

Good hope in chaos: Beyond matching to complexity in career development

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ABSTRACT

The significance of both higher education and career counselling is outlined. The predominant matching paradigm for career development service delivery is described. Its implications for reinforcing the status quo in the South African community, are identified and questioned. The Chaos Theory of Careers (CTC) is suggested as an alternative theoretical perspective which incorporates both stability and change using convergent and emergent perspectives. The counselling implications of the CTC are adumbrated in terms of confronting uncertainty by moving from closed to open systems thinking; accepting risk; not fearing failure and; negotiating uncertainty through shiftwork paradigms. An example of the application of the provision of career development services to a disadvantaged group is also described. It is concluded that a changed theoretical framework for the provision of career development services can provide a map and a strategy for incorporating stability and change as a basis for social reform and good hope for the nation's future through higher education.

KEYWORDS: CHAOS, THEORY, MATCHING, UNCERTAINTY, COMPLEXITY, CONTROL

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As economies develop and grow their social organization, means of production, consumer markets and labour force all become more complex. This in turn produces inter alia, a diversification of needs for resources including infrastructure, technology and workers. In particular workers require both new skills – from physical and manual to intellectual and conceptual; and a broader range of skills – from practical and procedural to abstract and imaginative. Production broadens from agriculture and manufacturing to services and information. These new industry sectors typically require increased levels of skills and training in complex and often theoretical problem solving. Such teaching and skills development is provided on a broad scale by institutions of higher education.

The importance therefore of higher education as part of the attempt to meet the challenges of such changes, can hardly be overstated. Insofar as higher education institutions exist to train individuals for the workforce, they face such labour market changes as the creation of new occupations, the changing nature of existing occupations and the changing ways in which work is structured and carried out. In this sense, access to higher education represents a major gatekeeping process toward economic and social advancement, particularly for those who have in the past been marginalised socially and economically.

While such changes may represent new opportunities for individuals seeking to undertake or resume higher education, they may also constitute major sources of confusion and anxiety. Change, complexity and cost of education may make individuals worried about the choices they make and the long-term consequences of poor choices such as disenchantment with a course, inability to handle the course content, lack of employment possibilities with the resultant qualification, the need for supplementary training and so on. It is for reasons such as these - societal, economic and

personal - that career counselling has been established and expanded in virtually all developed economies. Moreover, if the origins of this profession are interpreted as having commenced with Frank Parsons in Boston in 1905, then career counselling as a profession has always had some emphasis on social justice and the uncovering and utilising of individuals' motivation and talent, as distinct from advancement based merely privilege and financial advantage. In recent times (Blustein, 2005; Stebleton, 2007) the career development profession has begun to reaffirm its role as an advocate for the disadvantaged. For all these reasons career development counselling is likely to have a vital role in helping the South African population and the nation as a whole, to continue its progress toward increased equality, progress and prosperity.

The matching model of career counselling

According to Stead and Watson (1998) most career counselling in South Africa is based on a matching paradigm which has its foundations in positivist science. Well established examples of this model are the theories of Holland (1997) and the work adjustment approach of Dawis and Lofquist (1984). Fundamentally there are typically three or four components to matching paradigms:

1. Knowing about yourself including skills, interests and personality
2. Knowing about occupations including work demands and rewards
3. Decision making – finding the best match between 1. and 2.
4. Implementation – training for occupation entry and/or job search.

Such a paradigm seeks to be objective in the positivist tradition by using psychometric methods to provide the data for self knowledge in terms of tests of abilities and preferences and for occupations in terms of labour market research and job analysis. It is usually somewhat caricatured as directive and prescriptive in decision making process with authors such as Patton and McIlveen (2006)

reiterating the kinds of objections that Rogers had originally formulated. Rogers (1946) expressed the view that testing results in encouraging dependence on the expert; fostering a loss of client responsibility for action and; failing to promote clients' own attempts at self understanding. While there may be some merit in such arguments they pertain more to the way psychometric testing is used rather than to testing per se. Alternative models for the use of testing have been extant for many decades such as Meyering's (1968) client centred approach or the integrative testing approach (Pryor, 1986), which address these issues.

