SHIFTWORK: A CHAOS THEORY OF CAREERS AGENDA FOR CHANGE IN CAREER COUNSELLING

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This paper presents the implications of the Chaos Theory of Careers for career counselling in the form of Shiftwork. Shiftwork represents an expanded paradigm of career counselling based on complexity, change and uncertainty. Eleven paradigm shifts for careers counselling are outlined to incorporate into contemporary practice pattern making, an emphasis on planning, openness, flexibility, risk, possibility thinking, mattering and meaning, transforming information, scalable reasoning, emergence and trust as faith.

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). The superiority of career counselling over more constrained approaches such as workshops, classes and computer programs is due in no small part to the flexible, contingent and personal nature of the counselling process. Despite this, many of the theories, procedures and tools designed for career development emphasise stability and characterise career development as a problem to be solved, rather than career development as an ongoing process.

Approaches that emphasise certainty and hold out the promise of providing neat answers are attractive to people confronted by the uncertainties and complexities of their lives. It is therefore not surprising to discover that clients seek out certainty in career counselling and prefer that counsellors give advice, opinions and answers (Galassi, Crace, Martin, James, & Wallace, 1992). This presents a challenge because we live in a world that is not simple, certain and predictable, and a world that is populated by people who are complex, changing and inherently unpredictable. This world is characterised by Taleb (2007) who posed the following questions:

Look into your own existence. Count the significant events, the technological changes, and the inventions that have taken place in our environment since you were born and compare them to what was expected before their advent. How many of them came on schedule? Look into your own personal life, to your choice of profession say, or meeting your mate, your exile from your country of origin, the betrayals you faced, your sudden enrichment or impoverishment. How often did these things occur according to plan? (p. xix)

Things and people change, shift happens (Bright, 2008) but many of our methods, our training and our clients' expectations tend to privilege certainty over uncertainty. Taleb (2007) argued that all the shifts that have really mattered in life have shared three characteristics: (a) they are outliers that fall outside the realm of regular expectations; (b) they have an extreme impact; and (c) that 'human nature makes us concoct explanations for [their] occurrence *after* the fact, making [them] explainable and predictable' (p. xviii). Taleb called these effects 'Black Swans' because to the inhabitants of the old world the existence of black swans fell outside their experience.

The observation that we live in exponential times seems to be increasingly accepted. Uldrich (2008) has estimated that 95% of what we know about the human brain has been discovered in the last 20 years. If we consider our own discipline of career development, we can see clear evidence of exponential shifts in knowledge. A PsycLit database search on articles relating to 'careers' indicates the first listed in the database was published in the 1890s, but that just about half (49%) of the total output have been published in the last three decades. The results for papers on 'career change' are even more dramatic (see Figure 1), with 93% of them having been published in the last 30 years. While it may not seem surprising now that there

is such a focus on change, would we have predicted this in the 1960s? It appears that Black Swans are alive and well in our own discipline.

This dramatic, unprecedented change demands that we reconsider our methods, models and practices. Shiftwork has been suggested as a label to describe the essence of our practice as career counsellors in the 21st century (Bright, 2008). Shift-

work can be defined 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. It includes assisting clients to reinvent themselves continually, to identify opportunities, to recover from setbacks, to find meaningful work that matters to them and to others and to capitalise on chance. Hence Shiftwork covers the major developmental tasks in 21st century career development.

Shiftwork as a concept derives from chaos theory (Lorenz, 1993). Chaos theorists have observed that change can occur in systems either gradually or very quickly. However, the effect of change is to reconfigure the system. This is usually called a 'phase shift', after which the system functions in a way differently from its former operational configuration. The classic physical example of this is the proverbial sand tipping into a single pile forming a pyramid shape on a flat surface. At some point only one additional grain of sand is required for the existing pile to bifurcate into two poles—a new configuration of the system. The changes and uncertainties of human experience show similar analogous reconfigurations through the slow advances of age or the dramatic impact of trauma or job loss. Such effects can be internal to the person, such as disease, or external, such as technological change. The Chaos Theory of Careers (Bright & Pryor, 2005, 2007; Pryor & Bright, 2003, 2007) explicitly incorporates the concept of 'phase shift' in its account of careers in terms of complex dynamical systems.

