Changing Paradigms in the Career Guidance Field: The Journey from Objectivity to Subjectivity, Quantitative to Qualitative Methods

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Abstract

This paper focuses on a paradigm change in general, as well as specifically in the career guidance field, from objectivity to subjectivity, and from quantitative to qualitative methods. First, attention is drawn to how physicists and philosophers have contributed to changing notions of objectivity. Next, the words objective and subjective are re-examined such that subjective loses its conventional connotative meaning of being error-prone and unapologetically remains a slant, a point from which phenomena are viewed. Changed notions of objectivity and subjectivity bring us (in the third section) to postmodern approaches to science: In particular, that knowledge is constructed and the process of construction is value-laden. Discussions of postmodernism segue into the fourth section— on qualitative methods. Many qualitative techniques and worldviews are aligned with postmodernism and the newer notions of subjectivity. Importantly, examples are provided of postmodern and qualitative approaches in the career guidance field. Lastly, before one concludes that quantitative methods are best dismissed, the role of quantitative methods is repositioned as one rather than as the only or best method of viewing our world. The paper ends on a reflective note, requesting career researchers and practitioners to be mindful of how and what they choose to see, and how and what they choose to investigate.

Keywords: objectivity, subjectivity, postmodernism, qualitative methods, career guidance

Changing Paradigms

Progress in science is marked by paradigm shifts (Kuhn, 1970). Each paradigm provides a largely and seemingly coherent worldview; for those wedded to the paradigm, it is the world. However, the paradigm is *not* the world. Over time, the boundaries that provided focus and thus palatability are increasingly experienced as limitations. Especially for those not committed to the paradigm, the world and the paradigm appear mismatched, and the corresponding worldview chaotically askew and out of focus. Rival positions develop; a competing paradigm that provides a new lucid worldview takes the place of the old paradigm.

Each discipline is replete with examples of paradigm shifts. For example, in physics the shift from Newton's mechanistic worldview to Einstein's view of a universe characterised by relative rather than absolute and linear time and space (see Capra, 1991); and in psychology the shift from the behaviourist to the cognitive paradigm (see Stevenson, 1983). The focus in this paper is on a paradigm change in general, as well as specifically in the career guidance field, from objectivity to subjectivity, and from quantitative to qualitative methods.

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Changing Notions about Objectivity: Contributions of Physicists and Philosophers

Werner Heisenberg, famous physicist and Nobel laureate, wrote in 1958: *"*What we observe is not nature itself, but nature exposed to our method of questioning*."* Indeed, it is Heisenberg's contributions to subatomic physics that have shaken the foundations of conventional science (Zukav, 1980). In his theory of quantum mechanics and the uncertainty principle, Heisenberg unequivocally demonstrated the myth of "the exact sciences" at the subatomic level. As Zukav (1980) has explained:

> All attempts to observe the electron alter the electron. This is the primary significance of the uncertainty principle. At the subatomic level, we cannot observe something without changing it. There is no such thing as an independent observer who can stand on the sidelines watching nature run its course without influencing it. (p. 112)

Similarly, theoretical and systems physicist, Fritjof Capra, has expressed "that the classical ideal of scientific objectivity can no longer be maintained, and thus modern physics is also challenging the myth of a value-free science....Scientists, therefore, are responsible for their research not only intellectually, but also morally" (1991, p. 16). Furthermore, he clarifies that in as much as an object can only be understood in terms of its activity and that the activity necessitates interaction with the surrounding environment, an object is not an isolated entity with its own properties. The principles of interdependence and indivisibility require us to view the object and its properties as embedded in and integrated with the whole; a whole that is composed of multi-layered systems.

Thomas Kuhn, perhaps the most influential philosopher of science in the 20th century (http://plato.stanford.edu/entries/thomas-kuhn/), whose book titled *The Structure of Scientific Revolutions* is one of the most cited academic books, stated that the particular conclusions a researcher arrives at "are probably determined by his prior experience in other fields, by the accidents of his investigation, and by his own individual make-up....these are often essential determinants of scientific development" (Kuhn, 1970, p. 4).

Deepak Chopra (1993) has asserted that "(b)ecause there are no absolute qualities in the material world, it is false to say that there even is an independent world 'out there'" (p. 11). The world that we agree on conveniently (also termed naive realism) only reflects our sensory apparatus. He points out that the human nervous system perceives only a minuscule amount of the total energy vibrating in the environment. There are many other naively real worlds (contingent on the viewing apparatus, in this case the specie-specific nervous system) that exist along with ours: for example, the snake's world of infrared light and the bat's world of ultrasound.

