decades. The areas worst hit have been on the border between Ethiopia-Djibouti, northern-Kenya, central and south Somalia and parts of Eritrea (Red Cross, 2006: 1). It is argued by UNDP (2004: 49) that Ethiopia shows high levels of vulnerability to drought and has recorded a growing number of droughts in the period 1980 to 2000.
The drought conditions in Ethiopia have a significant impact on food security in that country. It is argued by the International Red Cross Crescent (2006: 1) that as many as 11 million people are affected by drought in the wider Horn of Africa region. Food insecurity in Ethiopia has left almost 2.6 million people in need of emergency assistance. The worst hits are the pastoralist or agro-pastoralists in the southern and the southern east part of Ethiopia, where most communities are dependent on the fertility of the land. When there is a drought these people are forced to relocate to other areas where the land is relatively fertile. The cause of the drought in this region is a scarcity of rain. Ababe et al (2008: 2) argue that of those who are in immediate need of assistance, 69% reside in critically affected pastoral and agro-pastoral areas of the Afar region. Although the Ethiopian government has already established a policy on disaster prevention and management to deal with the problem of disasters, the reality is that the country still faces natural hazards every year. The impact of natural disasters as result of severe hazards drains the economy of the Ethiopian government. Ideally, the government should have a financial reserve to solve this problem.

The situation in Sudan is not substantially different from that in Ethiopia, which has faced drought and flood hazards for a long time. Sudan has registered drought for two decades. According to Telku, Braun and Zaki (1991: 16) Rainfall levels have declined in Sudan during the past three decades: mean annual rainfall declined by 6.7% between 1960–69 and 1970–79, and by 17.7% between 1970–79 and 1980–86. Drought has had severe consequences for the poor, and particularly those in the northern region of Sudan, many of whom faced hunger and even starvation. The low rainfall also had a negative effect on crop production, which dropped sharply.

The same authors argued that a 10% drop in annual rainfall resulted in a decrease of 7.3% and 3.0% in sorghum and millet production respectively. A marked drop in rainfall levels at the end of 1970 meant that drought conditions became even worse. Hulme (1984: 271) has shown that on the basis of observed rainfall data in the arid zone of Sudan, the years from 1979 to 1983 were as dry as the 1969–73 period. Following the same argument, the International Federation Red Cross Red Crescent (2001: 1) noted that severe drought was reported in the western and the central parts of Sudan which affected at least 900 000 people, and that 600 000 people were at risk of famine.

Sudan has also experienced severe flooding in past years. In 2007 the Sudanese government registered torrential rain across the country and the Nile and other rivers burst their banks in eight Sudanese states, resulting in widespread damage. According to an assessment of the situation by the government and to reports which appeared in the media, more than 30 people were killed, 100 were injured and more than 25 000 houses were destroyed by the floods. Villages were submerged and the raging floodwaters caused extensive damage to infrastructure, including roads and bridges (IFRCRC, 2007: 1). The analysis provided in this article indicates that natural hazards still take place in virtually every country on the Africa continent. The relevant governments should be the main role player in attempts to offset these tragedies.

2.4 Southern Africa

Like its counterparts to the north, the Southern Africa region also faces the impact of natural hazards. In South Africa’s Western Cape province wildfires occur annually and the threat of natural hazards is frequent in many other countries in the region. Research indicates that southern African countries have suffered at least two debilitating droughts, triggering serious water-related imbalances and causing loss of crops. The shortage of water also led to loss of livestock, wildfires, famine and outbreaks of disease. Furthermore, the consequence of drought in
the 1994 and 1995 season caused a decline of cereal production by 35% compared to the previous years (Southern Africa Environment Outlook: 2008). Similar circumstances were experienced in countries such as Malawi, Zambia and Zimbabwe.

Further, the region also registered floods. Some analysts have linked the impact of floods to climate change. It is argued by Singh (2006: 13), for example, that climate change has a direct impact on rainfall. Scientists forecast that in the coming years, countries in the Sahel region will receive increased rainfall and the threat of floods will increase while southern Africa is likely to encounter persistent drought.

