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Psychotherapy for the 21st century: An integrative, evolutionary, contextual, biopsychosocial approach

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Fragmentation of processes and interventions plague the psychotherapies (Gilbert & Kirby, 2019). Part of the problem is that we have not agreed on a framework that could be the basis for integrating knowledge and the scientific enquiry of processes and interventions. This paper outlines an approach that brings together a variety of different disciplines in the service of consilience (Wilson, 1998, Consilience: The unity of knowledge, Vintage, New York, NY; Siegel, 2019). It presents the importance of an evolutionary framework for understanding the proclivities and dispositions for mental suffering and antisocial behaviour, and how they are choreographed in different sociodevelopmental contexts. Building on earlier models (Gilbert, 1989, Human nature and suffering, Routledge, London, UK; Gilbert, 1995, Clin. Psychol. Psychother., 2, 135; Gilbert, 1998, Br. J. Med. Psychol., 71, 353; Gilbert, 2016, Case formulation in cognitive behaviour therapy: The treatment of challenging cases, Wiley, Chichester, UK, pp. 50–89) the call is for an *integrative, evolutionary, contextual, biopsychosocial approach* to psychology and psychotherapy.

Practitioner points

- Evolutionary functional analysis is part of an evolutionary, contextual, biopsychosocial approach to mental health that can serve as a scientific platform for the future developments of psychotherapy.
- Therapist skills and training will increasing need to focus on the multidimensional textures of mental states especially the context-social-body linkages.
- Therapies of the future will also focus more on the moral aspects of therapy and address the need to promote prosocial and ethical behaviour to self and others.

Rooting the framework for integration in evolutionary science

Although the psychotherapies are fragmented in terms of different schools, identified processes, and interventions, there are also calls for a more pluralistic, cross-disciplinary, integrative, and consilient scientific approach (Gilbert & Kirby, 2019; Wilson, 1998). One grounding for this science is from insights into our origins; how and why we are built the

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way we are and suffer the maladies we do. An obvious reason for human suffering is because we are *biologically* created beings with built-in mechanisms for physical and psychological pain, decay, and death. It makes sense then to start the journey into understanding the causes, processes, alleviation, and prevention of mental suffering, by exploring the evolved nature of our basic motivational processes and needs, emotions, and cognitive competencies, as underpinned by evolved strategies and algorithms (Bernard, Mills, Swenson, & Walsh, 2005; Buss, 2015; Del Giudice, 2016; Dunbar, 2016; Gilbert, 1989, 1998, 2014; Wilson & Hayes, 2018). Deepening our understanding of our evolved range of possibilities and potentials, that are choreographed by the environment, and how modern culture can bring out the best and worst in us (Gilbert, 1989, 2016, 2018; Li, van Vugt, & Colarelli, 2017; Narvaez, 2017; Sapolsky, 2017), is essential for developing better therapies and preventions, and culturally sensitive ones (Edge & Lemetyinen, 2019). We will also need to better integrate new insights regarding our bodies as ecosystems whereby our diets, the ecology of the gut and exposure to microbes and viruses can play major roles in mental states (Dunn, 2011; Lima-Ojeda, Rupprecht, & Baghai, 2017). In addition, research is developing ways to use modern technologies to bring psychological insights and benefits to vast numbers of people, many of who may never have access to services (Bucci, Schwannaue, & Berry, 2019). Although only a few core themes can be covered here, this paper suggests that clinical psychology and psychotherapy of the 21st century be increasingly grounded in *an integrative, evolutionary and contextual, biopsychosocial science* (Gilbert, 1995, 2016).

Such considerations can help psychotherapists recognize the important implications of a socially contextualized, evolutionary psychology, how it offers counteracting paradigms to the over medicalization of mental distress, offers client psycho-education that is highly de-shaming, is a guide for understanding our dispositions and innate needs for certain types of social relationships, and points to improved ways of prevention of mental health difficulties and the promotion of well-being and prosocial behaviour (Atzil, Gao, Fradkin, & Barrett, 2018; Cassidy & Shaver, 2018; Conway & Slavich, 2017; Gilbert, 2009, 2018; Hari, 2018; Haslam, Jetten, Cruwys, Dingle, & Haslam, 2018; Lamers, Westerhof, Glas, & Bohlmeijer, 2015; Narvaez, 2017; Narvaez, Panksepp, Schore, & Gleason, 2013; Orford, 2008; Siegel, 2015; Wilson, 2011).

Pathways to the modern mind from the challenges of survival and reproduction

Evolutionary psychology helps us recognize that we are all part of the flow of life; just another gene-built species that has emerged on this planet at this time (Buss, 2015; Dunbar, 2016; Gilbert, 1989, 2009; Gilbert & Bailey, 2000; Wilson & Hayes, 2018). We did not choose any physical part of ourselves; to have two arms and legs, a set of internal organs, a brain that has all the capabilities it has for helpful or harmful behaviour. Nor did we choose our gender or the culture of our birth or how our brain was physiologically fine-tuned and choreographed by its social embeddedness (Atzil *et al.*, 2018; Cowan, Callaghan, Kan, & Richardson, 2016; Conway & Slavich, 2017; Kirby, Sampson, Day, Hayes, & Gilbert, 2019; Siegel, 2015). If I had been kidnapped as a 3-day-old baby into a violent drug gang, that version of Paul Gilbert would be very different to the one writing this paper; right down to epigenetics and the wiring of my brain. That version of Paul Gilbert might be impulsive, exploitative, harmful to others, possibly in prison, and certainly not preoccupied with compassion science. These are very important insights for

therapists to keep in mind (e.g., that the person in front of them is just one version of many) and to convey this to clients so they can begin to understand that in any one moment they are versions of multiple possible selves (potential patterns of mind) rather than 'collections of psychopathologies'. Indeed, we are all versions of multiple possible selves, emerging from patterns of information flow (Siegel, 2019).

Socially contextualized, evolutionary psychology enables us to understand that emotions and motives evolved because they solved contextual challenges to survival and reproduction (Buss, 2015; Nesse, 2019). Evolution operates on, if *A* do *B*, if *G* do *H*, stimulus-response *algorithms* that guide motives, emotions, and competencies; these are the elements of information flow in the service of survival and reproductive behaviours. Figure 1 outlines the two basic evolutionary challenges that over time have given rise to a complex, multitextured portfolio of human motives, emotions, competencies, and their phenotypes. Future psychotherapists will be increasingly informed about phenotypic variation. This is because evidence is emerging that phenotypic variation can be partly tracked to how early life 'caring and stable' versus 'uncaring and unstable' environments orientate individuals to different survival and reproductive strategies, called the life-history approach (Del Giudice, 2016). Such life histories are well known to affect vulnerability to different mental health problems and point to different types of intervention for different phenotypes (Atzil *et al.*, 2018; Kumsta, 2019). The question has always been: Do such backgrounds simply link to consciously available beliefs and schema or are we talking about something more fundamental, such as epigenetically sculptured phenotypes – and if so what are the implications for psychotherapy? (Kumsta, 2019).