As career counsellors, there are some cornerstones to Shiftwork that we must embrace if we want continue to provide clients with the greatest gains (Whiston, 2000). We have identified the first 11 shifts that we may need to embrace (if we are not already doing so). It would be an oversimplification to interpret these

shifts as meaning an abandonment of current practices in favour of new ones and nor are we suggesting these shifts represent movement along a continuum. Both concepts are variants of pendulum attractor closed systems thinking (Pryor & Bright, 2007). Rather, these shifts are characterised as a move from a more simplistic approach to a more sophisticated and complex approach

consonant with the realities of contemporary work and the gloriously complicated dimensions of being human. Shifting perspectives or paradigms of career counselling is mandatory if counsellors' work is to remain relevant to and effective for the ongoing development of the work and life experiences of their clients. It is not that traditional approaches to career development have failed miserably—they have not— however, complex dynamical people and economies demand that we as practitioners also shift. Indeed, think of the proposed approach as pressing the 'shift' key on a

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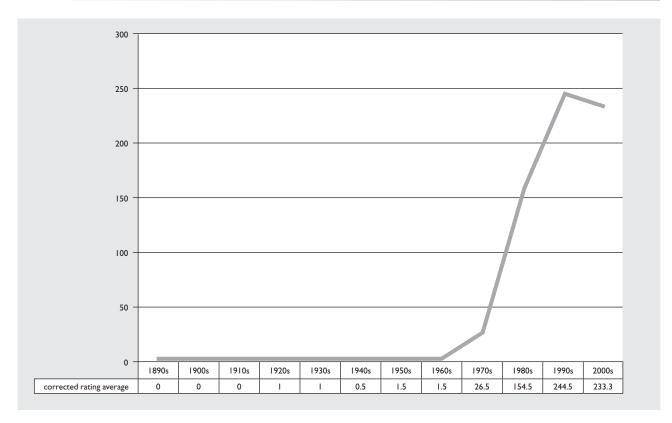


Figure 1: The rolling average number of journal articles published per decade related to the topic of career change

Note: Because at the time of writing there are still 18 months remaining in the current decade, the figures for the current decade have been corrected upwards by 15% (18 months/120 months)

computer keyboard. Doing so dramatically increases the possibilities, and increases our flexibility without abandoning the still useful un-shifted keystrokes.

SHIFT 1: FROM PREDICTION TO PREDICTION AND PATTERN MAKING

'It's tough to make predictions, especially about the future' is a saying variously attributed to commentators as varied as Mark Twain, physicist Niels Bohr and Danish artist Storm P. (Pors, 2007). Career counselling is generally future-focused in a way that other forms of counselling are not.

Savickas (1997) suggested that 'the career counselor's job is to see life prospectively, to extend a life theme into the future' (p. 14.) Whereas in personal counselling the goal may be to overcome past and current negative feelings or behaviours, very often in career counselling clients demand to know 'what they will become'.

The most commonly used approach to predicting a client's future is the use of interest inventories, and

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with good reason. As Savickas and Spokane (1999) pointed out, 'the long-term stability of vocational interests in group data was established in a compelling manner in the late 1960s...a finding that has never been refuted.' (p. 7). However they also acknowledged that changes of interests occur for some individuals and that accentuation of interests, changing careers and contexts all need to be considered more than they have in the past.

The limits of prediction in career development occur in psychology and economics for pretty much the same reasons: complexity, change (including personal inconsistency), chance and the misplaced assumption of rationality in decision-making (Ariely, 2008; Pryor & Bright, 2007). If we can learn to step back and avoid focusing on just a few influences on our situation, we may be able to discern patterns in both our behaviour and our environment, which could constitute the recognition of persisting problems to be redressed and of opportunities and possibilities to be developed and utilised. One of the best ways of learning how to

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see patterns is to start with what we are perhaps most familiar with, the patterns that have emerged in the life we have personally lived. Not only is the subject matter familiar, but also learning to see our patterns in all their complexity will present strategies to confront, cope with and capitalise on future changes in our lives.

There are now many different techniques available to analyse patterns in people's lives including the *Career Style Questionnaire* (Savickas, 1997), *CareerScope* for high school students (Amundson, Poehnell, & Pattern, 2005) and *Guiding Circles* for Indigenous peoples (McCormick, Amundson, & Poehnell, 2006), narratives (Bujold, 2004; Cochran, 1999), archetypal plots (Pryor & Bright, 2008), circles of influence (Bright & Pryor, 2003), *My Systems of Career Influence* (Watson & McMahon, 2006) and the *Pattern Identification Exercise* (Amundson, 2003).