Richard Rorty (1989), the renowned American philosopher of the last century emphasised that "truth was made rather than found" (p. 3). He succinctly stated: "The world does not speak. Only we do." (p. 6)

Objectivity to Subjectivity

In multiple fields, as also in the career guidance field, we are witnessing a change in paradigms, namely from objective to subjective and quantitative to qualitative. This change is startling. Conventionally, the definition of scientific inquiry itself is the pursuit of truth in as objective a manner as possible. The new paradigm forces us to question whether truth can be singular, fixed or absolute. It questions whether truth can ever be apositional (i.e., without a position or a frame of reference). Moreover, it makes us re-examine objectivity as a

characteristic of scientific inquiry; for that matter, for any inquiry.

Is the new paradigm heretical? Surely, the word objective means that which is unbiased, unprejudiced, and uncoloured by a particular frame of reference? Is it not desirable to see and act without a bias or prejudice? The immediate and conventional answer to these questions is *yes.* However if we pause and reflect, the answer, quite reasonably, is a *no.* Why? As on closer reflection, words such as bias are not negative in their literal sense although they have been in their connotative sense. A bias is a leaning; it defines a particular position. Following this train of thought, to be objective is to be without any leaning, to be minus a position or minus a point of view. Clearly, objectivity is controvertible.

Subjectivity in the new paradigm has shed the garb of *negatively* biased, prejudiced or coloured. Subjectivity represents the tenability of viewership or action as (always) constituted of some frame of reference, some position, or a particular point of view. Subjectivity moves from an inadmissible and abhorred condition to a valued and indispensable condition.

In continuing our re-examination of objectivity and subjectivity, note the subject and object in the following sentence: *The woman looked at the tree.* The tree is the object, the woman is the subject. A parallel is drawn for research: that which is studied is the object; the scientist/researcher is the subject. To clarify further, the adjective "objective" in the changing perspective is defined as that which comes from the object; that which belongs to the object. Complementarily, the adjective "subjective" is defined as that which comes from the subject; that which belongs to the subject. To reiterate, remember that the subject is the scientist or the researcher. Now ask yourself: In a scientific or any other inquiry, is knowledge produced by the object or the subject? Who is the direct producer of knowledge—the object or the subject?

If it is argued that it is the object that "reveals" its attributes, to be faithfully copied by the subject (see Piaget, 1983), why do we have *multiple theories* about the same phenomenon? It is because human knowledge is fundamentally creative and therefore plural. As Piaget (1983) has said, "knowledge results from *interactions* between the subject and the object, which are *richer* than what the objects provide by themselves;" it is "this inventive construction, which characterizes all living thought" (p. 112).

Objectivity, Subjectivity, and Postmodernism

The changed notions of objectivity and subjectivity have resulted in a postmodern approach to science (Rubin & Babbie, 1996). The key notions of postmodernism can be expressed as follows:

- The recognition that there is no objective truth.
- Instead, the qualities of an object depend upon the perspective or position of a viewer.
- Unsurprisingly, the qualities of an object vary across different contexts or frames of reference.
- Diverse properties of objects are evoked dynamically in conjunction with a participant or observer.
- If subjectivity is all there is, and there is never only one perspective, it follows that there are always multiple truths.
- Optimally, it calls for a celebration of subjectivity and multiplicity/diversity.
- The goal in science is to construct, deconstruct, and reconstruct worldviews, and in so doing, embrace ever-expansive worldviews.
- Postmodernism is compatible with constructivism. Knowledge is constructed by a viewer (e.g., researcher). This blurs the traditional distinction between discovery and invention: A discovery is also, by inference, an invention (Kuhn, 1970; Piaget, 1983).

- The acknowledgement that science can never be value-free; promotion of value-guided science. Neutrality is replaced (ideally) with explicit reflexive recognition of personal and group biases that influence one's research or practice.
- The role of a scientist/researcher includes identifying and wisely choosing values that will undergird the research process.

These ideas can be extended using K. J. Gergen (2009). Gergen has identified social constructionism as a specific instance or expression of postmodernism. When describing anything, we have to make sense of it. We always use a standpoint derived from a particular tradition to make sense of phenomena (ibid). In this way, Gergen explains, descriptions are the product of a community, representing its consensus, rather than an outcome of an isolated individual mind. It follows that science cannot yield truth that is universal because any "truth" is framed within a specific tradition of thought, located in time (history) and space (culture) (ibid). In fact, "to presume the local to be universal not only is arrogant but also sets the stage for conflict and a deathly silencing" of alternative/diverse voices (K. J. Gergen, 2001, p. 806).