An evolutionary focus

Many psychotherapies recognize the importance of evolutionary insights for understanding the mind (Gilbert & Kirby, 2019). While having insight into the phylogenetic and distal sources of the various types and functions of our emotion and motivation potentials is important, we need an evolutionary foundation for our science for another reason: *The brain was not designed*. It has been cobbled together to solve adaptive gene-centric problems of survival and reproduction (as per Figure 1; Buss, 2015; Davies, Krebs, & West, 2012; Dunbar, 2016). In fact, there are some very serious problems *built into* the

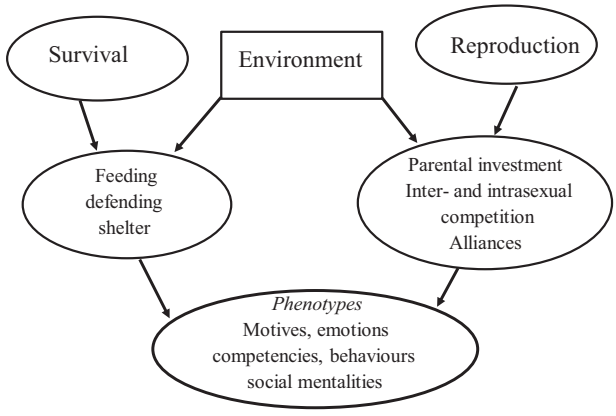

Figure 1. Evolutionary challenges and human phenotypes. Adapted from Gilbert (2018). With kind permission and Annwyn house.

human brain, so much so that Baron-Cohen (1997) called his book of readings The *Mal*adapted Mind.

Currently, there is no agreed nosology for classifying the different, evolved functions of the mind. Nonetheless, we can view minds as multifaceted, housing *motives and needs* that guide animals to life tasks, *emotions* that change the physical state of an animal according to the motive being pursued and local context, and *competencies,* both physical and cognitive, that enable and guide actions. When it comes to social behaviours, minds need to be able to send and decode complex social signals in order to co-create dynamic, reciprocal social roles such as for attachment, status, reproduction, or cooperative group living. Co-creating such roles requires fast changing, interactional dances utilizing specialist processing systems. These have been called *social mentalities* (Gilbert, 1989, 2005, 2014). A pictorial representation of these interacting processes is given in Figure 2 and will form a framework for the rest of the paper.

Clarity about the distinctions between motives, emotions, competencies, and behaviours and their evolved functions is crucial in psychotherapy because different individuals will require help with these different facets of mind. For example, some individuals have problems with emotion acceptance, tolerance and regulation; others have difficulties with motivation. While some are motivated to be prosocial, others are callous and antisocial (Basran, Pires, Matos, McEwan, & Gilbert, 2019; Gilbert, 2018; Sapolsky, 2017). In regard to cognitive competencies, some people are empathic and can mentalize, others cannot; some can become mindful and observe their mind, others struggle.

Not only do we have a multifaceted and multimotive mind, but as many of the early psychodynamic theories noted, it is subject to many complex conflicts between different motives, emotions, and belief systems, some of which are conscious, but many may not be (Abbass, 2015; Bargh, 2017; Gilbert, 1989, 2000; Huang & Bargh, 2014; Orenstein, 1986). This is a mind that, despite many millions of years of evolution, has all kinds of built-in glitches, responsible for creating maladaptive feedback loops, prone to mental health

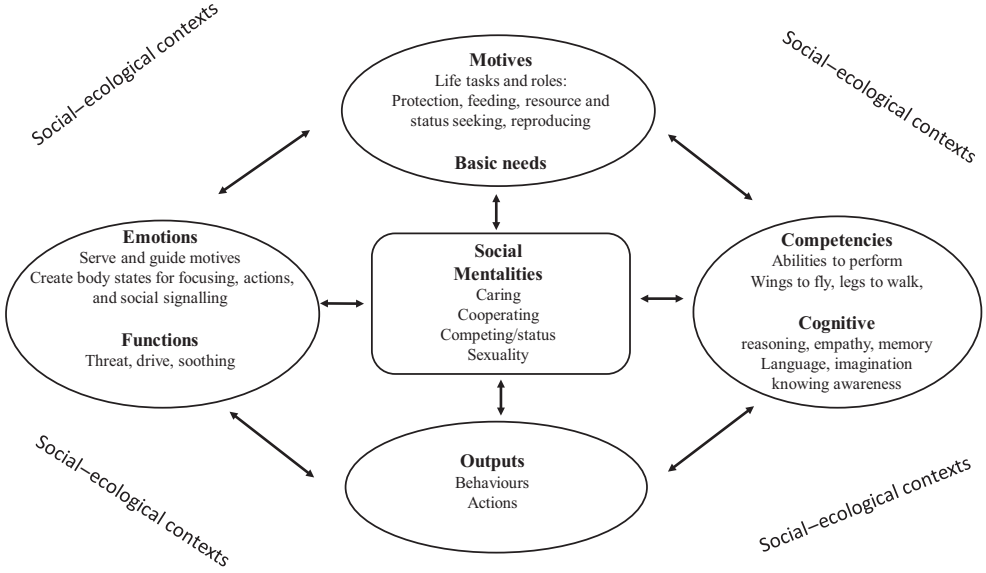

Figure 2. Relationships between the main domains of psychological functioning in social and ecological contexts.

problems, and capable of extraordinary viciousness to other living things, including humans (Gilbert, 1998, 2018). If you gave scientists 500 million years to *design* a body and brain, they would not come up with one that is so easily damaged, vulnerable to disease, rapidly decays and dies, often painfully, and can be so destructive to other living things.

Evolutionary functional analysis and explaining to clients why our minds are so tricky (poorly built)

Socially contextualized, evolutionary approaches to problems such as vulnerability to mental health problems and human callousness and viciousness are different to medical ones. Those tend to assume that bodies are well functioning until they go wrong, and then, they need to be fixed (Gilbert, 1998; Nesse & Williams, 1995). This has been extraordinarily successful for many human diseases and injures for which we should be extremely grateful. However, the difficulty comes when bodies are responding normally, as they evolved to do, to particular contexts (Nesse & Williams, 1995). As Nesse (2019) outlines, *there are good reasons to feel bad*, and we could add to 'act bad'. Anxiety, lowering of exploration and confidence, shutting, and hunkering down (depression), being wary of others (social anxiety and paranoia), helping others versus exploiting-harming others, all have their uses and payoffs (Baron-Cohen, 1997; Buss, 2015; Del Giudice, 2016; Gilbert, 2018). Many of our clients are unaware of the nature of their human archetypal potentials (evolved dispositions) they are born with. Some easily overidentify with them (fuse a sense of self with them), may feel personal shame for experiencing some of their proclivities, dissociate from them, or act them out harmfully.

As for prosocial and moral behaviour, the brain is again tricky. Moral behaviour has an evolutionary history behind it indicating that it was useful for helpful interactions between kin, partners, and allies (Krebs, 2015). Outside of those, and the social sanction of small group regulation, humans are not always moral by any means. While social learning and culture can do much to promote prosocial behaviour, we need the rule of law because (in larger groups) tragically humans find it so easy to be harmful to others (Gilbert, 2018; Sapolsky, 2017; Zimbardo, 2011). In fact, there are many ways to understand how and why the brain is so full of problems which need to be recognized by psychotherapists. The three big ones are constraints, trade-offs, and cultural mismatches.