SHIFT 2: FROM PLANS TO PLANS AND PLANNING

Shiftwork is an ongoing process. A plan is to planning what a change is to changing. In the same way that a single change rarely suffices longer than the short term before more changes are required, similarly plans rarely stand the test of time without modification. Yet there is still widespread emphasis on developing 'a plan'. School systems around the world commonly have a process to develop a school-to-work plan for each student, yet relatively little time appears to be devoted to teaching the next generation the skills of planning. Furthermore, such systems are often based on unwarranted assumptions about the power of logical processes to supply a winning formula. Why is it that relatively few adults have written long-term career plans akin to school-to-work plans despite many adults having had to produce one at school? What does this widespread failure say about the utility and validity of such approaches? How come there is little or no evidence of the long-term validity or success of such approaches? If we can learn to step back and avoid focusing on just a few influences on our situation, we may be able to discern patterns in both our behaviour and our environment, which could constitute the recognition of persisting problems to be redressed and of opportunities and possibilities to be developed and utilised.

The appropriate response from a Shiftwork perspective is not to abandon plans, but to support and counsel clients in the development, redevelopment,

deployment, and occasionally abandonment of plans. Shiftwork encourages creativity and dexterity in the use of plans, and encourages a perspective where plans are not seen as having met all future challenges, or as the answer to the problem of career development. In a personal communication, John Krumboltz, the originator of the social learning theory of careers, suggested that the career counsellor - client relationship should be viewed like that of a dentist to patient. Emergency services are provided as necessary, but ongoing checkups, minor modifications and treatments, using improved technologies and responses to changing conditions are also part of a continuing service and relationship. To extend the analogy further, at present career counsellors tend to operate as midwives delivering the plan for immediate action rather than as dentists offering ongoing assistance over an extended period, in the dynamical processes of career development and change.

SHIFT 3: FROM NARROWING DOWN TO BEING FOCUSED ON OPENNESS

Both career counsellors and their clients typically see the successful outcome of their interaction to be in terms of moving from undecidedness to decidedness. Individuals are often called upon to choose at various points in their education and working lives. Such a process is understood as narrowing down options to a single best choice. The academic and self-help literature of the last 25 years has relatively uncritically espoused the benefits of being focused, setting goals and objectives (Tubbs, 1986) but there has been less focus on the limitations of goal setting as career development strategy until recently (Bright & Pryor, 2005; Shapiro, 2006). The reality of human decision-making is that it virtually always occurs in circumstances of limited knowledge of outcomes (Butz, 1997). As a result it is rarely possible to know at the time of choice which option is incontrovertibly going to be the best one.

In terms of job search, fostering imaginative strategies such as creating work opportunities or combining different forms of work to meet a complex range of needs and desires is a good example of Shiftwork. Encouraging clients to consider the advantages of undecidedness and the openness to opportunity that can be the reward for such an approach is another example of Shiftwork, particularly in an environment that is in a state of flux and/or when individuals have the opportunity to keep their options open.

SHIFT 4: FROM CONTROL TO CONTROLLED FLEXIBILITY

Control is related to the need for predictability and it is also related to anxiety and occupational stress. Perceptions of being in control are one of the best predictors of stress reactions in employees (e.g. Jones & Bright, 2001; Jones, Bright, Searle, & Cooper, 1999). Seeking to control our environment and destiny is therefore understandable, but one of the great individual developmental challenges is to appreciate the limitations of personal control.

Flexibility in Shiftwork terms relates to notions such as Luck Readiness (Neault, 2002; Bright & Pryor, 2007) and planned happenstance (Mitchell, Levin & Krumboltz, 1998). Developing strategies, optimism, self-efficacy, curiosity, persistence, and risk-taking as well as seeing yourself as lucky are effective ways to encourage personal exploration and flexibility in career development.

Flexibility of individuals and workforces is increasingly prized by employees who are confronting the need to re-invent themselves regularly as well as operating in complex, inter-connected global economic markets that are also inherently unpredictable (Taleb, 2007).