The weakness in the Matching Approach is not its use of psychometric instruments but rather the positivist paradigm on which it is founded. Positivism characterises the scientific investigation of reality as:

1. Reductionistic – phenomena have to be broken down into their component parts and each must be analysed separately;
2. Premised on cause and effect – finding the antecedents and consequences of phenomena is the primary aim of this approach. Linear forms of causality are the only ones investigated with the use of linear models of mathematics such as analysis of variance and regression;
3. Discrete – phenomena are usually purposely divorced from their contexts as in the laboratory, in order to study each individual aspect of a phenomena separately;
4. Predictable – being able to predict is viewed as the sine qua non of all investigation;
5. Quantifiable – the essence of reality is mathematics - a view still frequently espoused by physicists and cosmologists such as the String Theory proponents Greene (1999).

It would be foolish in the extreme to fail to acknowledge the immense contribution of the scientific endeavours founded on such assumptions and their consequent methods of experimentation and observation. However, this approach has one fundamental limitation – it simply does not

correspond with reality and the way the real world works. For the sake of trying to understand phenomena this approach inevitably simplifies reality in order to observe or manipulate it in the quest for identifying causal relationships. In this process what is lost is the complexity, the changeability and the connectedness of reality. Phenomena in the real world do not exist in a vacuum or laboratory but are contextualised in the messy and complicated milieu of the world as we experience it. Everything is linked to everything else (Barabassi, 2003). Change is not always linear (Lorenz, 1993). Causality and prediction are at best probabilistic rather than deterministic (Prigogine, 1997). The systemic effects of nature such as emergence, undermine simplistic explanations of phenomena (Morowitz, 2002). The quest for simplicity in the positive paradigm typified in the Occam's Razor dictum, collides with the hard reality of the complexity of the real world. Indeed it may not be being too prescient after the event to recognize, that many of the biggest problems facing us all, such as world poverty and global warming, are at least partially consequences of viewing reality in simplistic terms and failing to recognise the systemic dimensions of nature and the non-linear impact of our interactions with it. How does this relate back to the Matching Paradigm in career development?

The Fundamental Limitation of the Matching Paradigm

The matching paradigm's major limitation is its exclusive focus on the stability of phenomena. It assumes that both the characteristics of the person and of various occupations are stable and do not change as a consequence of the interaction of the two. In this sense it could be understood as reinforcing the status quo in its assumption that what has been the case in the past up to now, will be the case on into the future. Further it is based on the supposition that what is currently available will continue to be available and what is there now is all that there is now or will be in the future. Such a model does not question the status quo in terms of its malleability, equity or sufficiency.

Therefore it favours those with resources and those with the capacity to utilise those resources in the implementation of the results of the matching process. In doing so this reinforces that status quo since those in positions of privilege are more likely to take the most advantageous occupation options while those with few resources fail to secure access to sufficient knowledge and resources to rise above their current disadvantage.

The matching paradigm of career development could therefore be viewed as a pattern of thinking and acting which fears and neglects change in preference for order. Its proponents may even be encouraged by their subscription to it, to resist change especially when such change might have the potential to disadvantage themselves in the longer term. A preference for order and the status quo almost always favours ruling elites who seek to preserve the “old order” of their own power and control. It was this realisation in the early 1900s that galvanised Frank Parsons to recognise the potential of informed career decision making for the improvement in the financial and social welfare of individuals (Parsons, 1909). As a social reformer, Parsons appreciated that by improving individuals’ work prospects through more informed choices, that the inequities of opportunity within a society could be reduced. At the time his matching model was a major leap forward for those for whom no career development counselling had ever been available. However, the continued exclusive adherence to such a model has now meant that instead of developing opportunities for the poorest in a society, by neglecting the possibilities of change, it is more likely to confine them within the constraints of their current impoverished contexts.

An Alternative Model of Career Development: the Chaos Theory of Careers

From the foregoing analysis it should be clear that an alternative model or paradigm is required which confronts the realities of:

1. the complexity of influences on career development – especially differences of societal subgroups and cultures;
2. the potential for both individuals as well as occupations to change – especially the possibility and the capacity of decision makers to construct their careers;
3. the interconnections between influences on career development – especially as these have become increasingly apparent in a globalised world environment.

However, at the same time the positive aspects of matching, stability of patterns of behaviour and occupations also should be included in a new model. There is a temptation to jettison the advances of the past through psychometrics, occupational classifications, decision making models and strategies of choice implementation, in preference for postmodern theoretical approaches. This is reactionary in the extreme. It represents another attempt at the oversimplification of complexity analogous to that of the Matching Approach it seeks to subvert.

