The Evolved Self: Mapping an understanding of the self in psychotherapy

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Abstract

The self may be taken to be a self-referencing cognitive structure that allows one to take oneself as an object. The self, so structured, may then be placed in past remembered events and anticipated future ones making conscious self correction and future planning possible. This paper reviews the literature on how this self may be conceptualized and then shares the experience of the authors in creating maps of this self with clients in psychotherapy. It is argued that a capacity for objective observation and forward planning flows from the essential characteristics of this fully developed "modern" self. It is proposed that this method of self-mapping potentially benefits clients in planning and executing transformative change, and that the paradigm used is central to the practice of psychology. These anecdotal experiences of two therapists show promise and suggest the need for further research.

Key words: The self, psychotherapy, collectivism, individualism, The Enlightenment

The Evolved Self: Mapping an understanding of the self in psychotherapy

Using a model of the self as a culturally mediated cognitive construct, this paper aims to demonstrate an application of a method of mapping the self to clients in psychotherapy. Modern schools of psychotherapy start from the premise that the client is an individual with unique experiences, interpretations and social relations (David & Szentagotai, 2006; Hersoug et al., 2010; Pivato, 2016) with the self being core to such concepts as self-esteem (Harter, 2012), self-actualization (McAdams, 2012) and self-efficacy (Lightsey et al., 2014). In psychotherapy, clients are empowered to make changes to their selves in keeping with their experiences and new evidence. We begin this exploration with an examination of the literature describing this self.

Literature Review: The Self as a Cultural Construct

The self, as understood here, is a culturally mediated mental representation that allows individuals to situate themselves in consciousness (Donald, 2001; Sun, 2017). The self then is a cognitive project of self-definition - to be conscious requires that we have an idea as to who we are that is acting and is being acted upon. It is a kind of theory constructed to explain who we are that may be amended as new evidence is received or new interpretations of existing evidence are re-evaluated.

Our primate ancestors had developed a form of the self when they learned mirror recognition several million years ago. (Suddendorf & Collier-Baker, 2009). A more developed self was in evidence 50,000 years ago when our ancestors developed funeral rituals and art in the form of cave paintings. The consciousness that now forms part of our definition as the species Homo Sapien or "wise man" includes the ability to have objective beliefs, is capable of internally consistent thought, and can take oneself as an object is a relatively recent development occurring among ancient Greeks and Egyptians (Johnson, 2003). In *The Evolved Self* (Robertson, 2020). it was argued that this "modern self" capable of individual volitional planning led to the "Axial

Age" when most of the great religions of the world came into being (Jaspers, 1951; Mahoney, 1991). Since the capacity to project oneself into past remembered events and possible future ones is necessarily exercised individually, the resultant self represented a challenge to existing collective societies. The religious movements of the Axial Age, concerned with maintaining a collective identity, attempted to constrain the individualism inherent in having a volitional, constant and unique self (Robertson, 2017).

Child development recapitulates this cultural evolution of the self. Most children, cross-culturally, can share subjective experience around nine months of age. (Rowe, 2012). There are two transcendental moments along a child's developmental road to consciousness. Between 3 and 7 years of age, children become competent at theory of mind skills and can explicitly take themselves as an object. We now teach our young to have selves through the same process that we use to teach language (Harter, 2012). Initially infants receive their culture from their family or other caregivers who attribute to their emotional displays to cause and motivation. In this way, children begin to develop ideas as to who they are and how they fit into the world. This is supplemented by their experiences within family, community and society. The interplay of genetic, cultural and experiential factors contributes in the construction of an implicit self. Psychotherapists seeking to make this self explicit would be aided by a process of visual representation which can be accomplished using the elemental units of culture from which the self is constructed.

The Self as a Complex of Memes

Richard Dawkins (1976) coined the term "meme" to represent an elemental unit of culture that can be transmitted from one brain to another, and he suggested that these memes exhibit forces of attraction and repulsion on each other. Dan Dennett (1991) defined the meme as "the smallest complex ideas capable of replicating themselves with reliability and fecundity" (p.

201). Blackmore (1999) said each self is a viral complex that convinces the bodies it infests that it has consciousness and free will. The memetic concept has subsequently been used to study the transmission of indigenous knowledge (Eades, 2010) and the persecution of witches (Hofhuis & Boudry, 2019).

None of these writers suggested a means by which these memes attract or repel other units of culture or how they convince unconscious bodies that they have consciousness. Although it is possible to mime portions of culture, for the most part memes are collections of words or words combined with visual representations. While such presentations can clearly affect a listener in some ways, it is not clear how they can affect each other independent of a human mediator. We need to consider that human beings are the creators of culture with the implication that it is impossible to divorce its units from the psychology of the creators. Any qualities possessed by memes would be assigned and maintained by human participants.

Memes have been described as having connotative and behavioural dimensions (Csikszentmihalyi, 1993; Robles-Diaz-de-Leon, 2003). Emotions play a role in maintaining the self (Damasio, 1999; Donald, 2001; Leary & Tangney, 2003), and emotional valence has been identified with respect to memes in urban legends (Heath et al., 2001) and negative reciprocity (Freidman & Sing, 2004). Connotative, affective and behavioural properties can mimic forces of attraction. If meme "x" connotes meme "y" or leads to behavior "z," we can consider memes x, y and z to be linked. By defining a meme as the smallest unit of culture that exhibits referent, connotative, affective and behavioural components that may be transmitted from one person to another, we eliminate the tautology implied by Dawkins' original definition while providing a mechanism for attraction and repulsion. The cost of this elaboration is that such a meme would rarely, if ever, be copied in its entirety from one mind to another.