SHIFT 5: FROM RISK AS FAILURE TO RISK AS ENDEAVOUR

Why are we so reluctant to confront uncertainty? Why does it unsettle us so much? Why does it take traumas

and other dramatic life events to shake us out of our complacency or even fear? Fear of failure is a well recognised barrier to action, implicated in a range of self-limiting behaviours such as sporting achievement (Sagar, Savally, & Spray, 2007), parenting (Sideridis & Kafetsios, 2008) and vocational aspirations (Tseng & Carter, 1970). The Shiftwork approach characterises failure

as a marker of action and endeavour, and recognises that error is an essential ingredient in exploratory learning. A willingness to accept failure is a legitimate part of an individual's or an organisation's way to develop and expand.

Peat (2002) addressed this issue thus: 'many people fear chaos because for them it means a lack of control' (p. 134). However, we never have enough control

to eradicate the possibility of failure. Acting under conditions of uncertainty as we inevitably are obliged to do does not obviate our personal responsibility for action. However a Shiftwork approach to counselling clients or employees discourages a punitive approach to failure, and encourages a learning and endeavour approach.

Mistakes are viewed as possible solutions tested and learnt from, as a basis for further experimentation. Many of the triumphs of human endeavour only come after a history of unsuccessfully trying many other possibilities (Moore 2002). While not advocating thoughtless recklessness in career decision-making, the Shiftwork approach sees strategic attempts which end up proving unsuccessful but from which insight is gained, not as wasted effort but as 'successful failures'.

SHIFT 6: FROM PROBABILITIES TO PROBABLE POSSIBILITIES

The traditional approaches to career decision-making typically seek to identify the probable options as the best ones to consider. Using the Chaos Theory of Careers as a theoretical framework, Pryor, Amundson and Bright (2008) argued for a broader career counselling process that includes both probability and possibility thinking. The convergent or probabilistic approach seeks to converge on a single choice option (or a limited number) through logical and rational approaches such as weighing evidence, focussing on few variables and maximising certainty. The possibility

or emergent approach (Bright & Pryor, 2007) seeks to generate patterns by crafting (Amundson, 2003) or constructing (Savickas, 1997) new options through processes such as taking risks, learning from failure, pursuing passions, listening to your intuitive approach and searching for new and enlightening knowledge.

The Shiftwork perspective incorporates both probability and

possibility thinking as valuable strategies for action. An overly exclusive focus on the probable career options risks self-perpetuating self-limiting futures and may underestimate the impact of change on the individual and their options. However, focusing excessively on possibilities may lead to frustration and hesitation, as well as overwhelming the individual. Both approaches are required for good Shiftwork.

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SHIFT 7: FROM GOALS, ROLES AND ROUTINES TO MEANING, MATTERING AND BLACK SWANS

The temptation to reduce a complex world or choice to the simplest possible terms can be irresistible, and it can also be very effective. Such an approach is likely to be effective if there is a high degree of clarity, a lot of available information, low costs associated with changing course, no long term implications or a pressing need to decide. However many career decisions do not conform to this prescription. Often the options are many, vague or complex, information may be incomplete or inaccurate, costs associated with changing course may be perceived or in reality be high, or there may be no pressing need to decide immediately. Under conditions of change, complexity and chance attempts to think about career decisions in closed systems (i.e., simplified) terms are less likely to be effective and run the risk of lulling the individual into a false sense of certainty, or limiting the individual to an unnecessarily constrained and unimaginative range of choices.

In Chaos Theory of Careers terms, this would amount to clients being trapped into Point (Goal), Pendulum (Role) or Torus (Routine) attractors (Bright & Pryor, 2005; Pryor & Bright, 2007). Such approaches are likely to be ineffective in assisting the client to confront the realities of change that is sometimes dramatic. Such approaches run the risk that change will be under-estimated and humility will be replaced with complacency (Taleb, 2007).

Shiftwork involves recognising the usefulness of closed-system thinking under certain constrained conditions, while at the same recognising that in the longer term, the open systems reality of the chaotic strange attractor is a more useful way of understanding self and the world. In counselling terms, this means encouraging and supporting clients in developing strategies to explore uncertainty, and to develop opportunity awareness. It encourages an attitude of acknowledging the unplanned as inevitable and welcoming it as providing creative possibilities.

Adopting an open-system approach should not be mistaken for abandoning any form or structure in career development. Within the Chaos Theory of Careers the strange attractor has an emergent stable and recognisable form, but this form is subject to continual change which is sometimes dramatic. The Shiftwork approach does not encourage trusting to dumb luck, random, fatalistic or incoherent approaches to career development.