In March 2000, flood caused by cyclone El Nino impacted heavily on the Southern Africa region, particularly in Mozambique, where more than 900 people were declared dead. As regards the threat of drought, Unganai (1994: 1) reports that droughts have become a regular occurrence in southern Africa and also one of the most debilitating natural disasters in the sub-region. In fact, it is becoming increasingly unusual for drought conditions not to be experienced somewhere in southern Africa each year. This hazard impacts most heavily on the region’s agricultural sector, which plays a major role in the economics of the sub-region.

An analysis of statistics on droughts and floods in the Southern Africa region is presented below in the form of table. This is to illustrate that the entire region has registered severe natural hazards over an extended period of more than 150 years.

It suggests that most countries in the region have recorded natural disasters. Droughts and floods were the most frequent natural hazards. The table shows that virtually every year a natural hazard of some kind was registered. On the basis of this information it can be predicted that similar natural disasters will continue to occur in southern Africa. The consequences of these hazards obviously differ in each country, depending on the magnitude of the particular disaster.

Table: 1 Chronology of droughts and floods in southern Africa

<table>
<thead>
<tr>
<th>Year</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>1820–1830</td>
<td>This was a decade of severe drought throughout Africa.</td>
</tr>
<tr>
<td>1844–1849</td>
<td>Southern Africa experienced five consecutive drought years.</td>
</tr>
<tr>
<td>1875–1910</td>
<td>There was a marked decrease in rainfall in southern Africa, and 1910 experienced a severe drought.</td>
</tr>
<tr>
<td>1921–1930</td>
<td>There was a severe drought throughout southern Africa.</td>
</tr>
<tr>
<td>1930–1950</td>
<td>Southern Africa experienced dry periods alternating with wet seasons and in some years the rains were very good. The 1946–47 seasons experienced a severe drought.</td>
</tr>
<tr>
<td>1968–73</td>
<td>This 6-year period was dry across the entire region. Some records show a severe drought in 1967. The equatorial region (including the DRC) experienced above-average rainfall.</td>
</tr>
<tr>
<td>1981–82</td>
<td>Severe drought in most parts of southern Africa.</td>
</tr>
<tr>
<td>1982</td>
<td>Most of sub-tropical Africa experienced drought.</td>
</tr>
<tr>
<td>1983</td>
<td>This year saw a particularly severe drought for the entire African continent.</td>
</tr>
<tr>
<td>1986–87</td>
<td>Drought conditions returned to the region.</td>
</tr>
</tbody>
</table>
Natural disasters in Africa

<table>
<thead>
<tr>
<th>Year</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1994–95</td>
<td>Many countries in the SADC were hit by a severe drought, surpassing the impacts of the 1991 to 1992 drought in some regions.</td>
</tr>
<tr>
<td>1999–2000</td>
<td>Cyclone Eline hit the region and widespread floods devastated large parts of the Limpopo basin (southern and central Mozambique, southeastern Mozambique, parts of South Africa and Botswana).</td>
</tr>
<tr>
<td>2001–2002</td>
<td>Southern Africa experienced abnormally high rainfall and disastrous floods causing damage to infrastructure, loss of life and property.</td>
</tr>
<tr>
<td>2005–2006b</td>
<td>Parts of southern Africa received heavy rains resulting in flooding causing considerable structural damage, destroying schools, crops, telecommunications and roads.</td>
</tr>
<tr>
<td>2007c</td>
<td>Cyclone Favio hit Madagascar and Mozambique and affected parts of Zimbabwe. Flooding killed about 40 people and affected more than 120,000 people in Mozambique. Nearly 90,000 people had to be evacuated. More than 700 cases of disease were reported among flood victims. Parts of Angola, Namibia and Zambia were also struck by devastating floods in early 2007.</td>
</tr>
<tr>
<td>2007–2008d</td>
<td>Early season floods were recorded in Malawi, Mozambique, Tanzania, Zambia and Zimbabwe, affecting more than 190,000 people by January 2008.</td>
</tr>
</tbody>
</table>