While memes may be thought of as existing outside of the individual, we do not have to consider qualities intrinsic to the meme to explain differential meme propagation, and they may be thought of as a form of social contagion dependent on group processes (Mazambani et al., 2015; Weng et al., 2012). If the self is a developmental product of childhood socialization (Harter, 2012) then it represents an individualized effect of group process. In the formulation used here, memes that are mutually attractive will form a stable self and it is that stability that gives the sense that a person exists over time (Louisy, 1996; Tippett et al., 2018).

Since the construction of the self, especially at the developmental level, results from social processes, it is not purely or even primarily an exercise in free will. Factors which are often not consciously understood by the individual including genetic predispositions, habitual emotions, hormonal change, or environmental variables influence perception and trigger sequences of behaviours, and these factors, even when the actor is not conscious of them, may be considered as part of the self (Quinn, 2006). A map outlining the self of which the client is conscious can be used by psychotherapists to identify that which the client needs to be made conscious so as to increase their potential for empowerment. The self that can be mapped at any given time should be thought of as a theory that we hold to be true with the provision that it can change over time as new information is learned.

Identifying and Modifying Memes in Map Construction: Method and Results

The authors are two psychologists in private practice who have, with clients for the past ten years, co-constructed representations or maps of the self in units of culture called memes. We discuss here our method of map preparation and we share some of the implications of that process for clients. We also share the maps of two clients here to illustrate the process.

Often we become conscious of having a self when invited to do something and we respond with "Yes, I would like that," or "No, that is not who I am." Such determinations require

an existing idea as to who we are against which we measure opportunities and choices that arise. If we only reference our self when making such specific behavioural choices, then self-change is not likely. It is our experience that when clients see themselves represented in map form, and when those maps resonate with their sense of being, they will spontaneously engage in a process of self-change. Visualizing the self in map form often leads to thoughts about improvement.

We have used two methods of identifying memes used in self-mapping. In the narrative method used to create figure 1, the client is asked to tell us who they are, and they generally respond by telling us an illustrative story or set of stories. The clinicians need to be prepared to ask supplemental questions to ensure a full and rich description. The narratives are recorded, transcribed and segmented using a procedure common in qualitative research such as grounded theory or transcendental realism. Specifically, transcribed narratives are divided into units of thought which are then given a code representing its content. Segments are placed in "bins" with the same code word, and the contents of each bin are then reviewed for the defining characteristics of a meme. Those with referent, connotative, affective and behavioural characteristics are declared to be memes and set against other memes who share one or more of those characteristics (Robertson, 2020; Robertson & McFadden, 2018). Figure 1 illustrates the initial self-map of a young Cree man that was prepared using this descriptive interview method (Robertson, 2014). A two hour interview with the young man was then transcribed and segmented according to units of thought. Thirteen pages of single-spaced transcript was divided in 110 segments representing thirty-eight memes. The memes along with the number of segments that were applied to each meme (in brackets), and the connections with other memes were in the used to produce the self-map reproduced in Figure 1. Referent words were place in ovals. Those

memes placed centrally were determined as being core to the self while peripheral memes were

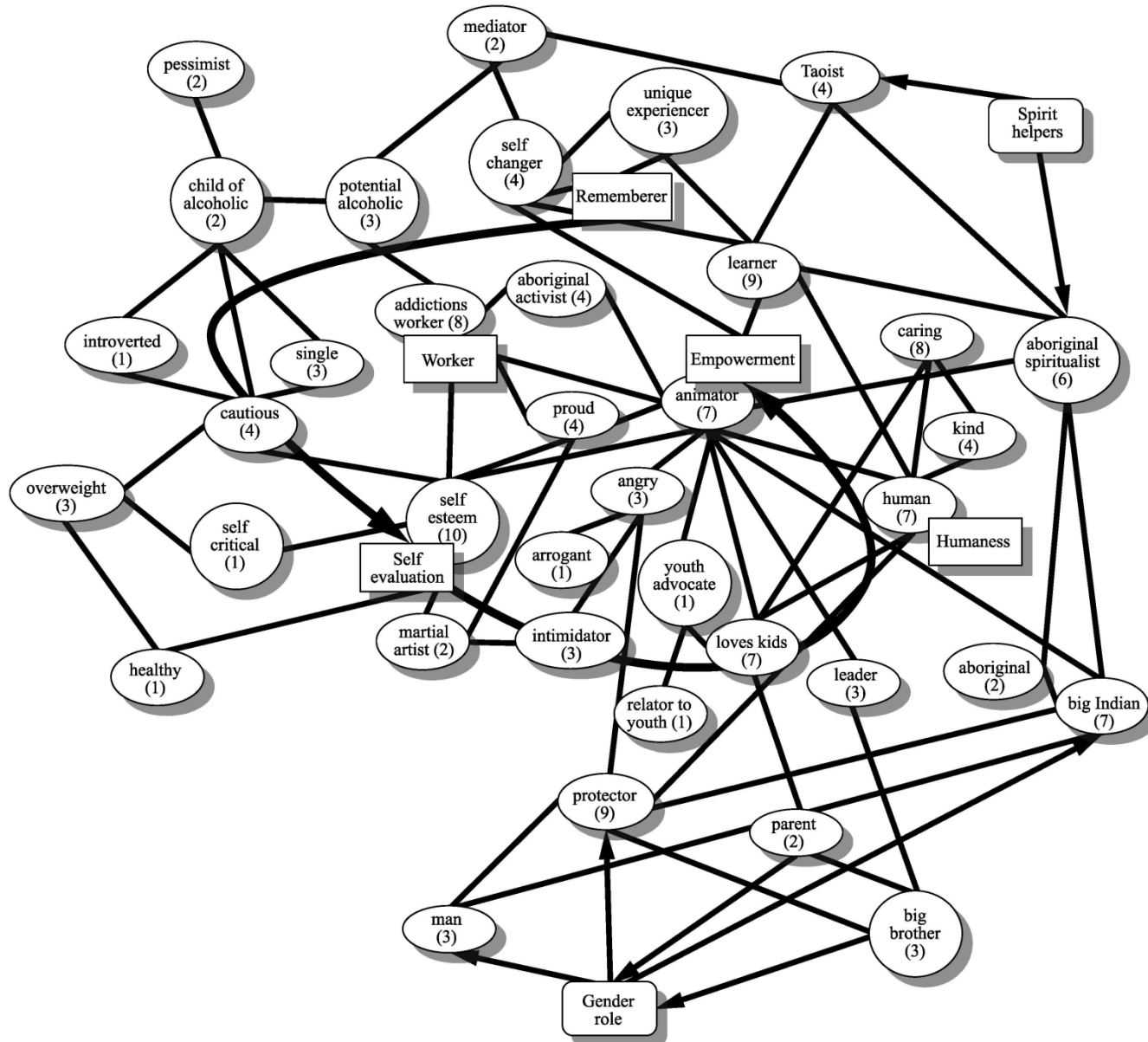held more tentatively or were more recent additions to the self.