Constraints

Evolution can only progress through changing small steps and adapting previous designs. It cannot go back to the drawing board and start again. Hence, many designs are compromises. For example, the crossing of the digestive and respiratory tracts exposes us to the danger of choking. The skeleton evolved in the sea as a coat hanger and is not well suited for upright walking, making us vulnerable to back, hip, and knee problems.

Humans have evolved a number of new, complex cognitive competencies but these can be recruited by phylogenetically much older motivational systems with helpful or harmful consequences (Gilbert, 1989, 2009, 2018; Sapolsky, 2017). We can use our new competencies to create medicine, cooperate, and build wonderful things, but the same brain can create slavery, horrendous weapons of war, ethnic cleansing, and torture. We can use our cognitive competencies to work out how to promote our own well-being but equally we can get locked into loops that drive us into depression and anxiety. The downside of these evolved, complex cognitive competencies is called a trade-off.

Trade-offs

Trade-offs refer to the way an advantage in one area can cause serious problems in another. There are different types. For example, one gene may give certain protection as in the case of malaria protection or lung mucous. But as that success grows, more and more individuals carry that gene until both parents have the gene in which case the offspring inherit both copies. When that happens malaria protection now becomes sickle-cell anaemia and mucus advantage becomes cystic fibrosis. Some forms of mental health difficulties may be like this.

Other examples of trade-offs include how defences work. For example, diarrhoea and vomiting are defences against pathogens; they are not the disease but if they are not regulated, they can kill you and therefore can be the target for intervention (Nesse & Williams, 1995). Many of our basic dispositions for anxiety, depression, paranoia, and antisocial behaviour, as well as various fantasies and lusts, are rooted in basic brain systems and processes (Baron-Cohen, 1997; Gilbert, 1998; Nesse, 2019; Panksepp, 1998). It is the activation and regulation of the processes that are important, rather than their inner potential. Problematically, the human brain is full of recent, rapidly put together trade-offs allowing our new cognitive competencies to, at times, run riot (Gilbert, 1998, 2009; Nesse, 2019; Sapolsky, 2017 see below). Helping clients understand this can be very de-shaming and re-focus on a new type of responsibility taking.

Trade-offs also exist in physical form with psychological consequences. For example, upright walking offers the advantages of freeing the hands and allowing a wider range of vision, but as noted gives rise to back, hip, and knee problems, and narrowed the birth canal at the time when the human baby's head was evolving intelligence and getting bigger. Two major consequences are that humans have the most dangerous and painful of births, with mothers and infants more likely to die from birth complications, compared to other primates. Second, babies are born considerably more immature than most other mammals and require far more post-birth caring, making them more vulnerable to problems in their developmental journey. One positive consequence was to increase the individuals involved with childcare. Most primates will not let another individual touch or hold their infant for some time whereas humans share their babies from birth. The multiplicity of (relatives as) caregivers possibly stimulated the evolution of empathic abilities (Hrdy, 2011). There is increasing evidence that rates of post-natal depression vary in relation to the kin and other forms of support women experience in the pre- and post-natal period (Hagen, 1999). This has important implications in the modern world where many mothers and children do not have easy access to multiple carers and supports (Narvaez, 2017). Indeed, it is now recognized that major contributing factors to vulnerability to mental health problems and antisocial behaviour arises from the poor quality of affectionate care in childhood (Atzil *et al.*, 2018; Cowan *et al.*, 2016; Music, 2019; Shonkoff *et al.*, 2012; Siegel, 2015) and in general (Hari, 2018; Haslam *et al.*, 2018).

Contextual mismatch

Our rapidly expanding intelligence created new agricultural-based cultures that had far-reaching consequences on our minds. There are a huge number of physical and mental health problems there are clearly linked to modern environments and evolution-cultural mismatches (Hari, 2018; Li *et al.*, 2017). The intervention of agriculture brought us into close contact with animals and their viruses. Obesity is an epidemic driven by having a body that evolved in food scarce environments now living with an unregulated food industry that has propelled our diets into high, fat sugar, and salt. Modern supermarkets (and sedentary

office working) reduce physical activity for finding food. For all the diets available, these are unlikely to impact on the epidemic of obesity; this needs to come from social and food production change. All the problems associated with drugs, drinking, and smoking (health and criminality) are clearly cultural. The young of many species need to be active early in life. Attention deficit disorder is partly related to the fact that we expect our children to be trapped in houses and schools for unreasonable time periods (Shelley-Tremblay & Rosen, 1996; Swanepoel, Music, Launer, & Reiss, 2017). Agriculture drove a vast expansion of group size, introducing new social dynamics controlled by resource accumulating, aggressive males, and many civilizations in history, and nations today are still in the grip of such individuals with serious consequences for all. Many species are tribal but with our intelligence, we can be callous, vicious, and threaten the world with nuclear and biological weapons (Gilbert, 2018; Sapolsky, 2017). Increasing group size introduced new psychologies of hierarchy, of the rich and poor, giving rise to huge disparities of power, influence, and wealth. The poor always suffer far greater physical and mental health problems than the rich. Further, today our basic human needs for close, stable, interconnected, social support systems are being replaced by increasing pressure to compete for social place that can be devoid of genuine, consistently available, friendly, caring human contact (Hari, 2018). Shame, sense of inferiority, exclusion, self-criticism, and many mental health difficulties result. Evolutionary contextual, biopsychosocial approaches help clients understand just how abnormal and depriving our modern environments can be, while at the same time acknowledging the technologies, physical pleasures, wonderful comforts and medicines they offer. Many therapists appreciate that while at times it is helpful to teach and practice acceptance we can also teach and practice non-acceptance! The next generation of therapists will need to do better at promoting social change and socially contextualizing our minds and needs (www.prosocial.world; Haslam *et al.*, 2018; Wilson, 2011).

Motives, social motives, and social mentalities

We can now turn to the specifics of the mind, starting with evolved motives. Motives are the fundamental steering mechanisms for all lifeforms supporting their survival and reproduction. Motives use phylogenetically built-in strategies and algorithms that link stimulus configurations to behavioural responses (if *A* do *B*, if *G* do *H*). Hence, motives come with *feature detectors* that enable animals to notice and pay attention to different stimuli (e.g., threat, food, sexual opportunity) and initiate appropriate responses (including certain types of emotional arousal and actions). The sight of potential food, a predator, or sexual opportunity will stimulate very different cognitions, emotions, and behaviours partly because of their physiologically prepared algorithms and systems. Importantly, motives also have *seeking functions* and orientate animals to take an interest in and *seek out* different stimuli in certain ways (Deckers, 2014; Knox, 2003; Marks, 1987). Hence, we can be *activated* by stimuli indicating food, threat, sexual and status opportunities or threat, but equally we can actively *seek out* food, sexual opportunity and social connections or ways to engage (overcome) threats, or avoid them. So, motives also underpin *striving*. When seeking and striving functions do not find their objects, problems can arise; hunger that does not find food; threat and safety seeking that does not find safety; and comfort seeking that does not find comfort (Gilbert *et al.*, 2007). Early life vulnerabilities can arise from a thwarting or blocking of innate seeking motives (Knox, 2003; Stevens, 1982). Crucial aspects of therapy can be helping clients articulate what different social motives and mentalities they are actually seeking, what they feel they need, what they are looking for and why, keeping in mind that sometimes these seeking

orientations are not fully conscious. Clients may not really know but have a sense of wanting and needing something to help them (Bargh, 2017; Freshwater & Robertson, 2002; Knox, 2003), especially seeking a safe haven and secure base (Holmes, 2014; Holmes & Slade, 2018; Music, 2019).

