Reimagining the subconscious: A proposal for a revised understanding

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This paper seeks to establish the groundwork for a theory that has the potential to significantly impact various forms of psychological therapy. Prior to the research conducted on Brain Working Recursive Therapy, the notion of subconscious processes as the primary drivers of human behavior was widely accepted within the field of psychology, albeit without much critical scrutiny. However, this investigation prompted a re-evaluation of the concept of the "hidden" aspects of the psyche. During the time in which the research was conducted, there was a fascination with the unknown and mysterious, which made the concept of subconscious processes appealing since it appeared to account for behaviour that was otherwise unexplainable. However, the concept itself lacks a unified definition; making it abstract and impossible to observe. If asked, a hundred different psychologists would likely provide a hundred different interpretations of the concept; including the iceberg and hamburger models. The traditional depiction of subconscious processes is that they underlie irrational behaviour that individuals cannot justify, often due to repressed memories or hidden impulses. However, this portrayal is incomplete, and the elusive nature of the concept renders it challenging to fully comprehend.

Keywords: behaviour; brain; cognitive process; psyche; subconscious

The major problem with the subconscious is that it does not truly exist and was simply a phrase coined by Pierre Janet in 1889 to account for what was going on in the human psyche when it could not be accounted for by any other means (Bühler & Heim, 2009). Most people mistakenly attribute it to Sigmund Freud or Carl Jung and it has become a staple part of just about every psychological therapy that was ever created. Every training course, every coach, trainer and public speaker refers to the concept with their students, clients and audiences (Cambray & Sawin, 2018).

The notion in question was, undeniably, "of its time". However, it is important to bear in mind that the period under consideration was the 19thcentury, an era prior to women's suffrage, the advent of air travel, and even before the conception of radio technology. During this time, there existed a pervasive fascination with the mysterious, and as such, the concept in question was readily embraced, particularly as it purported to account for otherwise inexplicable phenomena. Nonetheless, the crux of the issue is that this idea remains elusive and amorphous, defying any unifying definition, and indeed, any observation as an actual, empirical entity. Were one to query one hundred different psychologists as to their respective interpretations of the concept, the result would likely yield one hundred divergent answers, including the iceberg and hamburger models. As for what it does, the standard description is that if an individual is doing something irrational that they cannot justify, it is associated in some way with their subconscious processes, perhaps because of a buried memory or hidden impulse (Korsgaard, 1986).

Perhaps one of the most unhelpful aspects of the concept of the "subconscious" is the persistent association, even among those undergoing therapeutic interventions, with an obscure, vast, and inscrutable component of the psyche, which eludes any clear description. This portrayal evokes the impression of a fragmented entity, endowed with its own will and beyond the bounds of conscious control, only susceptible to modification through a variety of therapeutic techniques, each of which utilises a distinctive approach to accessing it. Yet, these strategies rely on a range of formulas, none of which corresponds entirely with the nebulous idea. From hypnosis and tapping certain areas of the body, to maintaining a daily journal (Mohamed et al., 2023), meditation, regulating breathing, exploring semantics, and tracking eye movement (Field & Cottrell, 2011), all of these interventions demonstrate some efficacy. However, none fully encapsulate the concept and their limited success rates are evidenced by the unreasonably high rates of relapse associated with many of these approaches.

There is a parallel between all this and the early days of astronomy, when the majority made all manner of tweaks and complex calculations to explain how the earth was the centre of the Universe and the planets revolved around it. When Nicolaus Copernicus proposed, in 1543 that the earth and the planets revolved around the sun, it was a hundred more years before the notion was accepted (Kotze, 2022). In those days, that the earth was the centre of everything seemed so entirely natural that anything else was at least unlikely, and possibly even some form of heresy. It was what seemed obvious, what everybody had always believed and what was, therefore, always taught. Eventually, it was recognised that Earth really was *not* the centre of the Universe, and perhaps it is now time for a similar paradigm shift about the nature of what lies beneath the level of conscious thought and awareness.

It is evident that, if any replacement concept for the notion of a subconscious is to be taken seriously, there must be an explanation about how and why there are psychological processes and events happening of which there is no conscious awareness. Pierre Janet, had he been fully aware of its function, would almost certainly have decided that the answer lay in the most ancient part of the physical brain, the Lizard Brain or Reptilian Brain (Naumann et al., 2015). It is not a single lobe or part but is comprised of the brainstem, with its limbic system and cerebellum, the latter containing around 80% of the total of the brain's neurones, though they are smaller and simpler than the others in the brain, granular, and incredibly fast (Geminiani et al., 2018). Although it has been studied since the late eighteenth century, the cerebellum was long thought to be involved mainly with fine motor control and balance (although for a short period it was considered to be the seat of sexuality). But the latest research indicates that it is actually a highly complex organ in its own right (it has in the past been labelled the "little brain") and it is connected to almost every other part of the main organ and is essentially a prediction module complete with error-checking. It is a complex safety assessment system that does almost all, if not all, of what Janet attributed to the "subconscious". Because it is not just a single part of the brain, it is best referred to in therapy as the "reptilian complex" and for the purposes of this paper, it will be taken to include the entire limbic system (Prince, 1908).

If the theory is correct, there could be an advantage in using the concept of the "reptilian brain" as opposed to the abstract idea of the "subconscious" in therapy. This is because the "reptilian brain" is a physical object, which allows for a consistent description and understanding of its function. Furthermore, it has a tangible physical presence, unlike the abstract and vast idea of the "subconscious".