Understanding what matters to an individual and searching for meaning through work and more generally through social contribution (Savickas, 1997) is central to the Shiftwork approach. Indeed the form and shape of each person's strange attractor can be thought of in terms of their systems of values, meaning and beliefs (Pryor & Bright, 2004). Hence within this approach, meaning, mattering and awareness of the ever-present Black Swans (non-linear unplanned events) are central to the career counselling enterprise.

SHIFT 8: FROM INFORMING TO INFORMING AND TRANSFORMING

The Information Age means there is unprecedented, democratised access to information. In an era where many universities around the world have made their staff's lectures available to all through iTunes and other web-based applications and where interest inventories, job analysis tools, classifications of occupations, videos, blogs and twitters are all available to anyone on the planet and often at no cost, the role of the careers counsellor needs to shift. In the career development discipline there are examples of free electronic access to career experts such as Savickas and Glavin's *Vocopher* (Savickas & Glavin, 2008) project, or the Bright and Associates *Factory Podcast* (Bright, 2008b).

The emphasis on providing information is now under challenge from the sheer volume of information available. Those professionals who pride themselves on being information portals are becoming overloaded and defeated by the exponential growth in occupational information. The shift in practice away from information provision needs to be towards assisting clients to reform and transform the information into personally relevant and practical strategies for action. The Chaos Theory of Careers highlights that no matter how much information we have, we can never be sure that we have the full picture at the time individuals have to choose. Therefore they can never be totally confident about the outcome of whatever decision is made.

Career information continues to be a vital element in career development, however career information is merely an ingredient in career transformation. Shiftwork eschews reifying information and recognises how new information technologies can free us up to be more effective. The counselling process itself can also benefit from the use of information technology

and some such as Lewis and Coursol (2007), Chester and Glass (2006) and Gredge (2008) report on already developed effective models that harness podcasting and email in career counselling. Social networking sites such as MySpace, Facebook and YouTube are already being used by job hunters to advance their credentials, and possibilities exist using these technologies and others such as Voice Over Internet Protocols to develop internet-based individual and group counselling sessions for minimal costs. Such approaches may overcome some of the cost and distance barriers to accessing affordable and effective career counselling.

SHIFT 9: FROM NORMATIVE THINKING TO NORMATIVE AND SCALABLE THINKING

Many career counsellors and social scientists in general, are trained to accept a perhaps unconsidered or uncritical appreciation of the bell-shaped curve. The normal or bell-shaped curve assumes that the occurrence of natural phenomena takes the characteristic form of high frequencies around the average, and decreasing frequencies as scores move away from the average in a characteristically bell shape. This encourages both counsellors and their clients to believe that 'other than typical or average' occurrences are always highly unlikely.

Taleb (2007) argues persuasively that there are severe limitations manifest in applying the normal curve to complex systems. The normal curve fails to account for non-linearity or scalability. The fact is that events which are out of all proportion with what went before can and do happen. They happen all the time. Oil crises occur. Terrorists attack. Tsunamis inundate coastlines. Viruses spread. People get injured and sick. Actors are discovered overnight and become famous, successful and rich. Fortunes are made and lost on the stock market or through mergers and acquisitions. Girls meet princes in pubs and become Danish Royalty. The impact of events both positive and negative is immense and we need to be aware that they will happen. It points to the limits of our control, but also to the need to understand complex systems as continually shifting, interconnected and subject to sudden change. The Chaos Theory of Careers and the Shiftwork approach recognises both the utility of using the normal curve where appropriate, but also the opportunities and threats associated with living in a complex, interconnected and scaleable world.

SHIFT 10: FROM KNOWING IN ADVANCE TO LIVING WITH EMERGENCE

Given the inherent uncertainties that comprise and surround us, the need to know in advance becomes even less plausible or desirable. It becomes a recipe for stagnation, stalling, prevarication because one can never know for sure in advance. This does not prevent clients from attempting to impose the expectation of foresight on beleaguered counsellors.

The Shiftwork approach is to recognise that action is a way of gathering information that may inform future strategies. Consequently, in this approach actively engaging with the environment in an ongoing way is as important as off-line career strategising. This engagement may be purposeful and result in planned outcomes and desired knowledge but equally it may well result in serendipitous discoveries and personal transformations. Such an approach may require the counsellor working on strategies to boost the client's self-efficacy or tolerance of ambiguity when engaged in activities that may not yield any clear pattern or direction immediately. Furthermore, developing a strong sense of purpose will assist in directing engaged effort toward activities that are more likely to bear fruit, while at the same time recognising that there are no guarantees.