There is growing consensus on what the core, warm-blooded, live birth, mammalian motivational systems are. These relate to non-social motives such as avoiding harm, finding food, shelter, and maintaining body temperature within appropriate limits. *Social* motives evolve because they aid reproduction and survival and their success depends upon the actions of the individuals who are part of the relationship. Social motives therefore have to come with competencies for social communication that enables coordinated interactions – 'like dances' (Gilbert, 1992, 2005, 2014).

Amongst the most important *social* motives are: seeking out sexual partners and competing for sexual access, competing for resources, gaining or maintaining status and avoiding unwanted inferiority and oppression; forming alliances, cooperating and belonging to groups/tribes; providing care for young, and seeking out care and help, for example, from parents, relatives, and alliances (Baumeister & Leary, 1995; Buss, 2015; Cassidy & Shaver, 2018; Gilbert, 1989, 1992, 2017; Neel, Kenrick, White, & Neuberg, 2016).

Social motives as social mentalities

Social motives that depend on social communication and reciprocal interactions have been called *social mentalities,* giving rise to what has been called social mentality theory (SMT; Gilbert, 1989, 1995, 2005, 2017). Basically, securing any social motive *requires a partner* and the co-creation of a set of reciprocal interactional behavioural sequences that can be called an *interpersonal dance* (Gilbert, 1995). Individuals need to be able to send signals to, and decode signals from, partners rapidly in order to coordinate their behaviour to co-create the role. For example, the sexual displays of various animals would be useless unless there were those who are excited and responsive to them. The provision of care to an infant would be useless if the infant was not biologically set up to respond. Role creations are dances where partners are coordinating their behaviours with each other. Role mismatches activate the threat system, disengagement, coercion, or realignment. Although there is no agreed nosology of social mentalities, and the biosocial goals they serve, a rough outline of common evolved roles is given in Table 1.

There is growing empirical support for SMT. First, it has been known for a long time that the brain has special processing systems dedicated to social information. In a major review of the neurophysiological networks underpinning social cognition, Silston, Bassett, and Mobbs (2018) highlight a social mentality theme that social cognition is 'fleeting, subtle, contextual, abstract and often ambiguous' (p. 413) yet humans and other animals can operate, smoothly, moment-by-moment, in these extraordinary complex, fast, flows of social information and interactions. They identify a series of circuits such as those underpinning empathy, the default mode, metacognition, and social anticipation as essential to social behaviour. What SMT adds is that social animals need to *identify the type of social motive and social role* that they are being invited to co-create, are seeking to create or being forced into (Gilbert, 1989, 2005, 2014). To complicate matters, *different* motivational systems and hence types of role creation may be seeking expression at the same time but be in conflict (Gilbert, 2000; Huang & Bargh, 2014). A fundamental conflict for humans, that has been well articulated, is that of *getting along* versus *getting ahead*

Table 1. A brief guide to social mentalities

	Self as	Other as	Fears
Caring eliciting/ seeking	Needing input from other(s): care, protection safeness, reassurance, stimulation, guidance	Source of: care nurturance protection, safeness reassurance stimulus and guidance	Unavailable withdrawn withholding exploitation threatening harmful
Caregiving	Provider of: care, protection safeness, reassurance, stimulation, guidance	Recipient of: care, protection safeness, reassurance, stimulation, guidance	Overwhelmed, unable to provide, threat focused guilt
Corporation	Of value to others, sharing, appreciating contributing, helping	Valuing one's contribution, sharing, reciprocating appreciating	Cheating, non-appreciating or non-reciprocating, rejecting/shame
Competitive	Inferior–superior, more–less powerful harmful/benevolent	Inferior–superior, more–less powerful harmful/benevolent	Involuntary subordination, shame, marginalization, abused
Sexual	Attractive/desirable	Attractive desirable	Unattractive rejected

Note. Adapted from Gilbert, P. (1992). *The evolution of powerlessness*. London: Psychology Press.

(Wolfe, Lennox, & Cutler, 1986). Indeed, evolutionary psychology highlights the fact that conflict over issues of how much to help others versus help oneself, is deeply rooted. Behaviourists have long highlighted the fact that approach-avoidance conflicts are highly disorganizing of minds and create a whole range of psychological difficulties captured in the term experiential neurosis. Not all therapies, however, put the complexities of inner conscious and unconscious conflict central to their therapy. Therapies that do focus on motivational and emotional conflict help clients articulate different sides of the conflict in a variety of ways, such as by the therapeutic relationship, using chair work and behavioural acting techniques.

Social mentality theory suggests that mental health problems will differ according to the inner conflicts and patterns of social motives that are being thwarted or excessively pursued according to the contexts people are operating within. Exploring different patterns of depression, Keller and Nesse (2006) found that when motives were orientated to striving to succeed, failure was associated with feelings of pessimism and fatigue, whereas social relational losses were associated with crying, sadness, and seeking social support. Hence, both thwarted achievement striving and care seeking/relating may be pathways for depression but symptoms vary according to the mentality involved.

Derived from the social competition hypothesis of depression by Price (e.g., Price & Sloman, 1987; Price, Sloman, Gardner, Gilbert, & Rohde, 1994), social rank theory (Gilbert, 1989, 1992, 2005; Gilbert & Allan, 1998) focuses on the mental health problems associated with the social mentality that orientates attention and self-evaluation to competitively navigating of one's social place, status and flow of, and control of, social resources. A number of researchers have highlighted the fact that when we experience down rank stresses such as experiencing status defeats, thwarted ambitions, oppression, social criticisms, rejections and putdowns, attacks, or abuse that we cannot defend against, and/or are placed in involuntary subordination positions we cannot get away from

(entrapments), hunkering down and demobilizing into depression is (like learned helplessness) a defensive, if unpleasant, (evolved) strategy/solution (for reviews see Gilbert, 1992, 2001, 2005). When our heads are full of these signals in the form of *self*-attacks and criticisms, we trigger these innate defeat-state defences (Gilbert, 2013; Gilbert & Irons, 2005).

Problems in the competitive social mentality can be linked to difficulties with social comparison (feeling inferior and worthless) vulnerability to shame and self-criticism, especially when competing to avoid inferiority (Gilbert *et al.*, 2009). Social rank judgements are important for dealing with conflicts because individuals who feel inferior tend to blame themselves for difficulties, whereas those who feel superior blame others (Gilbert & Miles, 2000); anger is rarely expressed up rank (Fournier, Moskowitz, & Zuroff, 2002; Gilbert & Irons, 2005). Hence, self-criticism can be viewed in terms of its underlying motivational functions. Wetherall, Robb, and O'Connor (2019) highlighted the growing evidence that social rank theory offers important insights into vulnerabilities to mental health difficulties, and that with experiences of an unwanted sense of inferiority, depressive symptoms (and suicidal ideation/self-harm) increase. This has clear implications in societies that are accentuating individual competitiveness.