Matching-based career development theories as outlined in Holland (1993) or Dawis and Lofquist (1984). display the evidence of their positivist foundations. They tend to focus on a small range of variables believed to be relevant to career decision-making and development and to emphasize career decision-making as a rational and controlled process of logical deduction. Along with this is an almost exclusive emphasis on the decision maker as though he or she was the only relevant career choice influence. This has resulted typically in oversimplifying decision-making as a static matching of individual characteristics with occupations' demands and rewards. Such theories leave out or fail to take into account adequately four crucial contemporary elements in career development and choice (Bright & Pryor, 2005; Pryor & Bright, 2007ab). First, there is a failure to incorporate the sheer complexity and range of potential influences on people's careers - in particular, the influences of objective and subjective context. Second the dynamic, interactive and adaptive nature of human functioning in the world and in making career decisions and taking career

action is frequently neglected. Third, the tendency of humans to construe and construct experiences and perceptions into meaningful and often unique interpretive structures for understanding themselves, their experiences and their world is acknowledged more often than actually incorporated into most contemporary formulations. Fourth, that human experience and career development in particular, tends to be laced with unplanned and unpredictable events and experiences which are often crucial and sometimes determinative in the narrative of people's careers, Such events as influences on career development are still largely uncharted territory for most theories or inserted in to them in an ad hoc manner (Bright, Pryor, Chan and Rijanto, in press).

In his discussion of career development issues for African immigrants to the USA Stebleton (2007) identified chaos theory as a promising theoretical framework from which to perceive and conceptualise the experience of Africans. The Chaos Theory of Careers (Pryor & Bright, 2007b) was specifically developed to address the shortcomings of the oversimplification of reality as typified in the closed-systems thinking of positivist approaches: it characterizes career development in terms of a complex array of variables; it is dynamic and subject to continual and sometimes unpredictable non-linear change; it incorporates both realist and constructivist epistemology and incorporates uncertainty (unplanned events) as a central defining feature of the system – chance events in this theory are the norm not the exception. The perception we typically have of chance events being relatively infrequent reflects biases in our processing of such events rather than their scarcity (Bright et al, in press). Pryor and Bright (2007a) have adumbrated the Chaos Theory of Chaos (CTC) in which complexity, change and connection are integrated with traditional career concepts of stability, matching and choice. The CTC views reality in terms of complex dynamical systems. Complex dynamical systems are open systems in which a potentially wide range of influences develop and aggregate into coherent wholes which interact both endogenously and exogenously.

In career terms individuals are impacted potentially by a multitude of influences including those traditionally focused upon such as abilities, interests, values and traits as well as health, age, gender, culture, location, emotionality, family of origin, cultural expectations, socio-economic status, labour market fluctuations, transport options, education levels and so on. Due to such complexity the potential for change in the interaction among such career influences is both likely and unpredictable. The unpredictability of change in such systems gives rise to the uncertainty which all individuals experience at least some of the time. How might this new vision of career development be integrated into a matching paradigm approach which will allow for a new vision of career development which incorporates both the stability of the status quo with the opportunities of unpredictability and change?

Convergent and emergent perspectives

The Counselling Quadrant (Bright & Pryor, 2007) is a way of characterising client issues that highlights the relationship between the convergent and emergent perspectives on assessment. Convergent qualities are those that are shared between many people such as height, Holland codes (Holland, 1997), and declarative knowledge. Convergent knowledge is common to people and circumstances. It is predictable and replicable. Emergent qualities arise from the complex interaction of the many and varied factors that influence career behaviour (Bright, Pryor, Wilkenfeld and Earl, 2005; Patton & McMahon, 1999). Emergent qualities cannot be predicted in advance but they can be clearly discerned once they have emerged (Kaufman, 1995). They are qualities that are unique to the individual and the ones that set them apart from other people. Emergent knowledge is neither predictable nor replicable.

The Counselling Quadrant highlights that there are different ways of knowing and avoids sterile debates about the superiority of either the convergent or emergent approach, instead highlighting that they are complementary and interdependent. The revolt against psychometric testing witnessed by some in the grip of post-modernism can be seen as an extreme preference for emergent knowledge and the associated techniques of narrative, pattern-making, collage, and parable. For instance gaining an appreciation of a client's individual narrative cannot be translated into social contribution such as employment without recourse to the use of convergent knowledge of matters such as the individual's abilities and knowledge on the one hand, and labour market and occupational classification knowledge on the other. Ignoring the convergent knowledge runs the risk of leading the client into a fool's paradise where expectations are not consonant with ability or availability. Extremely sight-impaired people cannot be airline pilots regardless of their personal story or ambitions.