Source: Southern Africa Environment Outlook: 2008

3. Statistical data analysis

It is important to clarify that the available statistical data has been reorganised for the purposes of this article. These figures do not stipulate particulars of the specific disasters that occurred in each country in Africa for the past 30 years. Some countries experienced more natural disasters than others. Another important point that must be made is that this present analysis includes the North African countries. In its initial form, the disaster statistics from the Centre for Research on the Epidemiology of Disasters (CRED) at the University de Louvain in Belgium, only discussed disasters in sub-Saharan Africa. Figure 1 below presents a breakdown of the natural disasters that occurred in Africa for the 30-year period from 1974 to 2003.

Figure 1: Natural disasters in Africa: 1974 to 2003

<table>
<thead>
<tr>
<th>Year</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1994–95</td>
<td>Many countries in the SADC were hit by a severe drought, surpassing the impacts of the 1991 to 1992 drought in some regions.</td>
</tr>
<tr>
<td>1999–2000</td>
<td>Cyclone Eline hit the region and widespread floods devastated large parts of the Limpopo basin (southern and central Mozambique, southeastern Mozambique, parts of South Africa and Botswana).</td>
</tr>
<tr>
<td>2001–2002</td>
<td>Southern Africa experienced abnormally high rainfall and disastrous floods causing damage to infrastructure, loss of life and property.</td>
</tr>
<tr>
<td>2005–2006b</td>
<td>Parts of southern Africa received heavy rains resulting in flooding causing considerable structural damage, destroying schools, crops, telecommunications and roads.</td>
</tr>
<tr>
<td>2007c</td>
<td>Cyclone Favio hit Madagascar and Mozambique and affected parts of Zimbabwe. Flooding killed about 40 people and affected more than 120,000 people in Mozambique. Nearly 90,000 people had to be evacuated. More than 700 cases of disease were reported among flood victims. Parts of Angola, Namibia and Zambia were also struck by devastating floods in early 2007.</td>
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</tbody>
</table>

Source: CRED

TD, 6(2), December 2010, pp. 478 – 495.
Figure 1 shows the spread (expressed as a percentage) of natural disasters in Africa for the past 30 years. The findings show that 41% of these disasters occurred in the East Africa region, while 24% were in the West Africa region. In the same 30-year period, 14% of natural disasters took place in the North Africa region. Southern Africa recorded only 11% of the continent’s natural disasters, while the region with the lowest percentage, is central Africa with 10%, although this region is not without risk of such disasters. Eastern African countries are by far the worst off in terms of the number of disasters registered on the continent. The data indicates that for the past 30 years, 379 natural disasters occurred in that part of Africa. By way of comparison, southern Africa registered 101 disasters. However, it is clear that each region on the continent faced a number of hydrometeorological hazards.

Figure 2 provides a graphic representation of the five regions showing the comparable geographic incidence of hydrometeorological disasters for the past 30 years.

**Figure 2: Hydrometeorological disasters in Africa: 1974 to 2003**

![Hydrometeorological disasters in Africa: 1974 to 2003](image)

Source: CRED

According to Figure 2 above the readings for hydrometeorological disasters that occurred in the period 1974 to 2003 in eastern Africa, western Africa, northern Africa, southern Africa and central Africa are 41%, 25%, 13% 11% and 10% respectively.

The next figure (Figure 3) provides an indication of the geological disasters that took place on the African continent in the same 30-year period.

**Figure 3: Geological disasters in Africa: 1974 to 2003**

![Geological disasters in Africa: 1974 to 2003](image)

Source: CRED
In Africa, geological disasters are less prevalent than other forms of natural disasters. The northern African countries are the most at risk with a reading of 38% as compared to 31% in eastern Africa and 17% in central Africa. Western and southern Africa both recorded the same incidence (7%) of the continent’s geological disasters over the same 30-year period.

**Figure 4: Drought hazards in Africa: 1974 to 2003**

![Diagram showing drought hazards in various regions of Africa: North Africa (28), West Africa (101), Central Africa (31), East Africa (128), Southern Africa (45).]