Some forms of competitive behaviour are clearly antisocial, linked to narcissistic drive, seeking status and specialness, and exploitation of others for one's own benefit (Basran *et al.*, 2019). Intergroup competitiveness also underpins prejudice, viciousness, war, and ethnic cleansing (Gilbert, 2018; Sapolsky, 2017). Figure 3 offers a simplified way to conceptualize the interplay of these two social mentalities for therapy, and how they might be measured. Also how to help people balance their social mentalities by, for example, reducing the harmful aspects of competitiveness and increasing the health benefits of compassion and prosociality (Petrocchi & Cheli, 2019).

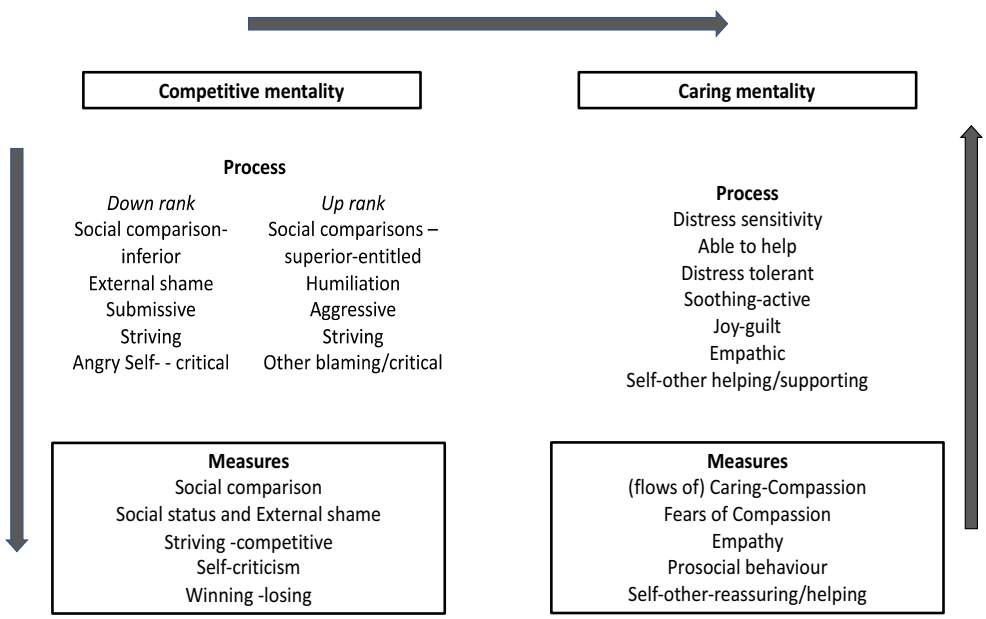

Figure 3. Outline of the competitive versus caring social mentality as a therapy focus. [Colour figure can be viewed at wileyonlinelibrary.com]

Hence, competitive mentalities will orientate individuals to attend, tune into, and process social information in particular ways linked to social rank and power dynamics. In contrast, caring/compassionate mentalities will orientate individuals to attend tune into and process social information in ways linked to caring behaviour, addressing needs and alleviating and preventing distress and suffering (Mayseless, 2016). These different mentalities have their own physiological signatures that impact on well-being and mental health difficulties.

Compassion focused therapy (CFT) was developed partly as a motivational switching therapy to help people who are overly identified with (fused with) a competitive, social rank, and self-focused orientation to life. It is not negative self-evaluation itself that causes mental health problems, it is the underlying (evolved) motivational and emotion systems that are linked to fears of exclusion, rejection, and isolation, which have physiological consequences (Gilbert, 1992, 2014). Helping people to switch into a caring and compassion focused social mentality to themselves and others has far-reaching effects on a range of physiological systems (Petrocchi & Cheli, 2019; Weng, Lapate, Stodola, Rogers, & Davidson, 2018; Weng *et al.*, 2013).

Mullen and O'Reilly (2018) used SMT to develop a map of the different types of social motivational problems that are associated with eating disorders. They outlined how SMT helps clinicians to understand the complex patterns of motives and emotions for this group of clients and therapy planning. Many psychotherapies have been well aware of the importance of co-created role interactions. Analysis of transference and countertransference interactions are examples, but they have not always linked them to specific, evolved social role formations. SMT helps therapists consider the kind of role relationship that is emerging and being co-created. Therapists and clients can find themselves experiencing motives and mental states that they may not want to experience, such as sexual desire, shame, fear, dislike, boredom, hostile dominance, urges it to rescue, or be rescued from a sense of inadequacy. While some clients respond well to cooperation, they may respond less well to obvious caring and compassion, if they are fearful of it (Gilbert & Mascaro, 2017; Liotti, 2017). Some clients invite therapists to be dominant and then try to earn approval by submissively doing what the therapist suggests. Others insist on self-reliance and find it hard to acknowledge that anybody could be helpful to them or experience gratitude. These are all examples of problematic role co-creations.

Liotti (2017) was amongst the first to introduce attachment theory into cognitive therapy in the 1980s and went on to utilize SMT to develop multimotivational therapy. He focused on how people engage in different, motivated role seeking patterns; feeling comfortable in some and less comfortable in others; and able to mentalize in some but not in others (Liotti & Gilbert, 2011). Some individuals are confident at taking leadership roles, being assertive and promoting their own self-interest, whereas others find that difficult. Some find caring for others and making empathic connections to others suffering relatively easy, but *self*-compassion and assertive behaviour are difficult. Narcissists can be the reverse. These motivational differences cannot be subsumed under concepts of values or beliefs, though they may be linked to them, because they are operating from evolved physiologically regulating systems, and may relate to different epigenetic profiles (Del Giudice, 2016).

Social mentalities and social needs

Space does not allow for detailed discussion of the many different models for basic physical and social motives and needs that have been put forward over the years, but they

include ones for: achievement, self-efficacy, control, affiliation, status, security, belonging, attachment, connectedness, competency, meaning, identity and self-determination, self-esteem – amongst many others. In the early 1940s, Maslow (1943) (who also viewed life as harsh and difficult) suggested that humans had an unfolding maturational-dependent set of needs. These included physiological needs, safety needs, the needs for belonging, self-esteem, and self-actualization. Socially contextualized, evolutionary psychology offers insights into the changing nature of human needs over the life cycle, from the cradle to grave (Ellis & Bjorklund, 2005). In addition, such a focus helps us keep in mind that therapy can facilitate a development process (Basseches & Mascolo, 2009).