Figure 1: Self-map of a young aboriginal man showing self-defining memes, themes, linkages between memes, and directional flow.

Numbers within the ovals indicate the number of segments coded for the meme from the

transcript and may indicate relative importance.   Words within rectangles indicate themes

formed by clusters of memes. Directional arrows indicate the flow of the narrative; and lines without arrows indicate memes linked by connotation, affect or behaviour.

If we view the self to be a product of the narratives we tell about ourselves then individual memes can be thought of as reference points on an outline. The thick black circular line in figure 1 forms the outline of "Trevor's" initial story. He had begun by talking about how he could change and that he had begun life as a child of alcoholics and as a potential alcoholic. He talked about being introverted and cautious as a child with low self-esteem. He admitted his response was that he became an intimidator with the motto "Nobody messes with a big Indian."

Despite being mentioned in six segments, "aboriginal spiritualist" was, as a relatively recent addition, placed near the edge of Trevor's self. As a young man he asked himself what it meant to be an Indian and his first response was "warrior." Taking direction from a traditional elder, he went on a vision quest and became a drum keeper and a powwow singer. He had previously embraced Taoism learned from his martial arts instructor.

After reflecting on the self map in figure 1, Trevor tempered his anger and aggressive behaviour, and he decided to be politically active in more mature and respectful ways. He began writing and performing poetry and music. He reflected on his failed relationships and decided to give up his need to "save" women, and he decided to date women who did not need saving. He replaced the referent "overweight" with the less pejorative "big." He created a new meta-narrative for himself beginning with the theme "Humaness" and running clockwise on his self-map lessons he had learned in life. It suggests a distinctly male role in parenting drawing on new lessons learned from life experiences. These changes are reflected in Trevor's final self-map illustrated in figure 2.
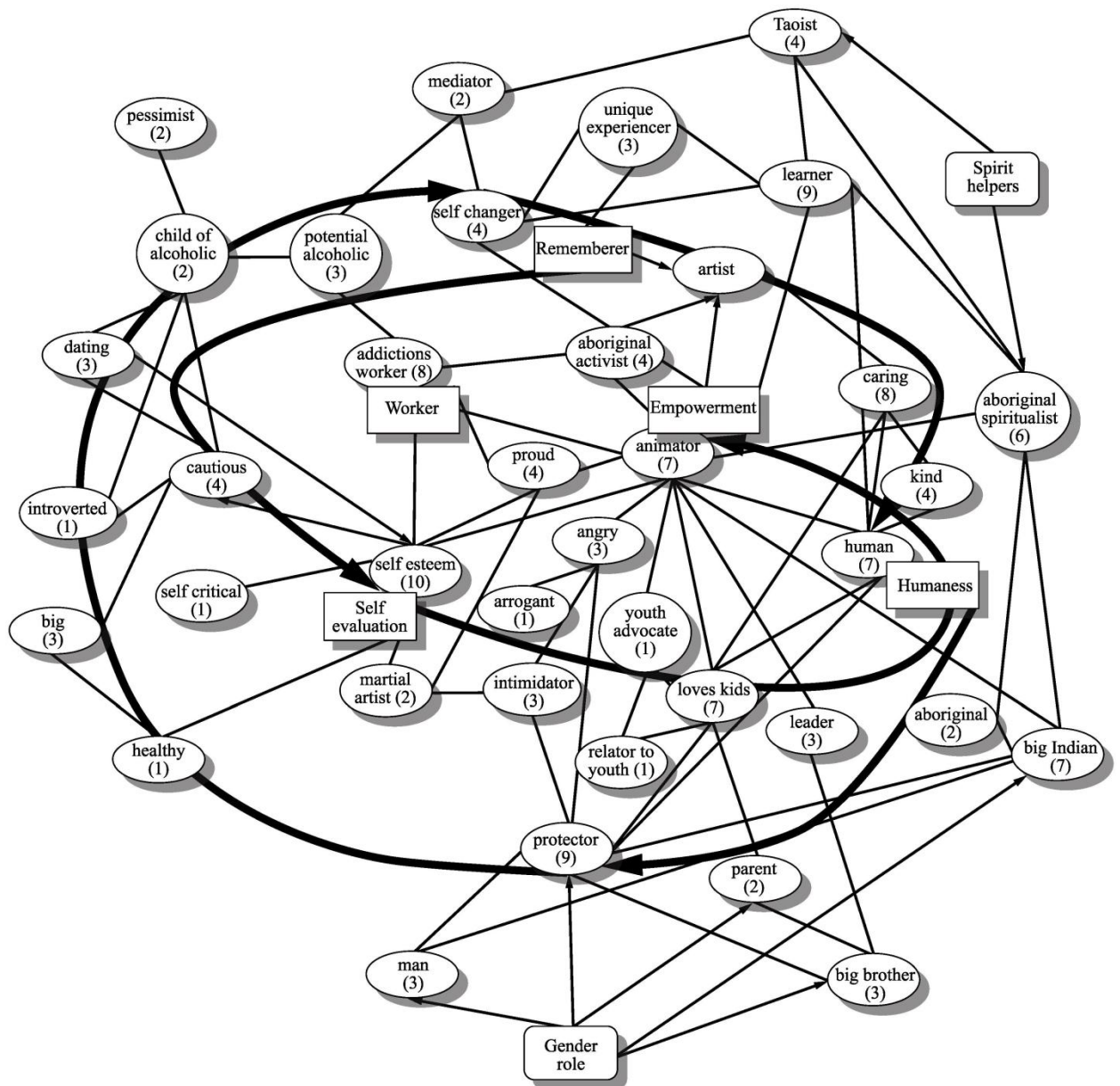
Figure 2: Final revised self-map of Trevor after six months.