Source: CRED

Each region of the continent recorded a fairly high number of droughts in the 1974 to 2003 period. Reading from the left of Figure 4, and beginning with the North Africa region, 28 cases of drought were recorded. West Africa was considerably worse off with 101 cases while in central Africa there were 31 cases reported. The East Africa region was severely stricken by drought in the 30 years of statistical analysis and shows by far the highest incidence of this natural disaster. There were 128 cases of drought in that part of the continent. However, in the SADC region, the number dropped by more than half to 45 cases of drought for the same period.

**Figure 5: Flood hazards in Africa: 1974 to 2003**

![Diagram showing flood hazards in various regions of Africa: North Africa (7), West Africa (9), Central Africa (4), East Africa (16), Southern Africa (3).]

Source: CRED

The incidence of flooding increases every year on the African continent. The 30 years of data analysis in this research is aimed at presenting a clear picture of the current situation on the continent. The North Africa region experienced 74 floods in the evaluation period. This

incidence of flooding continues until today. In western Africa the number of floods was far higher, reaching 98 cases, but in central Africa there were only 47 cases. By far the highest incidence of this hazard was in the eastern African countries where 162 cases were recorded in the past 30 years. In the SADC region only 31 cases of floods were experienced, making southern Africa the region least affected in comparison with the rest of Africa.

**Figure 6: Volcanic related disasters in Africa: 1974 to 2003**

![Volcanic related disasters in Africa: 1974 to 2003](image)

**Source:** CRED

Based on the available statistics, volcanic eruptions on the African continent are limited in number. Figure 6 demonstrates that there were no volcanic related disasters in northern Africa in the 30 years under review, while in western Africa only one case was recorded.

The number increased sixfold as far as the Central Africa region was concerned, the reason being that volcanic eruption is relatively common in the DRC and Cameroon (UNDAC: 2008). In eastern African countries only four cases of volcanic disasters occurred, while in southern Africa no volcanic eruptions were recorded in the survey period.

**Figure 7: Disasters with economic damage in Africa: 1974 to 2003**

![Disasters with economic damage in Africa: 1974 to 2003](image)

**Source:** CRED

The economic impact caused as a consequence of natural disasters in the period 1974 to 2003 differs from one African country to another. In the North Africa region 26 such cases were
recorded. Figure 7 does not identify the specific countries, which were affected but it is clear that East Africa (58) is particularly vulnerable in this regard, followed by West Africa (43) North Africa (26) and southern African (16) cases. The Central Africa region recorded only 8 instances where natural disasters caused economic damage but this is linked to the limited number of natural disasters that occurred in the region.

3.1 Key findings on statistical data
The analysis presented in this data evaluation on natural disasters in Africa indicates that many countries on the continent faced economic losses. Some of these losses could not be recovered because of slow economic growth and other internal social and political issues within the countries concerned.

A crucial effect on the increase of hazards in various countries in Sub-Saharan Africa is climate change. This problem of disasters cannot be discussed without making reference to changes in climate. When analysing disaster events that took place in the last 30 years in different regions of the continent, there is a strong correlation between disaster and climate change. According to ISDR (2008: 5) climate change affects disaster risk in two ways. Firstly because it increases weather and climate hazards, and secondly, because climate change increases the vulnerability of communities to natural hazards, particularly through eco-system degradation, reduction in water and food availability and changes in livelihoods.

In addition, Kreimer, Arnold and Carlin (2003: 12) argue that the economic losses suffered do serious damage to developing countries and those without post-disaster contingency plans; they are forced to divert funding from development to disaster relief, stunting their economic growth even more. They also claim that there are countries which do not even try to alleviate the risk of natural disasters, opting instead to demand that the international community bail them out.

The statistical analysis of available data for the 30-year period shows that the East African region of the continent is most heavily impacted by natural disasters. It is argued by United Nations for Environmental Programme (UNEP) (2008: 1) that the ENSO floods in 1998 in East Africa resulted in human suffering and death, as well as extensive damage to infrastructure and crops in Kenya. However, this analysis does not focus on Kenya, because the data shows that other countries in the region, such as Sudan, Ethiopia, Somalia, and Eritrea to name but a few, also registered serious natural disasters during the same period.