It is well established that humans are born with specific needs from others in order to mature a range of physiological and psychological processes (Atzil *et al.*, 2018). These inputs are forms of (affiliative) social relating and stimulation, environments relatively free of high or prolonged stress, and stimulating environments that facilitate learning, play, and growth (Cacioppo, Capitanio, & Cacioppo, 2014; Cassidy & Shaver, 2018; Dunbar, 2016; Gilbert, 1995, 2009, 2015; Music, 2019; Narvaez, 2017; Narvaez *et al.*, 2013; Petrocchi & Cheli, 2019; Siegel, 2015, 2019). Attachment theorists highlight the fact that the adult is not only providing core needs for the infant/child but (in humans) requires empathic awareness and competencies to do it skilfully (Cassidy & Shaver, 2018; Music, 2019). These functions are to provide a *secure base* that offers protection, support for growth, and a *safe haven* that provides for emotion regulation, particularly soothing in the context of distress. Experiencing parents as available when needed, soothing when needed, encouraging when needed, validating when needed, along with the joy parents express 'in the being of the child' enables a child to develop positive internal working models of 'self as competent and lovable' and 'others as competent and caring' (Mikulincer & Shaver, 2016). Different therapies focus on different aspects of such developmental needs (See Banai, Mikulincer, & Shaver, 2005; Gilbert, 1992 for comparisons of Kohut and Bowlby). In addition, there have been major debates on the role siblings and peers play in children's maturation of self-confidence, emotion regulation, and values, linking to the social needs we have as adults.

When a child's basic needs for protection, security, guided stimulation, and affection are lacking or even abused, the developmental trajectory is very different. Threat system processing dominates the construction of the self-identity, interpersonal attentional sensitivity, vulnerability to mental health problems, and antisocial behaviour (Cassidy & Shaver, 2018; Cowan *et al.*, 2016; Del Giudice, 2016; Kumsta, 2019; Siegel, 2015). Holmes (2014) Hence, some aspects of psychotherapy involve the clients *search and need for a secure base and safe haven* within the therapeutic relationship, especially when these have been lacking in childhood. These can provide a needed context for change and growth enabling the client to develop the courage to explore difficult and frightening material (Holmes, 2014; Holmes & Slade, 2018; Knox, 2003; Mearns & Cooper, 2017). Hornstein and Eisenberger (2018) reviewed the evidence that the presence of 'support and safety figures' impacts both fear acquisitive and extinction. Engaging stressors with 'supportive others' verses alone impacts the physiological response to the stressor. Utilizing attachment theory and such research, CFT seeks to help the client create a sense of an internal secure base and safe haven as part of the cultivation of one's compassionate mind (Gilbert, 2000, 2009, 2010).

Central also are social mentalities and needs for a sense of belonging, identity, and peer support (Banai *et al.*, 2005; Baumeister & Leary, 1995). Many clients not only feel lost or disengaged in terms of their close and intimate attachment relationships, but also in terms of their sense of belonging. Be it at work or generally, there can difficulties in feeling valued, cooperating, and appreciated as a contributing member of their community (Gilbert, 1984; Hari, 2018). Loneliness percolates through many psychological difficulties (Cacioppo *et al.*,

2014; Hari, 2018). If you ask a depressed person, someone with severe anxiety or paranoia if they feel connected or alone, they will usually answer 'alone', with a sense of disconnectedness. Both physical and emotional aloneness have powerful, detrimental physiological, and psychological effects (Cacioppo *et al.*, 2014) and are a key focus in CFT.

Many commentators have noted that in our inner cities, young people without jobs or focus are trapped in environments that thwart their aspirations, need for respected social place, and opportunities to make contributions that are appreciated and valued (Hari, 2018). The feeling that one cannot make valued and appreciated contributions underpins some depressions (Gilbert, 1984). Many compassion focused therapies help people become compassionately involved with others so they feel they can make a valued contribution to the well-being of others (Stevens & Benjamin, 2018). Indeed, compassion for others is the main focus in the Mahayana traditions of motivations by which to live one's life (Dalai Lama 1995; Ricard, 2015). While the self-help movements are important, we must be cautious not to socially decontextualized people. As the World Health Organization suggests, 'Mental health is defined as a state of well-being in which every individual realizes his or her own potential, can cope with the normal stresses of life, can work productively and fruitfully, and is able to make a contribution to her or his community' (https://www.who.int/features/factfiles/mental_health/en/).

Despite the extraordinary importance of different human needs for development and growth, there is no agreed nosology of needs, and some psychotherapies ignore them altogether, including the maturational and development needs for therapy (Basseches & Mascolo, 2009; Music, 2019; Stevens, 1982). Therapies of the 21st century will need to develop more coherent, science of mind, models of human needs, how to assess them in any particular client, and the interventions to address them. The information is available but scattered across different models. Amongst the needs in psychotherapy are for a trusting, validating, supportive, encouraging, guiding, and informing therapeutic relationship (Gilbert, 2007; Holmes & Slade, 2018; Mearns & Cooper, 2017).

Emotions

Clarity of the distinctions between motives and emotions is essential (Gilbert, 2015). What can appear as an emotional disturbance can also be a motivational one. Whereas motives are guides for attention and behaviour over time, often throughout life, emotions are short-lived physiological changes of states that guide thinking and action in the service of motives. Without a motive, emotion may not arise. The more motives are activated the greater the emotional intensity, for example, of hope for, and joy at success, or anger or disappointment with failure. The strength of motives and emotions is linked. Both are also linked to needs; as Freshwater and Robertson (2002) ask, 'what needs may be underpinning those times when we flare up in anger or panic or collapse into hopelessness'? Salient too are the arguments on the causal and regulatory links between cognition and emotion (Haidt, 2001).

Recently, there have been important discussions about the evolutionary nature of our emotions. Researchers like Ekman and Friesen (1971) and Panksepp (1998, 2010) have suggested universal, evolved emotions with specific functions, such as anxiety, anger, joy, and surprise. These can be targets for intervention (Panksepp, Wright, Döbrössy, Schlaepfer, & Coenen, 2014). Barrett (2017) has raised concerns that emotions are not so fixed and categorical. People can experience them in different blends, different intensities, and express them in different ways according to culture, context and background states. Nonetheless, most psychotherapists will have some kind of map about

emotions that clients are struggling with. Some emotions can be used to (unconsciously) avoid emotions or needs; for example, individuals who typically respond with anger may struggle to process anxiety or sadness (Bargh, 2017). Ferster (1973) offered a classical conditioning account for how children acquire fears of certain emotions by how they are paired (e.g., anxiety with anger expression) and – how parents punish or reinforce them (Gilbert, 1992 for discussion). Some psychodynamic therapies focus specifically on using the therapeutic relationship to uncover and work through blocked off emotions like anger, with increasing evidence of effectiveness, particularly for psychosomatic clients (Abbass, 2015; Abbass, Kisely, & Kroenke, 2009). Most therapists working with emotions recognize the importance of facilitating exposure, experiencing, tolerating, making sense of, and acting on them appropriately (Greenberg, 2004, 2011; Leahy, 2015; Panksepp *et al.*, 2014). For various behavioural therapies for depressive disorders, it is facilitating *positive and reward* linked emotions that can be central. Although positive psychology has championed the importance of fostering well-being and positive emotion states, rather than just countering aversive ones (Seligman, Steen, Park, & Peterson, 2005), there is increasing recognition that some clients can be very frightened of different types of positive emotion and require 'desensitization' work. Particularly troublesome for some people can be the fears of affiliative emotions associated with being cared for and about. (Gilbert, McEwan, Catarino, & Baião, 2014; Gilbert *et al.*, 2013).