A more directive "forty things" method was used to create the self-map represented in figure 3. This figure represents the initial self-map of "Olivia" who was treated for depression and anxiety (Robertson, 2016). While figure 1 was created from a recorded transcription, this client was asked to name and rank order four lists: 1) at least ten "persons" such as worker, wife or poet that represents her, 2) a minimum of ten things she believed to be true, 3) a minimum of

ten things she liked about herself, and 4) a minimum of ten things she would change about herself if she could.
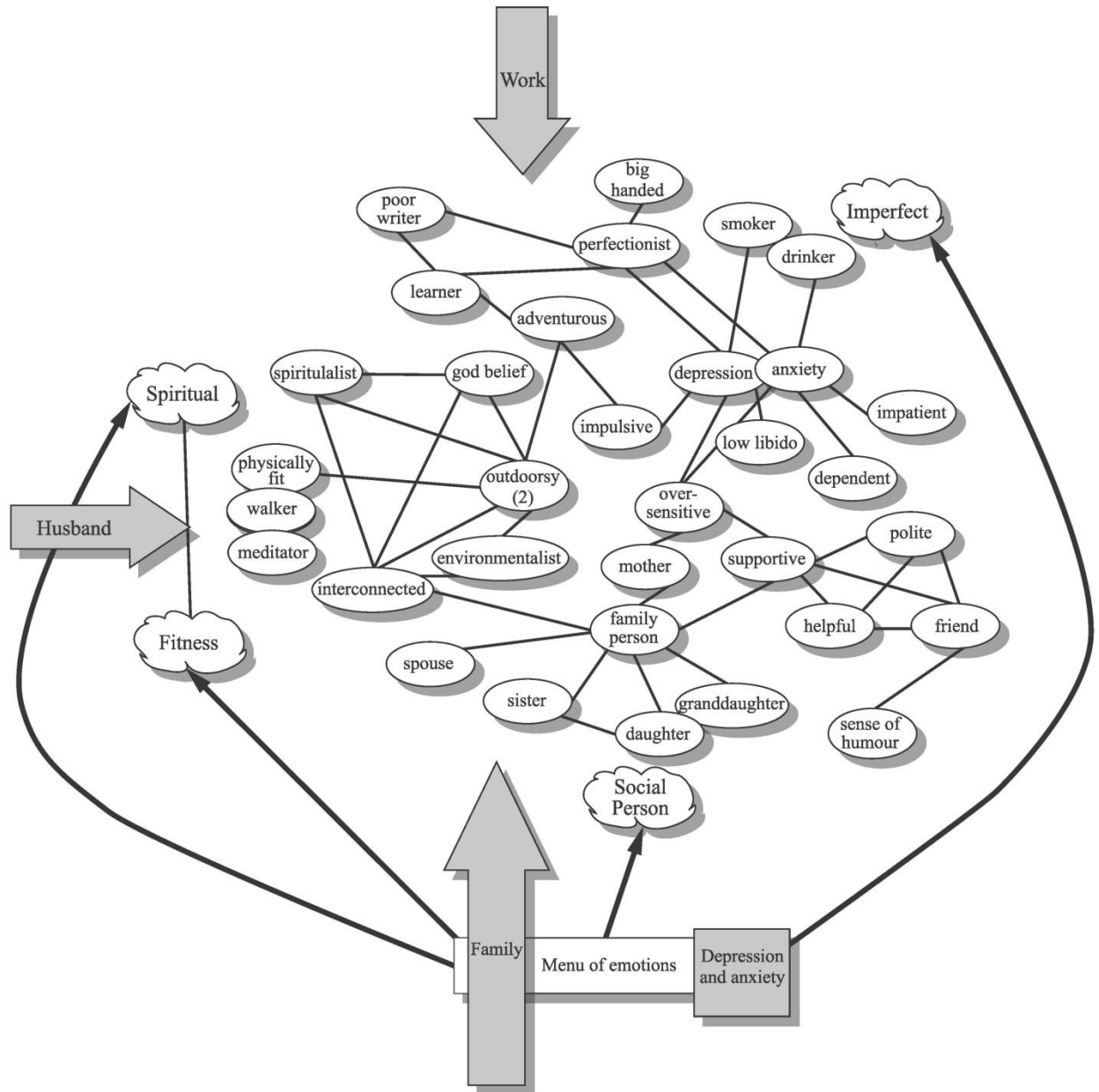