Equally, it is a mistake to rely solely on convergent knowledge in career counselling. Ignoring the emergent knowledge runs the risk of leading the client into a passionless, depersonalised space where availability and ability are privileged over a range of personal concerns such as meaning, purpose and spiritual aspiration.

Implications for counselling

Confronting uncertainty

Senge (1990) identified "a reverence for uncertainty" as an unnoticed and neglected aspect of systems thinking. Such a reverence opens up the creative possibilities of personal vision and at the same time explores the riskiness of action due to our human limitations. Therefore, confronting uncertainty requires courage – the courage to take risks for the sake of something significant and

meaningful. Governments and their bureaucrats usually dislike risk. They fear supporting things with an already acknowledged possibility of failure because failure itself is viewed as something that must be avoided at all costs. Fear of failure is the touchstone for the stifling creativity and change. It is a retreat to what Pryor and Bright (2007a) have designated closed systems thinking. Such an approach to policy and personal decision making is based on avoiding risks repeating “safe” options seeking control over all aspects of the process, accepting things they are and avoiding any new strategic approaches. Chaos theory identifies such strategies as attractors focused on goal, roles and routines (Bright & Pryor, 2005). These attractors perpetuate the myth of control in decision making in much the same way as much general science perpetuates the myth of accurate predictability of phenomena. (Prigogine, 1997).

Closed systems thinking does not reverence uncertainty so much as fear and deny it. These are strategies to root out or at least minimize uncertainty. For example, the bureaucratic policy developer looking at the role and structure of a career development service, will tend to set up rigid structures for service delivery and resource accountability without flexibility and the capacity for adaptation. A typical result in career service delivery, is that only those who already “fit the system” will actually seek it and benefit from it. This typically will be those most like the bureaucrats who designed the service delivery systems in the first place: hence the perpetuation of the status quo. Those with other subcultures, values, perspectives on life and work, which are incompatible with the service system’s values and procedures will either fail to see the relevance of the service and therefore not use it, or try to use it and find it irrelevant to their essential work concerns. From a bureaucratic perspective such reactions appear to confirm that when you try to help those who are disadvantaged they do not want help or they abuse it when they do receive it. Further, so they conclude, it just goes to show that providing services for such groups is simply a waste of time and money.

Open systems thinking on the other hand “reverences uncertainty”, firstly by acknowledging its reality in all aspects of human endeavour, secondly, by recognizing its potential to radically alter situations and outcomes and; thirdly, by seeking to utilise the possibilities of opportunities at the same time as identifying potential accidents and disasters. Therefore the open system thinking attractor (the technical term is the “strange attractor”) seeks to integrate order and disorder into a coherent whole. This involves a focus on non-linearity. The essence of non-linearity is the recognition that in complex systems small initial changes may ripple through the system resulting in disproportionately greater change. Non-linearity highlights the importance of feedback in systems. There are two types of feedback: negative and positive. Negative feedback can be understood as all these influences within a system that seek to maintain its equilibrium its stability its ability to correct for change. In human terms it is the processes of adaptation, accommodation and resilience in response to endogenic or exogenic change. Positive feedback can be understood as all these influences within a system that seek to initiate amplify and develop change. Some theorists identify positive feedback with a system’s perturbation or turbulence (Briggs & Peat, 1989).

It is the interplay of negative and positive feedback within a system which constitutes its twin qualities of stability and uncertainty at the same time. For example, the cultural expectations for a societal subgroup such as a tribe, may have a negative feedback effect on a young subgroup members’ expectations and behaviour. The effect may be in terms of community obligations both social and financial. However at the same the young person may be changing physiologically becoming stronger taller and more coordinated. Such changes may have a positive feedback effect such as reinforcing a sense of individual power and independence which may result in change attitudes to authority and tradition. The outcome of such an interplay of influences for any one individual may be contingent and therefore unpredictable. Such interplay typically is endogenic

(occurring within the system), however uncertainty may also be generated exogenically by the impact of influences beyond the boundaries of the system. For example, the depletion of environmental resources on which an industry in a specific area depends may result in closure of a mine or factory with major loss of employment.