A complimentary, evolutionary, functional analysis of emotion suggests three major functions (Gilbert, 2005, 2009, 2010). First is the function of threat detection and defensive action. Second is the function of resource seeking and acquisition, and third is the function of rest and digest and allowing processes of calming, settling, contentment, feeling safe, and physiological regeneration. These different functions have different physiological underpinnings and different emotions. Threat emotions can include anger, anxiety, and disgust. Successful resource seeking can involve excitement and joyfulness. Rest and digest can be associated with feelings of contentment (non-seeking) and safeness (non-threat). Figure 4 offers a pictorial representation that is often used in CFT to help clients identify different emotion processing systems and how they operate within them.

All three systems can be regulated through social relationships. Threat and harm to, loss of, or conflicts with, people we care about stimulate the threat system. Relationships can be a source of great joy, pleasure, and encouragement, and social relationships can be

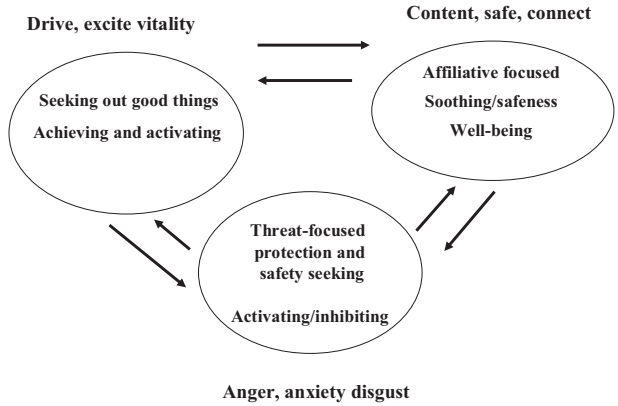

Figure 4. Three evolved functional affect regulation system. From Gilbert (2009). With kind permission from Little Brown.

a source of soothing, calming, and security. CFT highlights the fact that the rest and digest system has been adapted with the evolution of mammalian caring behaviour such that the vagus nerve as part of the parasympathetic system, can now be triggered through human interactions, particularly those of validation, care, kindness, and support (Gilbert, 1989, 2014; Porges, 2007). This functional, emotional system has been grossly underappreciated clinically but is increasingly becoming a focus for some integrative therapies, helping clients to access and cultivate this system using breathing, posture, behavioural and imagery practices (Kirby, Doty, Petrocchi, & Gilbert, 2017; Porges, 2007). This also helps regulate the other two emotional processing systems. Directly working to improve parasympathetic tone also improves prosocial behaviour (Bornemann, Kok, Böckler, & Singer, 2016).

The cognitive revolution of two million years. An Aladdin's cave of competencies

Turning now to evolved competencies, these are the faculties that allow motives and emotions to be acted on. For example, birds need wings to fly, and some have competencies to detect magnetic fields, flying thousands of miles to the same place each migration. Along with upright walking, the most fundamental evolutionary human change in the last two million years has been the evolution of *human cognitive competencies* (Brüne & Brüne-Cohrs, 2006; Dunbar, 2008, 2014, 2016; Kappeler & Silk, 2010; Suddendorf, 2018; Suddendorf & Corballis, 2007; Tomasello & Rakoczy, 2003). The challenges that drove such evolution were mostly social. Good relationships with conspecifics buffer against the stresses of group living, reduce conflicts, facilitate grooming and mutual support, and enable opportunities for sharing and cooperation (Dunbar, 2014; Kappeler & Silk, 2010; Van Schaik & Burkart, 2010), all of which have practical *and* physiological benefits (Petrocchi & Cheli, 2019). This is called the *social brain hypothesis* (Dunbar, 2008, 2010, 2014, 2016; Petrocchi & Cheli, 2019). Figure 5 gives a brief overview of the potential history of the evolution of human cognitive competencies.

Due to space limitation, I will just touch on a few of these competencies and make a plea to develop a fuller nosology of the multiple, cognitive competencies now available to us. All these competencies noted below are interdependent, in that improvement of one can improve the others. Each one can be a focus for specific therapeutic interventions.

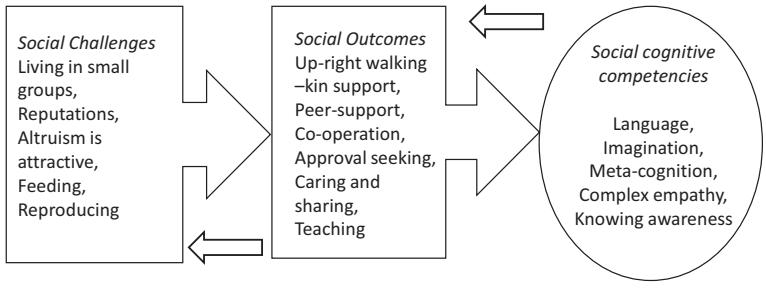

Figure 5. Evolution of the social brain and human social cognitive competencies.

Language

One obvious, specific human competency is language (Pinker, 2003). Language provides new competencies for systemic reasoning, enabling us to build complex models of the world, learn about complex relationships between objects and people, have a sense of past and future, and convey huge amounts of information to each other. It enables narrative, storytelling (of past and future), and opportunities to map and locate our sense of self in a sea of other minds and relationships. Acceptance Commitment Therapy has articulated some of the implications of human language with the notion of *relational frames* (Hayes, Barnes-Holmes, & Roche, 2002; Luoma & Hayes, 2017). While language is a remarkable competency it is often the motives and emotions that texture it that carry the core emotional impact (Greenberg, 2011).

Reasoning

From the early Greek philosophers to the modern-day cognitive therapists, competencies for reasoning have been regarded as central to emotion and behaviour. There are now a huge variety of models of reasoning, linked to attributions of causality, belief and attitude formation, through to various forms of metacognition. However, conscious cognition can be a late stage in processing (Bargh, 2017) and affect driven (Greenberg, 2011; Haidt, 2001). Some theorists have suggested *dual process* systems distinguishing between fast, automatic, and emotion-controlled systems in contrast to deliberate, reflective cognitively controlled systems (Epstein, Lipson, Holstein, & Huh, 1992; Power & Brewin, 1991). Barnard and Teasdale (1991) distinguish between implicational and propositional reasoning and thinking, suggesting different specialized interacting subprocessing systems. Reasoning then is multifaceted and more complex than sometimes portrayed.

Imagination

Imagery is the bedrock of human *creativity* (Singer, 2006). Science and art depend on our ability for the complex, time-expansive competencies of imagery that do not depend on language. We can play scenarios in our minds, creating virtual realities of possibilities. We can anticipate dangers without having to experience them. We do not do the same things repeatedly, but want to change and improve them and can imagine how; it may have been this creativity that separated us from Neanderthals. We can imagine the outcomes of our behaviour on the minds of others. We can deliberately create images to trigger physiological change, as in sexual fantasy. Imagination gives rise to future thinking whereby we can imagine different outcomes for the future (Suddendorf, 2018). Such thinking can be the basis of hope or despair, the intellectual hunting ground of many schools of philosophy. People can be encouraged, despondent, or terrified by what they imagine. Indeed, some forms of reasoning may depend on imaging. Therapists use (guided) imagery in a host of different ways. Some work with archetypes and dreams with guided imagery (Knox, 2003; Stevens, 1982). Cognitive therapists suggest imagery is more powerful than verbal interventions partly because of its visceral and physiological impacts (Hackmann, Bennett-Levy, & Holmes, 2011).