Figure 3 Initial self-map of Olivia displaying memes, external influences and emotions

The therapist reviewed this "forty things" list with her to determine which of the statements she had made about herself met the definition of a meme. Centrality in the map was determined by rank ordering with items more difficult to give up deemed to be more central to

her self. The memes in figure 3 form three clusters labelled "Imperfect," "Social Person" and "Spiritual/Fitness." These clusters were activated by triggering emotions represented by a menu at the base of the map. Work, Family and Husband were included as directional arrows in the map representing external forces that both impacted on her and formed part of her self-definition.

Olivia associated outdoor activities such as fishing, hunting, hiking, and snowshoeing with spiritual, meditative, and mystical processes with the result that the themes labeled "Spiritual" and "Fitness" are linked. She also saw herself as interconnected with her large extended family and this cognitive path leads to a cluster labeled "Social Person." This cluster includes two groups, family and friends, connected by the meme "supportive." A connotation of "supportive," was that she should do for others, and this led to the self-critical, "oversensitive" meme which included the affect of feeling imposed upon and this, in turn, led to memes for depression and anxiety - the core of her "Imperfect" self cluster.

Few pathways were available to Olivia between clusters with the result that she would ruminate on items within a cluster with associated behaviours to the exclusion of the rest of her self for days and weeks. Her family, spouse, and work associates were initially presented as being supportive, but as we began a process of therapeutic change Olivia experienced their pressure to keep her old self in place. For example, Olivia's spouse continued a pattern of heavy drinking and when drunk accused her of neglecting her housework, infidelity and trying to "be white" when she did not engage in this pattern. At a subsequent counselling session, Olivia announced that she had left her spouse and had moved into a small unfinished family cabin. She focused on her "Outdoorsy/Spiritual" self and took up "photography," which she linked to "learner," "outdoorsy," and "environmentalist." She also reframed "oversensitive" to "sensitive" with a positive connotation that it now included perceptiveness and perspective. She decided that

"oversensitive" had been a word used by her family of origin and she decided to develop

personal boundaries. Her new self-map including accumulated changes are illustrated in figure 4.
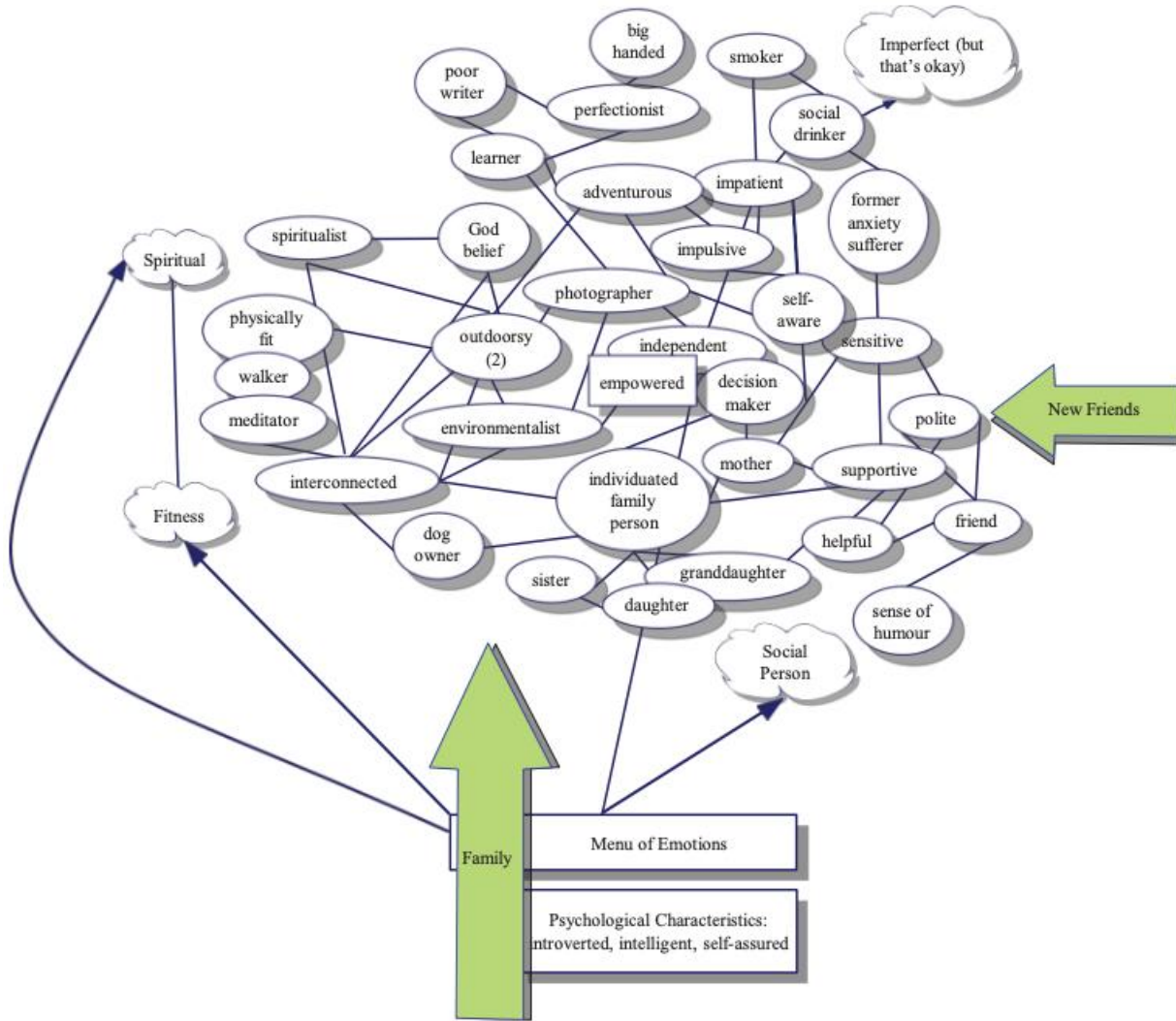