Another region which recorded a high incidence of various types of natural disasters is western Africa. The literature shows that some of the countries in this part of the continent, for example the Sahel region (Nigeria, Ghana, Burkina Faso, Mali and Benin) began to experience severe drought and other natural calamities such as lack of water resources, destruction of crops etc. before 1974. Furthermore, this situation has also caused the outbreak of various diseases in the region and natural disasters continue to impede development.

North Africa is a region that was not initially included in the research. When this study was first envisaged it focused on Sub-Saharan African countries. However, as the study progressed it became evident that while not as vulnerable as East Africa, North Africa is indeed at risk particularly as far as the total number (expressed as a percentage) of natural disasters is concerned (Figure 1, where it is the third highest reading); geological disasters (Figure 3); flooding (Figure 5); and economic loss (Figure 7).
Southern Africa is in fourth position (of the five regions) in terms of overall percentage of natural disasters occurring in Africa over the 30 years covered by this survey. This needs to be explained. Some of the countries in the region faced devastating disasters, as did Mozambique in the floods of 2000. It was the only country in the SADC region that was hit by this disaster. However, countries such as Malawi, Zimbabwe and Zambia experienced severe drought a few years earlier as shown in Table 1. The impact of these hazards led to severe economic loss, which in turn reflects on southern Africa’s fourth standing (Figure 1) finding solutions in order to recover from such hazards is extremely difficult for many of these countries.

The Central Africa region faced the lowest percentage of natural disasters overall in the 30 years of statistical evaluation (see Figure 1). When compared with other regions on the continent. However, it recorded the highest number of volcanic eruptions, specifically in the Democratic Republic of Congo and Cameroon. The effects of this hazard in these two countries was (and remains so) exceptionally severe in terms of destruction of infrastructure and human suffering.

3.2 The consequences of climate change

The increased frequency of disasters in Africa is a consequence of climate change on the continent. According to CRED (2009: 16), in 2008 Africa registered a 20% increase in global disaster events. The major type was climate induced disaster, most countries being affected by severe drought, which claimed more than 14 million victims. Following the analysis in this article it could be argued that in the long run many countries will be affected in terms of agricultural production. The ISDR (2008: 4) predicts that by 2020 agricultural yields in some African countries could be reduced by as much as 50%. By 2080, areas of arid and semi-arid land in Africa might increase by 5–8%.

Figures 4 and 5 indicate that the East African region tops the list in terms of natural disasters in Sub-Saharan Africa. This is closely linked to climate change in the region. Hulme et al (2001: 4) claim that projection of climate change readings suggest that East Africa will experience warmer temperatures. They predict that by 2050 there will be a 5–20% increase in rainfall in the December to February season and a 5–10% decrease in rainfall from June to August. This situation will have significant consequences for water availability and drought conditions in that region.

These predicted climate changes and the variability of rainfall will impact heavily on the agricultural sector in East Africa because rain plays a major role in crop production. According to the International Food Policy Research Institute (IFPRI) (2004), agriculture contributes 40% of the region’s domestic product (GDP) and provides a livelihood for 80% of the population of East Africa. Increased occurrence of floods and drought is likely to decimate the agricultural sector in a number of countries in the region and famine will continue to wreak havoc.

The West Africa region ranks second highest in terms of disaster risk on the continent (see Figure 1). Again, this is linked to climate variability. It is argued by Madiodio et al (2004) that West Africa is highly vulnerable because some of its physical and socio-economic characteristics predispose it to be disproportionately affected by the adverse effect of climatic variations.

Moreover, the ISDR (2008) maintains that Africa is vulnerable to the effects of climate change because of multiple stresses and the continent’s low adaptive capacity, arising from widespread poverty, and weak civil administration. These circumstances are also linked to conflict such as civil wars. All these issues impact negatively on the occurrence of natural disasters on the African continent and the ability to cope with them.
3.3 Government strategy to reduce disaster risk in Africa

At this point the article suggests certain strategies to help African governments deal with natural disasters. This is especially relevant for those governments who are not as yet applying a mechanism to mitigate disaster. It has been pointed out that 30 years of statistics indicate that natural disasters occur in all regions of the continent so all country’s face some risk. The paper suggests three points which every government should consider:

- Strong political governance;
- Internalisation of the responsibility; and,
- Specialist capabilities.