Postmodernism challenges modernist values such as truth, impartiality, objectivity, reason, control, and prediction (K. J. Gergen, 2009). Specifically, postmodernism illustrates the emptiness of that which is central to modernism: Value neutrality of science, robustness of reason, and knowledge as an outcome of individual observation (ibid). In contrast, Gergen exhorts, postmodernism recognises that science is laden with values, reason is insubstantial, and knowledge is a communal construction. In the postmodern context, scientists can be released "from the task of being mere mirror holders to the world as it is" and take the responsibility of constituting "new and potentially transformative conceptions" (K. J. Gergen, 2001, p. 810).

Quantitative to Qualitative Methods

The journey from objectivity to subjectivity has also created the beginning of another shift: from the quantitative research paradigm to the qualitative research paradigm. Traditionally, the quantitative paradigm has been the stronghold, the domineering position in research. In contrast, the qualitative research paradigm has been the minority position in research and there have been attempts to force it into remaining marginalised (e.g., the evidence-based hegemonic movement in the United States [Denzin, 2009; Denzin & Lincoln, 2011]). However, a discernibly growing movement toward qualitative research is evident. Sections devoted to qualitative research methods are expanding in newer editions of textbooks; journals that previously published only hard-core quantitative research are actively seeking and publishing qualitative research.

In quantitative research, conclusions are drawn using numbers. In fact, in chasing objectivity, numbers have been the mainstay. In other words, numbers have been thought to lend credibility to the idea that one's work is objective and thereby scientific.

Compatible with older paradigms, statistics is used in quantitative research to uphold the majority picture which frequently is misconstrued as the singular, correct position with other possibilities labelled deviations. The bulwark of statistics, both descriptive and advanced, rests on making a majority conclusion with regard to the data.

For example, if we obtain a statistically significant correlation coefficient between x and y of .8 it means that as x increases so does y and vice versa. For any case in the sample, if the value for x is high, then the corresponding y value will also be high. For another case, if the value for x is low, then the corresponding y value will also be low. The significant .8 reflects that many xy pairs in the sample conform to this pattern of covariation. When a correlation

coefficient is nonsignificant we conclude that there is no relationship between *x* and *y*. Technically, actually what this means is that there is no repeated pattern of relationship between *x* and *y*. Different pairs co-vary in their own ways. To reiterate, the correlation coefficient is an example of the fact that in statistics (the data analytic tool of quantitative research) numbers are used to make majority conclusions.

Another point to consider is that advanced statistics requires the testing of statistical hypotheses and thus the debatable use of the uniform probability model. For the large part, what this means is that the soundness of the mathematical models that are frequently applied require sampling techniques which researchers may omit to use. In fact theoretically, probability sampling works much better with coins and dice than with dynamic populations of human beings.

From the preceding explanations, it must be clear why the qualitative paradigm is increasingly relevant today. A crisis of validity and (related) methodological scepticism have catalysed the growth of the qualitative movement: Descriptions of the world are couched in language, not as a replica of the world but as constructions intelligible within a framework\paradigm (M. M. Gergen & Gergen, 2000). Moreover, evidence is never devoid of politics, morals, and ethics (Denzin, 2009). "There is no value-free science" (Denzin & Lincoln, 2011, p. 5). This calls into question positivist inquiry which has long privileged quantitative methods. If claims of objectivity, neutrality, and rigour are open to debate, the search for alternative methods is imperative and justified.

The qualitative paradigm is host to varied approaches and methods, which are not necessarily compatible or free of complex tensions (Denzin & Lincoln, 2011). Nonetheless, Denzin and Lincoln have distinguished qualitative work as follows:

The world *qualitative* implies an emphasis on the qualities of entities and on processes and meanings that are not experimentally examined or measured (if measured at all) in terms of quantity, amount, intensity, or frequency. Qualitative researchers stress the socially constructed nature of reality, the intimate relationship between the researcher and what is studied, and the situational constraints that shape inquiry. (p. 8)