Figure 4: Olivia's self-map as co-con*structed prior to* the termination of therapy

Olivia came to realize that she had changed, and actions that had been perceived to be

supportive 6 months earlier were now felt to be restrictive. With the support of her family, she

moved to another community, found a new job, and began professional training in photography.

She offered the insight that being "sensitive" had led to her becoming "self-aware," and that, in turn, fueled her newfound sense of independence and decision making.

Not only did Olivia complete commitments made in therapy, for example successfully becoming a social drinker and taking up photography; but, she successfully initiated actions even before discussing them in therapy. Having used this method of self-mapping on more than 50 clients, we have noted that the process often empowers them to take charge of their own treatment.

Typically, groups of memes form clusters and the psychotherapist adds those identifying themes to various clusters. The maps produced by either the "forty things" or "narrative" methods consist of cognitive pathways linking associated memes. As mentioned, the self also consists of non-rational and unconscious factors that trigger activation of various clusters of memes. These unconscious factors might include associations between emotional triggers and responses that appear to overrule rational cognitive responses.

On its face, the narrative method of self-map construction allows for more possible variations and less therapist or researcher influence on self-depiction and is, therefore, preferred from a research perspective. The more directive method requires less of the therapist's time with respect to transcribing and segmenting interviews making it more practical for clinical settings. Both methods depend on the active involvement of the client in map co-construction and interpretation.

We posit seven core elements of a functioning self: constancy, distinctness, volition, productivity, intimacy, social interest, and remembering / reflecting (Robertson, 2016, 2020). Regardless of the method used to identify memes, it is important to ascertain whether the client is actually missing any structural dimensions not apparent from the procedure used. For

example, a failure to identify an emotive aspect to the self independent of affect attributed to individual memes should be explored to determine whether the client is devoid of that attribute. Similarly, a failure to identify a volitional center using the directive method should not be interpreted as necessarily indicating the client lacks volition before exploring further the client's history and feelings with respect to self-empowerment. The process is aided by establishing collaborative equality with the mapping process viewed as exploration. Exploration of previous transitional experiences will remind the client that the self can change while maintaining a quality of continuity.

Client resistance involves a refusal to change. We have found that once clients recognize themselves in their self-map, they frequently initiate change. For example, Trevor immediately re-framed a meme with the referent word "overweight" with the less pejorative "big." He then built on existent memes to develop himself as an activist and an artist. Similarly, Olivia redefined "over-sensitive" to the less pejorative "sensitive" defining it as a strength contributing to a newfound interest in photography. Of course, sometimes further therapeutic intervention is necessary. In one example, when self-mapping revealed "depressed person" to be the core of a suicidal client's self, the therapist suggested the co-construction of a new core (Robertson, 2011). That new core was successfully built using memes already present.

In hermeneutic fashion, data collection and analysis proceed cyclically with more data collected and maps amended until the client declares that the map resonates with who they are; that is, the client identifies with the map at a feeling level. Participants are invited to discuss ways that their map could be strengthened, and, they are invited to elaborate on issues that came to mind while viewing their maps. Sometimes, resonance is achieved with the first iteration; but from our experience, two iterations are likely and occasionally three.

Once resonance is achieved, clients are invited to reflect on things that happened in their past that helped make their present selves. They are invited to share any new thoughts or feelings about who they are as a result of developing this map of themselves. Relationships between memes or clusters of memes are reviewed to establish themes. Themes may be viewed as the outline of a script habitually invoked in response to triggering stimuli. Scripts that do not result in a positive outcome can be amended.

Discussion and Conclusions

It is tempting to view memes linked to other memes as nodal points in the outline of a story. Reversing the process of the narrative method used to create many of these maps, we seek to change the associations and create a better self-story. This is certainly worthy of psychotherapy, but often clients appear to act spontaneously presenting alternative facets or "mini-selves" without going through the meticulous work of proceeding in that new direction meme by meme. We think that the self is more like a small world network and that view can aid in understanding both beneficial transitions and resistance to change.

The Self as a Small World Network

We began by describing the self as a cognitive construct, and the earliest application of this method of mapping the self used on a client with suicide ideation was bereft of a mechanism whereby emotions could activate clusters of memes (Robertson, 2011). Cognitive therapy by definition involves the slow process of conscious thought proceeding logically through linked memes to a targeted area with the objective of challenging illogical associated thoughts and associations (David & Szentagotai, 2006; David et al., 2008; Dryden et al., 2001; Robertson, 2017). While this method has proven efficacy, the method can be confounded by emotions disrupting logical progression. The maps of Olivia's self (figures 3 and 4) illustrate the interplay

of cognitive and emotional routes directing client behaviour, and it resembles a small world network as found in graph theory (GT).