Some implications of open systems thinking

Accept the risk

Taleb (2007) argues persuasively that we have been overly impressed with the ability to predict the future and that we systematically underestimate risk. This risk is also inevitable and consequently developing strategies to make risk pay off is an essential part of good hope. The point is not to become what is commonly termed a “risk-taker” as this inevitably implies adopting a selective blindness to risk. The risk-taker is foolhardy. Accepting risk means to make a distinction between positive and negative contingencies (Taleb 2007). There is a difference between those activities where a lack of predictability can be extremely beneficial and those activities where the lack of predictability causes harm. For instance if you were offered the chance of working for a new start up internet company, or spending \$45,000 to enrol in a Masters of Business Administration, the first option presents little chance of loss and the possibility of a huge pay off, whereas the MBA presents a guaranteed large debt with no certainty of recouping it, let alone getting a return on the investment.

Related to this is the idea of accepting opportunities. The trouble is, that many of our counselling techniques, such as matching, focus clients on the “precise and local” (Taleb, 2007) when keeping a more flexible and open mind is a better way to see opportunities as they arise. The danger here is

that decision makers may become too focused on a specific option – course or occupation – thereby missing the chance to alter direction to a more fulfilling choice option.

Not fearing failure

People often personalise failure of a strategy or decision and invest it with a sense of moral value that it often does not or at least need not, possess. To do something that does not work does not imply that the person trying something is a failure. Moreover, in light of the chaos perspective on reality, failure is simply an inevitable consequence of uncertainty and human limitations of control and knowledge (Rescher, 1995). Therefore it is crucial for funding agencies as well as individuals confronting career decisions, to recognize that projects, programs and individuals may fail for reasons that are not inherently attributable to the projects, programs and individuals themselves. This is not an invitation to squander money and “hair brain” schemes that any reasonable analysis would reveal had next to no chance of success. However, it is a challenge to experiment with new options, different ways of doing things and alternative approaches to problems by initiating small experiments, lots of them, to see what can be learned, to find out what works by trying things. The usual alternative is setting up bureaucratic national programmes which ultimately degenerate into closed systems thinking and further the entrenchment of the status quo. The way to get new ideas is to have lots of ideas and to act to see which ones work and which do not. The point being that one genuinely powerful and successful idea, approach, system, project or perspective may be all that needs to be discovered. Utilizing the non-linearity within complex dynamical systems can result in its impact being so disproportionate to its original cost that eventually it will more than compensate for the cost of all the other failures not only financially but also societally, in promoting greater hope for a better future and improved opportunity to achieve it in the present. In

the following section an example is provided of such an experimental programme in which the authors have been involved.

An Australian example of an experimental approach to career development service delivery

Some commentators have objected to psychometric assessment not only because they are commonly associated with logical positivist theories but also on social justice grounds. For instance McIlveen and Patton (2006, 17) believe that testing services are provided “by human resources consulting firms whose interests are with their own profits and the corporate success of their client-organisations”. These lines of argument contain two oversimplifications. Firstly it fails to appreciate that it is possible to go beyond logical positivism without the need to jettison assessment, and secondly it focusses exclusively on the nexus between assessment and profit without appreciating that very often it is the costs of providing counselling personnel that presents the bigger barrier to equal access to career development services (e.g. Pryor & Bright 2007c).

The need to work together as a community to liberate groups that are disadvantaged in society, has been labelled by Prilleltensky (1997) the Emancipatory Communitarian (EC) approach – freedom through community action. One obvious target for community action is working to engage parents and other community helpers. As Blustein (2006, 154) points out “ in addition to providing career education programming ... a vocational psychologist working from an EC approach might also train parents to support their child’s occupational exploration”. Increasingly there are a variety of psychometrically valid no cost careers tests available on-line or in published form, either to the public directly or to practitioners (e.g. Athanasou, 2001, 2003; Savickas & Glavin, 2008). Furthermore the cost and technological barriers of accessing the internet are also increasingly being

reduced or removed through government initiatives and major social justice programs such as the One Laptop per Child Program (e.g. Negroponte, 2008).

The potential to address the social justice aspects of career development benefit from the charitable donation of intellectual property and creative deployment of low-cost technology. However, the costs associated with accessing one-on-one career development conversations with people who are appropriately trained remains a significant challenge. Building human capacity is as vital, if not more important than building the technological capacity.

Recently Bright and Pryor (2008) have called for a shift from a focus on information provision in career development to information and transformation. The current authors have taken up Blustein's challenge, and developed an intervention designed to build career development capacity in local communities that goes beyond information provision to transformation, and ultimately it is hoped, to emancipation.