In the qualitative paradigm, there is a clear acknowledgement that knowledge or viewership is subjective. The qualitative researcher explicitly values the perspective of a viewer. Multiplicity/diversity is anticipated and proactively sought throughout the research process. One example is the use of triangulation. Denzin (1978) is widely cited as having distinguished between four types of triangulation. All types involve the employment of multiple means or modes: when multiple sources of data are used (with regard to people, place, and time), it is data triangulation; when varied researchers or observers are used (e.g., a multidisciplinary research team), it is investigator triangulation; when multiple orientations are used to interpret the phenomenon, it is theory triangulation; and when multiple methods are used to examine the phenomenon, it is methodological triangulation. To take this further, note that Denzin has strongly recommended the use of multiple triangulation: that is, the use of multiple types of triangulation in the same research. In a similar vein, M. M. Gergen and Gergen (2000) have described reflexivity and multiple voicing as examples of innovations in methodology which are an outcome of the qualitative methods movement. In reflexivity, the researcher reflects about and makes visible to the reader or other audience how the conclusions that are being drawn are situated in a specific historical, geographical, and cultural context, as well as influenced by the researcher's own personal views and leanings. Multiple

voicing can take several forms (ibid): Divergent perspectives may be sought and presented without electing to organise or prioritise the worthiness of these perspectives. Alternatively, the research report could contain the participants' interpretations of the findings as well. Another possibility is that of the researcher presents contradictory interpretations and refrains from a making a superordinate conclusion. It also includes cognizance of polyvocality within an individual and not just across individuals.

Qualitative work entails "complex interpretive practices" in naturalistic settings (Denzin & Lincoln, 2011, p. 6). In place of an etic or nomothetic approach which relies on the use of large(r) sample sizes, qualitative workers use an ideographic, emic approach drawing on the rich details of specific cases (Denzin & Lincoln, 2011).

In addition, the qualitative researcher identifies, clarifies and justifies the selection of values that guide the research inquiry (Highlen & Finley, 1996). Qualitative researchers recognise that consciousness, individual or popular, is available and manifest through language and that such constructions can be limiting or empowering, constraining or liberating. Some qualitative researchers set out to engage the participant, who is termed a co-investigator, in a dialogue that will catalyse the participant in creating and expanding his/her informed consciousness. In so doing, these critical qualitative researchers believe that oppressive dynamics in society can be transformed and that power can be more equitably distributed (Highlen & Finley, 1996).

Postmodernism, Qualitative Methods, and the Career Guidance Field

In the career guidance field, the convention has been to use the trait and factor approach which is aimed at matching the characteristics of persons and jobs through quantitative assessment of individual interests, abilities, and personality (McMahon & Patton, 2002). Despite the entrenched nature of the trait and factor approach and its quantitative methods, McMahon and Patton (2002) have reported a discernible qualitative movement spurred by the following interwoven developments: Rogerian emphasis on egalitarianism and self-direction in the counselling relationship, theoretical innovations in the career guidance field especially those that have brought contextual influences to the forefront (e.g., the Systems Theory Framework), a subjective construal of career, replacement of a logical positivist approach with its focus on objectivity by constructivism and subjective orientations to one's life roles, an unpredictable world of work in which occupational choice is not the only or a one-time decision, and the growing need to cater to a diverse client population. Blustein and colleagues (Blustein, Kenna, Murphy, DeVoy, & DeWine, 2005) have noted that qualitative research is no longer at the periphery but is informing and transforming the core concerns in career development and the psychology of working. They have underscored that "qualitative methods are remarkably useful in exploring phenomena outside of the more circumscribed purview of quantitative methods" (p. 353).

Peavy (1998) has described a shift from a paradigm of fixed causes to a paradigm of flux. Counselling, including career counselling, he urges, must be transformed in the post-industrial, postmodern context and integrate "voice, social location, self-construction, meaning, and impermanence" (p. 66). Peavy (2001) has listed three principles as central to his constructivist counselling method (which he calls SocioDynamic counselling)—the principles of (a) personal freedom, (b) agency and empowerment, and (c) meaning-making. A person can be empowered by "gaining a new frame of reference" (Peavy, 1998, p. 22) and reinterpreting the story of his/her life. He has contended that "contemporary counselling is most usefully located in the observational, descriptive, interpretive flux of everyday experience and social-cultural life with its multiple realities, fuzzy logic,

and indeterminacy" (Peavy, 1998, p. 57). "Worn-out models of vocational development", he believes, are aimed at *predicting* futures; postmodern counselling must facilitate a person in *mapping* or *inventing* preferred futures which are relevant in highly changeable contexts (pp. 61-62). The self is not an objective, fixed reality but a reflexive project to be continuously constructed and revised "in a context of multiple choices in which chance and risk are prominent features" (p. 62).

Blustein et al. (2005) in an interesting overturn have declared that qualitative research allows us to identify the *biased* assumptions we may have as researchers about the phenomena and the individuals we are studying. In a grounded theory examination of U.S. urban students' constructions about work, they found that a large number of students viewed work as something that is best avoided rather than as something of intrinsic value. This alerted them to their own biases: Interventions that had been planned keeping in mind the researchers' own implicit, benign notions about work were then redesigned.