3.4 Strong political governance

It is recommended that governments should employ a skilled administrator on disaster risk management in all levels of government structures. This means senior public officials who have expertise in disaster risk reduction must be appointed to manage the disaster risk reduction department. According to UNDP (2004: 75) the heart of political governance implies participation, rule of law, transparency, responsiveness, consensus orientation, equity, effectiveness, efficiency, accountability and strategic vision as solutions for sustainable development and disaster risk reduction.

It is also argued by ISDR (2008:10) that government should develop a coordinated national mechanism. This should be implemented by calling an interdepartmental and national consultation forum with those involved in disaster risk reduction and climate change. What is required here is a government policy to be applied at different levels of government when disaster strikes. For example, in Tanzania, according to Robert et al (2009: 145) in order to minimise hazards in urban areas, in both formal and informal settlements, disaster risk reduction measures should be an integral part of the policies, law and planning procedures. Once institutionalised, these polices should be consistently enforced.

Furthermore, by political governance is meant that local community participation is essential in terms of intervention. Government should be able to take private participation into consideration.

3.5 Internalisation of responsibilities

African countries should be able show responsibility when natural disasters occur. Governments should offer strong intervention depending on the scale of the disaster. Some countries depend on external assistance from international non-governmental organisations in developed countries. The reason for internalised responsibility is to permit budgeting. A major problem is that some countries do not have the resources. In other words, a crisis budget may not be available.

Governments need to develop mechanisms to collect data relating to disasters to assist experts with a clear picture of the different hazards that threaten their particular country. This database would then be available to assist in terms of planning.

3.6 Specialised capabilities

Disaster risk reduction should become a ministerial function rather than simply a minor department as they exist in most African nations. In view of the increase of natural disasters on the continent it is each government’s responsibility to put in place a specialised capacity particularly in central government and local administration. Mehrotra et al (2009: 11) explain
that capacity here refers to the quality of institutions at various levels of government – local, regional, and national and within different departments. A lack of capacity impacts negatively when disasters occur.

**Conclusions**

This article demonstrates that natural disasters are on the increase in Africa and that governments must act; each region has recorded natural disasters of varying degrees and frequency. Research shows that climate-related disasters have increased by 20% in the period 2001–2008 on the continent. All African countries must therefore play their part by including disaster risk reduction as far as natural disasters are concerned.

The West Africa region has demonstrated for years that it is at very high risk indeed in this regard. It is one of the highest in terms of natural disasters registered in Sub-Saharan Africa. These natural hazards adversely affect a large number of poor communities and the damage in terms of economic loss runs into billions of dollars. But as yet, there is not an effective recovery plan; this is one of the biggest hurdles in that part of Africa.

The Central Africa region has recorded fewer disasters than other regions in Sub-Saharan Africa. The major difference is that here, disaster related to volcanic eruption has the highest incidence. Economic losses are also higher because of extensive devastation that volcanic disaster can bring.

The findings in this statistical analysis show the East Africa region is most severely affected in terms of natural disasters. Data proves that over the past 30 years most eastern African countries have been hard hit by these hazards.

Even today, natural hazards continue to cripple East Africa. There is currently a drought in Kenya that has led to the displacement of many communities. Moreover, other nations in the region face similar risks and other hazardous situations.

The Southern Africa region has experienced fewest natural disasters. In 2000 Mozambique was threatened by crippling floods and severe natural hazards have impacted on Zimbabwe, Zambia, Malawi, and South Africa. The agricultural sector, and thus food supply for the poorer populations, particularly those in the rural areas, was most affected.

Finally, the study demonstrates that natural disasters in Africa have a highly negative impact on the country concerned, seriously undermining sustainable development.