The intervention was based on the following premises:

- a) that career counselling is the single most effective career intervention that produces the greatest gains for clients in the shortest time (Oliver & Spokane, 1988; Whiston, 2000);
- b) the “inequitable access to counseling services both in terms of cost and the geographic remoteness” (Pryor & Bright, 2007c, 7);
- c) that students attending high schools in low socio-economic areas are least likely to be able to access one-on-one careers advice; and
- d) that the practice by schools of employing volunteer parents to assist in resource-intensive activities such as reading could be extended to providing some basic one-on-one career development assistance.

The intervention consisted of training a group of volunteer parents from an area of Sydney with high levels of youth seeking work and low levels of community resources relative to the population numbers, in how to administer the Congruence Interest Sort (Pryor, 1995). This is a highly interactive card-sort that assists students organise their career thinking using Roe's (1956) taxonomy. It integrates both a convergent and emergent perspective about assessment (Pryor, 2007). The parents were also provided with up-to-date information about the world of work and its inherent complexity and uncertainty using the Chaos Theory of Careers as a framework. In addition they were given training in the ethics of working with students and importantly knowing when to refer to more appropriately trained professionals such as the School Career Advisor or Counsellor. After two sessions of training, the parents attended a careers night at a local community club where they offered 30 minute one-on-one career planning sessions to students from the local community. All of the sessions were fully booked and the feedback from the evening was universally extremely positive.

The direct result of the intervention was that local students were given a rare opportunity to discuss their career ideas in a structured and personalised way with an informed and motivated adult. The indirect result was a significant increase in career development capacity within the local community, which now has five trained parents in each participating school who are motivated and available to assist their students in a voluntary one-on-one capacity.

What such a program illustrates is that the constraints of economic resources do not have to be determinative to the provision of career counselling services. By developing and using existing community resources economically, socially and geographically disadvantaged groups can be provided with careers assistance as a basis for better and more hopeful career decision making.

including a choice to seek entry into higher education which often those in such groups assume will be forever beyond their reach.

Negotiating uncertainty – shiftwork paradigms

Hope is a cornerstone in building a successful strategy to negotiate uncertainty. However, in our anxiety to remove uncertainty there is the risk of encouraging false hope in certainty. From a Chaos Theory of Careers perspective, complete certainty can never be achieved, and because of this, it is necessary to engage in ongoing Shiftwork. Bright & Pryor (2008) defined Shiftwork as all those activities in which career counsellors engage to assist their clients to develop the skills of adaptation and resilience required to negotiate and use productively, the fluctuating fortunes of their careers. They outlined eleven essential shifts that career counsellors need to embrace to more effectively provide hope for their clients. They are:

From Prediction To Prediction And Pattern Making;

From Plans To Plans And Planning;

From Narrowing Down To Being Focused On Openness;

From Control To Controlled Flexibility;

From Risk As Failure To Risk As Endeavour;

From Probabilities To Probable Possibilities;

From Goals, Roles And Routines To Meaning, Mattering, And Black Swans;

From Informing To Informing And Transforming;

From Normative Thinking To Normative And Scalable Thinking;

From Knowing In Advance To Living With Emergence;

From Trust As Control To Trust As Faith.

Within these paradigms good hope comes from understanding the emerging and changing patterns, that are influencing or likely to influence the individual, the community and the society. Hope does not come from doggedly trying to implement a single plan irrespective of changing circumstances, rather, good hope comes from knowing how to develop, deploy, defer or discard a plan as circumstances change. Good hope comes from being open to new possibilities rather than being fixated on only one solution. Good hope implies seeking control in a flexible and changeable manner rather than a rigid and unbending approach. Fear of failure is a potent threat to hope and a barrier to action, whereas good hope arises when risk is seen as what it really is – endeavour. Good hope means seeing beyond the immediate limitations of the probable to engaging creatively with the possible. Good hope is not locked into narrowly defined goals, rigid roles, or repetitive routine. Good hope arises when action is meaningful, when it matters to the individual and when it is accompanied by a sense of humility and appreciation of the limits of personal control. False hope informs but rarely transforms, whereas good hope offers information and transformation. Good hope is the recognition that things can and do change spectacularly, and the spectacular is not inevitably at the end of a Bell (Curve)-shaped rainbow, but could be as close as the next small step. Good hope is the recognition that we have the capacity to actively engage in an inherently uncertain world. Good hope drives our faith in others.