An Example: Qualitative Career Assessment

Quantitative career assessment is more likely to reflect positivist approaches, is highly structured, and dependent on standardised tests which yield scores (McMahon, 2008). Moreover, it typically casts the career counsellor and the person into the roles of an expert and a passive recipient (respectively) (Goldman, 1990; McMahon, 2008). On the other hand, qualitative career assessment is more likely to be aligned with postmodern models including constructivism, is less structured, and frequently uses narratives in one or the other form (McMahon, 2008; McMahon & Watson, 2006). Numbers or scores are not used in qualitative career assessment to make conclusions, the focus instead is on meaning-making, and the relationship between the career counsellor and the person is more egalitarian (McMahon, 2008; McMahon &

Patton, 2002). Thus, qualitative career assessment provides the person with more active roles in the assessment process; the career counsellor then becomes a collaborator and facilitator (Goldman, 1990; McMahon & Watson, 2006; Okocha, 1998). The distinction between assessment and counselling is deliberately diminished (Goldman, 1990, 1992), and the client or person is respected as an expert on his or her own life space (Peavy, 1998; Welfel & Patterson, 2005). Other related, oft-cited contrasts between quantitative and qualitative assessment include reductionism versus holism (Goldman, 1990; Okocha, 1998), and objective (i.e., universal, nomothetic, neutral) versus subjective (i.e., contextual, ideographic, positional) frames of reference (McMahon & Patton, 2002; McMahon, Patton, & Watson, 2003). It follows that of the two, it is qualitative career assessment which is more likely to be sensitive and adaptable to differences by gender, age, ethnicity, culture, and special groups such as the disabled (Goldman, 1990; Subich & Billingsley, 1995). Whereas quantitative career assessment has been the norm, qualitative career assessment is gaining ground (McMahon & Patton, 2002; McMahon & Watson, 2006).

Any Role for Quantitative Methods?

Perhaps by now you have surmised that quantitative methods are best rejected. That, however, would do us disservice. It would be akin to a reverse discrimination. The point of this paper is not to dismiss the quantitative paradigm but to endorse instead a facultative, plural approach. It is to displace quantitative methods as the only, ideal or best tools in research and practice. It is to draw attention to the relevance and worthiness of qualitative methods. It is to record the *growing* attention to qualitative methods (notwithstanding the "methodological conservatism movement" upholding the positivist, quantitative paradigm and the related resistance to qualitative methods in the Unites States in the last decade [Denzin & Lincoln, 2011, p. 1]). By due reflection, it is also to encourage the use

of quantitative methods with humility rather than arrogance because, firstly, quantitative methods are neither free of error nor are they exact. Remember, for example, that the probability of a Type I error of 5% still does not rule out error per se. Secondly, the quantitative researcher need not consider the task of generating general laws as superior: On the contrary, (s)he needs to be mindful of contextual specificities.

Is it possible to marry qualitative and quantitative approaches? How does "quanlitative" sound? Unsurprisingly, there are mixed views about mixed-methods designs: Incompatible bed mates or incommensurable in the eyes of some as the philosophical arguments supporting the two paradigms are counter-opposed (Denzin, 2009; Denzin & Lincoln, 2011). Yet others believe that the two approaches complement each other and together provide a comprehensive picture (e.g., Blustein et al., 2005; McMahon et al., 2003). Then there are those who have a largely quantitative bent (philosophically as well as pragmatically) but use qualitative techniques (e.g., open-ended inquiry) to support or explain quantitative findings; such scholars may also use qualitative techniques in preliminary work before using randomised control trials (Denzin, 2009).

I prefer to use a combination of quantitative and qualitative methods: for instance, in a research if I request a quantitative rating (which I analyse using statistics), I also like to ask the participant why they chose that rating. Different individuals, who have each selected the same rating, may have very different reasons for doing so. Philosophically I like to align my work with qualitative paradigmatic notions such as respect for the participant, providing the space to the participant to share his or her own perspective rather than select a response from a structured list, and soliciting multiple perspectives.

Conclusion

In conclusion, it is clear that we stand at intellectual and moral crossroads today. The shift from objectivity to subjectivity calls for fortitude and wisdom. Scientific inquiry, research, and knowledge are subjective; truths for want of a better word are multiple. As career researchers and practitioners, what do we choose to see, what do we choose to investigate? Whom do we choose to side with, to agree with; whom do we choose to disagree with? Do we recognise that our points of view are mutable? Do we recognise that the persons we work with—our clients, our research participants, our own selves—are mutable? Do we open ourselves to changing the ways in which we know and see (or see and know) the world? It would behove us to acknowledge that between black and white, there is an infinity of greys as well as grace.

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