Robertson and McFadden (2018) demonstrated that memes correspond to vertices in GT, the pair-wise relationships between memes correspond to GT edges, and the time evolution of the self-mapping diagrams correspond to GT sequence analysis. While the focus of using tradition cognitive behavioural methods involves tracing pathways from memes along edges or links and altering those pathways in some ways, emotional or unconscious centers can override this process. We can take the laborious "high road" of methodically thinking each step or we can intuitively or reactively take the emotional "low road" of responding to stimuli and quickly changing our presentation.

While methodical thinking is often necessary to generate self-change, the low route is necessary when time is an important factor. It also requires less mental energy. In their examination of connections in networks using graph theory, Watts and Strogatz (1998) demonstrated that the existence of even a few longer range connections reduced the minimum path length of networks of self organizing systems without deleterious effects on local clustering. Put simply, tracing a pathway along short links is both time consuming and results in an overall longer pathway while the existence of a few long-range "short cuts" increases the speed of operation and reduces the total distance of movement making the system more efficient. Drawing on research using fMRI experiments, Bassett and Bullmore (2006) concluded that such a small-world network model provided a powerful approach to understanding the structure and function of human brain systems. Since such a structure combines the stability of linked pathways with the ability to "leapfrog" normal pathways and stimulate distant clusters, from an evolutionary perspective such a combination of short and long connections would be expected.

As Bassett and Bullmore (2006) explained, "Small-world topology is associated with low wiring costs and high dynamical complexity, suggesting that small-world brain network topology could indeed have been selected to optimize the economic problem of cost effective information processing" (p. 516).

The self-maps discussed in this article were created by linking memes that shared connotative, affective or behavioral characteristics. Pathways between memes were mapped highlighting cognitive and behavioral scripts. These pathways involve a progression through short connecting links simulating conscious thought, but sometimes events, both internal and external, can act as triggers to focus attention on aspects of the self that are removed from the current focus. Intuitive and unconscious forces can lead to thought clusters relatively instantaneously without the necessity of pursuing a series of short connections from a present location.

The Self in Transition

Memetic self-mapping can be used to identify key structural elements that are weak or missing, and dysfunctional elements on which the client may rely for self-definition. *The Evolved Self* (Robertson, 2020) is based on research suggesting that the qualities of constancy, distinctness, volition, productivity, intimacy, social interest, and remembering are necessary for a functioning modern self. These qualities were already well established in the literature. Constancy, the feeling that we remain the same person over time; distinctness, the view that we are a unique person separate from all others; and, volition, the sense that we have the power to enforce our will were listed as constituting the "subjective self" in the classical work of William James (James, 1890, 1892/1999, 1892/2003). Productivity, the idea that people need to feel that they are contributing through their own efforts; intimacy, the need to feel a sense of closeness to others; and social interest, the feeling that we are benefiting our families, communities or

societies in some ways, have been cornerstones of Adlerian Psychotherapy since the beginning of the twentieth century (Adler, 1927/1957, 1929, 1967). The idea that reflecting on ourselves in past events is crucial to consciousness is also well established (Donald, 2001; Hermans, 2006; Mead, 1934; Seigel, 2005).

The Evolved Self (Robertson, 2020) begins with a description of "Suzie" whose "depressed person" core led to an unstable self when treatment was attempted. Traditional psychotherapy was successful after we were able to construct a new core that addressed weaknesses in volition and social interest. "Brent" replaced low academic self-esteem after choosing to believe that he had always been a competent learner but had been led to believe otherwise by other actors. Thus a sense of continuity was preserved while increasing his sense of productivity and competency. "JohnB" had negotiated several adult transitions resulting in different "selves" that he would invoke dependent on context. He worried that he had no true self and that he might not exist as a distinct person. His self-map gave him a sense of unity coupled with continuity through change.

As a result of our work with numerous clients we developed a hypothesis that the co-construction of self maps provides clients with a sense of continuity amidst change. To the angst of counsellors since the beginning of the profession, the self in its striving for continuity resists change; but self-mapping illustrates the structural integrity of the whole thus satisfying the client's need for constancy while engaging in a process of change. Referencing earlier transitional events in map form illustrates an ability to overcome early maladaptive self-definitions while remaining the same person, thus empowering clients to engage further beneficial change.

While no map represents a territory perfectly, they allow us to chart a course, and so it is with memetic self-maps. Planned incremental change can take into account groups of memes serving to keep dysfunctional core memes in place. Groups of such memes can be appropriated to support new desired alternatives. Peripheral memes are usually the easiest for the client to remove, or replace. Since the map building activity is necessarily a collaborative exercise between therapist and client, it commends itself to the joint planning of therapeutic alternatives. The dynamic of co-constructing developmental transitions is a way of increasing client self-empowerment and commitment to change. The potential benefits also include enhanced development of collaborative counsellor-client relationships, increased rapport, and a holistic perspective on the self-structure.

The various schools of therapy may be thought of as emphasizing combinations of the seven structural elements reviewed in this manual. Cognitive-behavioural therapy has stressed volition, activity and thinking. Adlerian Psychotherapy adds intimacy and social interest to the mix. Other therapies focus more specifically on emotion or remembered narratives. All therapies recognize the uniqueness of the individual, but most do not elevate this element to their central focus.