Conclusion

As Australians the current authors are aware of the temerity implicit in seeking to address career development issues of another country while in some ways may be similar but in other crucial ways may be very different from what we typically encounter. Indeed probably without an invitation to do so, we most likely would not have done so. We are conscious of our lack of appreciation of the

extent and the intensity of the challenges facing those seeking to administer, fund, plan and deliver career development services for the South African people as a whole. However, we take heart to attempt to say something, from calls such as that of Watson and Fouche (2007, 163) for ‘better international networking’ and from Stebleton’s (2007) belief that chaos theory has a contribution to make in reconceptualising the theoretical base of career development thinking in relation to the African experience.

In addressing what may at first glance, appear to be esoteric theoretical issues, some may consider that we have contributed little to the life-threatening needs of disadvantaged South Africans. Our retort to such an accusation is that a theoretical framework provides a map of the territory that a society needs to traverse, it highlights those aspects of the landscape that require special attention and it provides a perspective on how far one has travelled and how much further there is to go. As in counselling itself often the biggest challenge and the most helpful solution is to be able to reframe a situation and in the process find new solutions to what appeared to be intractable problems and insuperable obstacles.

In a complex, changing and connected world we all need adaptability and resilience to respond to problems and change as well as creativity and imagination to recognize and develop opportunities for personal, community and societal betterment. Chaos theory provides a theoretical framework that has no particular professional or cultural affinities. Its origins are in astronomy and mathematics but its applications have impacted virtually all identifiable intellectual disciplines including inter alia, biology, meteorology, political science, theology, philosophy, economics, psychology, sociology and aesthetics.

Pryor and Bright (2007ab) contend that chaos theory has the power to integrate positivism and constructivism, quantitative and qualitative assessment approaches, science and spirituality, convergent and emergent perspectives and being and becoming. In this paper we have outlined its implications for both those responsible for planning, funding and administering career development programmes and for those confronting career development choices and those seeking to assist them. We have purposely focused on the present and future rather than the past. Not because South Africa's past is not important nor even that it is not influential still. Rather it is because as Watson and Fouche (2007, 163) noted, "our past has been more closely scrutinized than our present or future".

On an individual level in our counselling we have seen how a fixation on the past with an attendant "victim mentality" can paralyse action and poison intervention attempts in the present for the future. That is a dead end whose end is one kind of death or another. Chaos theory addresses our possibilities as well as our limitations, our joys and our sufferings, our hopes and our disappointments our successes and our failures. The future is always uncertain and life has no guarantees, all of us have the choice between accepting this truth as a curse to be lamented of as a clarion call to seize the opportunity.

The development and the provision of training and skills enhancement for dealing with the challenges of complexity, change and connectedness, through higher education, is fundamental not only to the economic development of a country but also to the improvement in equity of living standards across the whole population. Improving education standards has always been one of the most effective ways for individuals from economically disadvantaged backgrounds to advance themselves and their dependants economically and socially. Career counselling has the potential to

provide those with appropriate levels of talent with the encouragement and assistance to “think bigger” than previous generations in terms of training and occupations.

If the future is not predetermined a society may find an antidote to fatalism or the “victim mentality”. The disadvantaged must struggle to develop their careers often without the resources of other more privileged sections of the community. The utilisation of higher education is a key way in which the cycle of “no future/no hope” thinking can be broken. The combined forces of higher education and careers counselling can provide more effective ways for communities to nurture, develop and use all the potential talent their people possess. It is easy to give up, to lose self worth, to abandon hope and to jettison belief in the possibilities of change. However ultimately, fatalism and a victim mentality are both the relinquishing of responsibility. Fatalism concedes responsibility for action to fate, destiny, the way things are, in effect to the status quo. A victim mentality concedes responsibility for action to someone else such as the perpetrators and preservers of inequity - the employer, the labour market or the government. Either way individuals give up and surrender to the status quo. However open systems thinking acknowledges the importance of stability at the same time as the inevitability of change in complex systems. For governments, communities, families and individuals change can be difficult, painful, risky, costly and fraught with the possibility of failure. However, in our own career development work on recognising and utilising unplanned events (Pryor and Bright, 2005), the single most important factor was found to be optimism. Optimism is hope in action and that is the “good hope” that all South Africans will need to sustain them through the mighty challenges that they will continue to confront.

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