Complex integrative thinking

Humans have a different type of brain to other primates in their ability to handle multiple domains of information at the same time. For example, consider driving a car, where we

are simultaneously moving at speed, paying attention to a lot of visual information that is rapidly changing in terms of road conditions and other drivers, changing gears, checking satnav, braking, and having a conversation with the person next to us! We can do this for hours on end! This integrative complexity links to memory systems and motor dexterity. Consider what is necessary to learn to play a Rachmaninoff piano concerto (Gilbert, 2009). Such thinking is facilitated in safe environments but can struggle under high threat. Again these skills are not language dependent but are a fundamental property of the human brain. Equally, when we are confronted by a mass of information, from internal and external sources that we cannot integrate, we can feel overwhelmed, stressed, and disorientated. Sometimes psychotherapy facilitates an ability to slow down and enable the integration of complex and at times conflictual information flow (Siegel, 2019).

Self-monitoring

Subjective self-awareness is a relatively new competency that facilitates self-monitoring in new ways (Sedikides & Skowronski, 1997). We can monitor anything, from our pulse rate, thoughts, emotions, plans and desires, impacts on others, judge them as either good or bad, and then (try to) enhance, change or avoid them. We can create an 'ideal' sense of self, a self we want to be and then match it to the reality. Having too big a gap between actual and ideal can ignite frustration, disappointment, and at times launch self-criticism. Self-criticism could not arise without this complex capacity for self-monitoring (Gilbert, 2009).

Knowing awareness

This is a huge area in the study of consciousness that is extremely important for psychotherapy, although often taken for granted. We have a *consciousness of being conscious* which gives rise to a special kind of imagination and insight into the nature of our minds. Indeed, mindfulness, so core to the contemplative traditions, would be impossible without it (Germer, Siegel, & Fulton, 2016; Khoury *et al.*, 2013). You cannot teach monkeys to be mindful, whereas we can deliberately 'on purpose' bring our attention to observe our own minds in the present moment. This *knowing awareness* also gives rise to *knowing intentionality*. For example, no animal can deliberately choose to practice skills *knowingly* aware that they intend to improve their skill. Lions do not wake up in the morning to go circuit training to be faster hunters. We are only just beginning to understand the implications of a mind that is conscious of being conscious and can become an observer of itself. Crucially, this competency also allows us to not be passive actors of what turns up in the mind, of our archetypal dictates, but to have a discerning attitude about what to act out and what not; what to cultivate and what not (Gilbert & Choden, 2013; Ricard, 2015).

Theory of mind, empathy, and mentalizing

The evolution of abilities to read the intentions and emotions of others, known as theory of mind, was fundamental to the evolution of social intelligence (Brüne & Brüne-Cohrs, 2006). While other animals have some competencies for empathy and caring (Preston & de Waal, 2002) because of our competencies for imagination and reasoning, humans can deliberately and knowingly choose to try to work out what's going on in the minds of others (Batson, 2017). Indeed, there is a specialized therapy that is dedicated to

mentalization and forms of empathy training (Bateman & Fonagy, 2016). These competencies enable inner reflection, on our own motives and emotions, understanding their origins and functions and the impacts we have on the minds of others and they on us.

Teaching

The integrated function of many of the competencies above enable us to teach in extraordinary ways that far exceeds anything other animals can do. Gilbert (1989) suggested that teaching (parent to child, ally to ally) was central to much of human development and that we evolved many of the competencies we have, partly because of its benefits, sharing knowledge, and showing others how to do things. It is also fundamental in psychotherapy. Nor should we underestimate *the motivation* to teach as being central. Today, the Internet is awash with videos of people who simply want to share their knowledge and teach others, be it how to cook, play golf or guitar, or study for a degree. Teaching is linked into the importance of feeling esteemed and appreciated, having something to offer (and see Stevens & Benjamin, 2018). There is also the question of being open to being taught, how and by whom, which has clear implications for psychotherapy. To what extent are clients open to learning from the minds of others? This is related to what has been called 'epistemic trust' which can be crucial to the therapeutic relationship (Fonagy & Allison, 2014)

Embodied cognition

One of the major challenges for understanding how our new cognitive competencies operate in and through evolved body/brain systems is to 'embody' them. We create (felt) meaning and experience the world, with what has been called embodied cognition (Gjelsvik, Lovric, & Williams, 2018). This suggests that our styles of processing are crucially dependent on, arise from, and part regulate, evolved (neuro)physiological processes. This is central to many therapies now (Gilbert, 2010; Rothschild, 2003; Van der Kolk, 2014). These therapies suggest that if individuals are unable to access key physiological processing mechanism (e.g., the vagus nerve, oxytocin, pathways in the frontal cortex) certain forms of affect regulation will be difficult for them. Thus, a core aspect of such therapies is to integrate evidence-based practices that have been shown to help the systems develop and become available to clients.

Overview

Although the 'cognitive' therapies have made huge inroads into understanding how some forms of thinking can be helpful or harmful, surprisingly we have not developed a nosology of the cognitive competencies that have evolved over the last two million years. This is a task for the future including specific training for different competencies (e.g., empathy, imagination, mindfulness, sensory-motor awareness) and how to use and train different competencies therapeutically. This is especially important in view of new work showing that specific practices (e.g., mindfulness, empathy, and compassion training) effect different brain systems (Valk *et al.*, 2017).

Conclusion

This paper explored the nature of our multifaceted minds and hence why our therapies need to become far more multifaceted than they are at present. The basic premise of this paper is that fragmentation and tribalism in the psychotherapies can be addressed using basic science and embedding our understanding of process and change in a genuine *integrative, evolutionary, contextual biopsychosocial science* (Gilbert, 1995, 2016; Rutter, 1987). In addition 'the sciences' are increasingly offering the basis for personally tailored interventions. For psychotherapy, this implies that some individuals will need help with motivation, others with emotional recognition and tolerance, others with competencies like empathy and mentalization, others with coming to terms with the past, and others with more prosocial styles of socially relating to others as in compassion training, and various combinations of these. Many will need help building new physiology capacities, given what we now know about neurogenesis and neuroplasticity.

Important too is that we have known for a long time that mental health and prosocial behaviour and their physiological underpinnings are linked to contextual issues, particularly, but not only when young. Western therapies, that have developed and tested their therapies on certain narrow social groups, have overemphasized brains as autonomous entities, that can be changed with autonomous ways, like an athlete may train their body. In fact, we are evolved to be, and function as, minds in social networks. The therapies and therapists of the future will be far more socially contextualized, multifaceted, and focused on how to harness the compassionate and prosocial between us and within us.

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