While counselling may focus on problem solving, psychotherapy is about self-change. If we think of the self as a theory each of us has of who we are, then each meme is a proposition linked to other such propositions in logical and emotive ways. With new information it should be possible to construct better self-theories.

Psychotherapists continuously confront conformation bias when helping clients construct better selves. Clients have their own habitual ways of defining what constitutes evidence and we need to explore and extend those definitions. Some individuals with negative self images resist

feedback because they fear confirmation of what they already fear is true. The challenge of therapists is to provide objectively defensible rationale for exploring self-enhancing change in a safe and nurturing place. The core of the modern self is the idea that there is an objective reality, and psychotherapists are in the business of helping our clients explore that reality through hypothesis testing and rational discourse.

While the self may not be purely a cognitive structure, it is possible to bring more of that structure into conscious awareness. The client may be relatively unaware of personal psychological characteristics such as intelligence, kindness, shyness or other dispositional qualities that may be true but unacknowledged. Equally important, therapists also need to acknowledge aspects of the client's self not in need of change that support a sense of constancy. The client needs to feel that in some important sense the person coming out of therapy is still the same person who entered it. Seeing oneself in map form placing the desired change in perspective assists this sense of constancy. Successful change requires support from memes already existent within the self, and such change may be viewed as part of an evolutionary process.

Due to the incremental nature of self-change, it is not always possible to identify when a particular change occurred. For example, Trevor (figure 1) reported he had become a political activist after his initial interview and he was surprised to find that "political activist" was already present when he appeared for a second interview. That meme was identified after our initial interview as a result of narratives in which he had taken direct action against a doctor who may have over-prescribed medications and men seeking the services of prostitutes. More formal political action during the course of this study seemed to flow from this earlier orientation. While this result may be interpreted as a phenotypic manifestation of a meme that was already present,

changes in expression may precursor change in self-identification. If we view the self as something that will change over time, then self-mapping can be used to interpret the direction of future change.

All of the transitions we have observed have involved relationships with other people. Those relationships were remembered in narratives that included thematic interpretations of events. The storylines imputed cause and effect. JohnB's relationship with a high school classmate who was non-Christian led to his questioning of church doctrine and eventually to an acceptance of cultural diversity. Trevor's relationship with an uncle resulted in his thematic Indian name "Against the Wind," and that gave direction to his life. Brent received encouragement from a swimming instructor led him to experiment with teaching others, and this, in turn, led to improved academic self-esteem and a teaching career. A friend encouraged "Magdelynn" to play wheelchair basketball, which eventually led to an invitation to play for the national women's team. "Tina" stopped drinking and drugging on learning she was pregnant. Since all of these transitional events were based on relationships with other people we need to consider the implication that therapy cannot be successful without consideration of such relationships and their affect on the self.

If the objective of therapy is change, then self-maps may be thought of as snapshots at a particular point in time. To be effective, the client needs to identify with the snapshot taken with the realization that snapshots taken at different points of time would not be identical. Since the self cannot be viewed as static, it is important to bring into focus the notion of remembered transitions. Once clients can link previous developmental change to who they are in the present, they will be able to better visualize future planned change. Therapists can use the concept of incremental change in planning such developmental transitions.

Limitations and the need for more research

Clinicians may generate new techniques during the course of psychotherapy when established treatments fail. The method developed here was first used to treat a youth who was experiencing suicide ideation that was resistant to anti-depressant medication, cognitive behavioral therapy, Adlerian psychotherapy, and eye movement reprocessing and desensitization (Robertson, 2011). Using the narrative method of generating memes the practice of memetic self-mapping was tested on a qualitative cross-cultural sample of people who were not in psychotherapy (Robertson, 2020). We need to confirm our anecdotal findings in larger studies using mixed methods. While we believe the methods of generating self-maps described here are compatible with various schools of psychotherapy, research demonstrating efficacy across this range of schools has not been done. In addition, research using the self-mapping technique on targeted populations whose selves have been damaged by trauma, psychiatric illness or other life experiences is indicated.

Two methods of identifying memes for self-mapping were described the "forty things" method used to create figure 3 appears to be more directive than the narrative method used to create figure 1. While we believe both methods produce workable self-maps, research is indicated to demonstrate the equivalency of these two methods. Research may asses the efficacy of these methods as applied to research and as used in therapy sessions.

While there may be a basic structure to the self, the importance placed on certain aspects of that structure and their relationship to other aspects of the self would be expected to vary between cultures. Memetic mapping may be used to further study how the selves in various cultures are constituted. As we have seen, the dichotomy between collectivist and individualist is simplistic as the self is constituted and maintained by social forces in all cultures. The study of

cultural differences will include consideration of how such forces are accommodated, balanced and interpreted.

Memetic mapping is a technique and as such is subject to influence by each practitioner's style and preferred therapeutic approaches. While we support the view that the process aligns with a number of common approaches, we are limited in that practitioners currently using it share commonality in approaches and client demographics. Data gathered by therapists with a broad range of foci and approaches would demonstrate transferability between mapping methods. Given that memetic mapping uses supported psychotherapy skills incorporated into existing therapeutic frameworks, the risks in applying the technique in therapy is low.

In applying memetic mapping, the only research conducted to date is by the creator of the mapping technique. Study replication with greater sample sizes would show the efficacy of memetic mapping as a technique and encourage further research and refinement of the methods. A clinical manual outlining the two approaches is in development for use by practitioners and researchers interested in applying memetic mapping to research and practice. It is our hope that memetic mapping has enough perceived utility for therapy that psychotherapists will want to learn the technique and conduct further research.

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