African countries should aim to mitigate such problems. Governments must insist that precautions be taken and sound management policies be implemented. This is vital to the development of the continent.

**References**


Impact of a commercial destocking relief intervention in Moyale District, Southern Ethiopia. Overseas Development Institute. Published by Blackwell Publishing.


*TD, 6(2), December 2010, pp. 478 – 495.*


International Federation of Red Cross and Red Crescent Societies (IFRC) 2007.

Democratic Republic of the Congo: Floods in Kinshasa. DREF bulletin No MDRCD002. Published by IFRC Geneva.


International Federation of Red Cross and Red Crescent Societies (IFRC) 2006. Ethiopia: Floods appeal No MORET 003. Published by IFRC Geneva.


www.bbc.co.uk. 2001 June. Flood hit Accra causing 10 deaths and forcing 100,000 to flee their homes. Access date: 15/03/2009.
Linking relationships between scientists, policy-makers and stakeholders in water management


Sustainable water management is now the focus of concern for many different groups in society, including scientists, politicians, water services managers in the public and the private sectors, the public, non-governmental organizations and industrialists. Their concerns are diverse, ranging from, *inter alia*, the effects of increasing demands on the quantity, quality and economic uses of water, as well as new challenges brought about by global issues such as more sophisticated needs by millions more people at many more localities, urbanization, over-extraction of water from underground aquifers and climate change. History and experience have shown that governments can not do it alone anymore due to the varying diversity and complexity of the water related services in especially the developing world out there.

In this book the following objectives, *inter alia*, are identified to successfully address and manage the aforementioned challenges:

- The identification and recognition of the ability of a ‘leading champion’, institution or forum which can facilitate the involvement of all stakeholders;
- bring about optimum visibility, transparency, access and participation at all administrative and sectoral levels, including public policy-making and its implementation; and
- in the final instance integrate the knowledge and experiences from the scientific, policy and stakeholder perspectives in a more efficient manner.

Integrated water resource management (IWRM) has been proposed as a way to address the aforementioned predicament and challenges. Unfortunately a quest to improve the nature and extent of integration needs a deeper understanding of exactly why this integration often proves so difficult to realize, as well as examples of how different groups might be assisted to really work closer together in a more effective, efficient, economic and equal manner. In this book the authors attempt and succeed to do just that, namely, to analyze what integration in water management is about, to unravel some of the main obstacles to this quest to improved integration, and also to provide some good examples from different parts of the world on how integration can be improved.

The authors of the book succeed in identifying the major role-player perspectives from the ‘scientists’, the public policy-makers and policy-doers, and lastly all the remaining stakeholders’ point of view. In order to make the needed integration manifest they identify the need for fully visible, transparent and accessible knowledge and information which can only be realized with improved communication. They also identified the place and role of ‘twinning’ (the deliberate development of permanent or semi-permanent ties between researchers and practitioners). The
Book review

The research findings on the aspect of integration as key challenge in sustainable water management by means of trans-disciplinary research, are also enlightening and the identified and presented ‘lessons learned’ and proposed reflections throughout the book are valuable contributions and pointers to fellow researchers and managers in the water services management environment.

It is clear from the book that the authors are masters in the organizational theory terrain in their exposition and highlighting of for example generic aspects from the four case basins of the STRIVER research project regarding aspects such as participation, stakeholder participation per se, social learning, networks and governance and then especially their willingness to come up with very understandable recommendations for improved water services management.

The last chapter of the book gives a very useful summary of common features with reference to the nature and extent of the SPSI processes in the four basins. From these a number of general recommendations concerning methods to improve SPSI in a holistically and integrated water services management quest, are presented which, to me as the novice reader and water services management researcher, is the ‘real cherry on top…’

It can be concluded that the authors of this book can be congratulated on the way in which they identify and demonstrate the fundamental sustainable development relationship between scientists, policy-makers, stakeholders as well as the place and role of the facilitating communication, twinning and collaborative interaction. This they did by conveying a breadth of information in a highly accessible and readable text. The book deserves warm recommendation to as wide an audience as possible.

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