SHIFT 11: FROM TRUST AS CONTROL TO TRUST AS FAITH

Trust is central to a career counselling relationship and is often alluded to by proxy with terms such as 'rapport', 'confidence', 'putting the client at ease'. In career counselling, there are at least two meanings of the word trust. The first usage may be termed a closed system view of trust as being related to control and predictability. Trust in this sense is based upon the assumption that only a limited set of carefully considered outcomes could eventuate, and that the client having considered all the possibilities is comfortable with any of them eventuating. This is trust as control. From this perspective, trust is the level of confidence individuals have in the strategy of limiting options to a manageable (and hence predictable) response set.

However, the Shiftwork approach and Chaos Theory of Careers generally reminds us that rarely are situations so completely predictable, and hence those that confer trust because they think they know what could happen

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are labouring under a misapprehension. This applies not only to the client, but also to the counsellor. Sadly it is not unheard of for counsellors to encourage clients to trust them by mistakenly over-estimating the degree of

control that the counsellor has over proceedings. A common example is the promise to a client of complete confidentiality in situations where the counselor has legal obligations to disclose information to others such as supervisors, colleagues or courts.

Trust as faith is a deeper, more complete sense of trust that recognises the limits of our knowledge and foresight, and instead invests trust as faith that the counsellor

will act in an ethical and responsible manner which generally will be in our best interests. The Shiftwork approach is to establish trust as faith as the basis for counselling rather than trust as control. This involves open and regular discussions about the possibilities of outcomes that may not necessarily be comfortable for the client, but at all times strives to create conditions of informed consent for the client.

Beyond the immediate ethical considerations, trust as faith means encouraging the client to have faith in their own abilities (Betz, 2004), and to develop luck readiness (Pryor & Bright, 2005). Ultimately, trust as faith involves encouraging clients to overcome their fears through courage.

Conclusions

Shiftwork represents a mindset, a toolkit and an agenda for change in career counselling based firmly within the Chaos Theory of Careers framework. Shiftwork does not represent any more of a radical departure from current practice, than engaging the shift-key on a keyboard represents a departure from the default keyset. Shiftwork is a way of thinking about the change process in a principled and powerful way that recognises the realities of career and life as experienced by us and our clients in a complex, interconnected and changing world.

Chaos theory in general has signaled a change of emphasis in science as a whole. It represents a new field of theory, research and practice that incorporates complexity and change as well as simplicity and stability. Traditional career counselling reflects the emphasis on simplicity and stability in the focus of matching people with occupations. Shiftwork presents an expanded and more inclusive paradigm of career counseling which supplements the matching process with the further realities of complexity, non-linearity, emergence and

phase shift, which confront the career decision-making process with the neglected challenges of chance, uncertainty and human limitations on knowledge and control.

Shiftwork and the Chaos Theory of Careers represent powerful new explanatory frameworks that locate and honour tried and true practices, embrace changes that enhance the delivery of our services and face up squarely to the exacting and

exciting opportunities of twenty-first century career development.

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THEORY AND PRACTICE

This section is designed as a brief professional review of the article. It provides relevant study questions and answers for readers to test their knowledge of the article.

What do you understand by the notion of Shiftwork as defined in this article?

Answer: Shiftwork can be defined 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. It includes assisting clients to reinvent themselves continually, to identify opportunities, to recover from setbacks, to find meaningful work that matters to them and to others and to capitalise on chance. Hence Shiftwork covers the major developmental tasks in 21st century career development.

What are the recommended II shifts in career counselling practice?

Answer:

Shift 1: From Prediction To Prediction And Pattern Making

Shift 2: From Plans To Plans And Planning

Shift 3: From Narrowing Down To Being Focused
On Openness

Shift 4: From Control To Controlled Flexibility

Shift 5: From Risk As Failure To Risk As Endeavour

Shift 6: From Probabilities To Probable Possibilities

Shift 7: From Goals, Roles And Routines To Meaning, Mattering, And Black Swans

Shift 8: From Informing To Informing And

Transforming
Shift 9: From Normative Thinking To Normative

And Scalable Thinking

Shift 10:From Knowing In Advance To Living With Emergence

Shift II: From Trust As Control To Trust As Faith

What do you know for sure you will be doing in five years time?

Answer: Who knows!