In therapy, referring to the "lizard brain" or "reptilian complex" would enable the client's thoughts to directly focus on the specific area of the body that requires attention during therapy. This approach can also help to reduce the likelihood of confusion or misunderstanding in the client's mind, leading to less resistance during therapy sessions. Overall, the use of the "reptilian brain" concept in therapy may offer a more tangible and consistent framework for understanding and addressing the physical and emotional aspects of therapy (Straughan, 2020).

This paper is not about to suggest the simple expedient of using the term "reptilian complex" instead of "subconscious", since there is more involved than what could be considered as a simple 'straight swap". It goes far deeper than that and there is a need to clearly understand its function, since the belief and confidence of the therapist is closely aligned with the success or otherwise of therapy. There is also a need to understand that for the client, a sense of purpose is important to ensure that the purpose of life (i.e., survival) is being relayed to the reptilian complex as being fulfilled, more of which later. The best, and probably only, way to gain such an understanding is to start at the very beginning.

In the beginning

The origins of the modern human brain are 550 million years ago in an ocean floor dweller called Dicksoniaceae, that was eventually confirmed as being the first example of terrestrial animals, a sentient being, as opposed to lichens, sponges and protozoa (Zhang et al., 2023). It is the ancestor of all animal life today, though it is impossible to ascertain from fossils whether or not it had a brain that we would recognise as such, and the first animals on earth with a truly recognisable brain were jawless fish, around 500 million years ago. It was in those early creatures that the true purpose of life developed, the same purpose that drives all life today: survival of self, and survival of life. It is a simple paradigm: eat, sleep, hunt, breed when possible and do the first three in order to stay alive as long as possible to do the fourth whenever the opportunity arises. As other creatures gradually came into being, a fight-flight response was developed as part of the process of staying alive as long as possible.

These early brains were similar to the reptilian complex, incapable of such sophistication as reasoned thought, and the function was solely for the survival of self and the species. Even the first land creatures, the tetrapods of around 400 million years ago still had that same simple brain with the one single objective of survival and though it was more developed by this stage, it remained as just the brainstem and cerebellum (George & Blieck, 2011). This was about the same time that breeding via sexual coupling evolved and hunting was then no longer just for food, but also for the opportunity to breed. Functionally, though, that would have been, and still most often is, the conscious pursuit of sexual gratification – the reward for the pursuit – rather than the evolved intent on the production of progeny.

It was not until around 200 million years or so ago that the next stage of brain evolution occurred, though there are gaps in the fossil chain and the stages leading up to it are unclear. This was the paleomammalian complex, also known as the limbic lobe (Kundra et al., 2014), in the first mammals, that were tiny shrew-like creatures with a far more sophisticated limbic system than previously (Stefanello, 2023). It functioned only via the neural input from the reptilian complex, being essentially an upgrade, not a replacement; nature does not replace a perfectly functioning system with a newer version as a result of evolution, instead enhancing functions or adding organic material as in this case. Therefore, it still had no reasoning power and no conscious awareness, just being driven purely by that primitive life purpose: eat, sleep, hunt, breed and avoid or defeat threat when necessary.

These creatures are our distant ancestors and although removed many times by the branches on the tree of life, we still possess that same early brain, the 500-million-year-old reptilian complex with its relatively modern overlay of the limbic lobe/paleomammalian complex. It still functions within us

and is still the first responder to stimuli from the world around us and it begins to react to those stimuli immediately, just as it always has done.

From this point on, there was a continual evolution of the brain as mammals became more complex (Luppi et al., 2022), though the human brain as we know it did not appear until around 300,000 years ago. The latest "version" was probably as recently as 100,000 years ago (Pinson et al., 2022)) and by now, it was a sophisticated organ with the "theory of mind" – the appreciation of what others might do. These early people had developed a sense of awareness, emotional responses, planning and reasoning abilities, tool-making skills, and the potential for intrapersonal communication. But their brain was still driven by that simple reptilian complex, still with the sleep, eat, hunt and breed purpose in life, and little else. The fittest and the fastest still did most of the surviving and therefore most of the breeding, and nothing was about to change anytime soon. Instinct prevailed and the key to survival was simply to follow the ancient instincts to fulfil the purpose of life.

During this era, individuals roamed freely and acted according to their own will. Life was relatively uncomplicated at this stage; hunt for sustenance, consume, rest, procreate and cope with danger. It was during this period that the "freeze" response emerged, likely due to the more complex brain requiring additional time to assess the situation. However, a possible inconsistency arises since numerous "lower" animals, lacking the capacity for logical reasoning, tend to freeze in the face of potential threats to their survival. Although no studies have investigated this phenomenon, it is essential to acknowledge its significance to the human animal. It is at this juncture that we begin to comprehend that our functioning is governed not by the "subconscious", but by the reptilian complex, based on the simple tripartite process that originated over 500 million years ago: (1) determine that the environment is secure and proceed with one's goals; (2) discern that the environment is hazardous, resulting in the experience of fear and initiating action; and (3) observe that the environment is unfamiliar, which necessitates waiting for additional information.

This might seem too simplistic at first but as this paper progresses, it will show how those three responses underpin the entire experience of life. Simply, if the situation is neutral or perfectly under control, the environment is safe and we experience nothing to the contrary; if any aspect of it threatens unplanned or unwanted change, it is unsafe and a call to action in the shape of anxiety (or its concentrate, fear) is the response; if it is unrecognised, it is potentially unsafe and demands the entire focus of attention to decide whether or not action is needed.

Memory

A potential argument against the notion that what has always been described as "the subconscious" is actually the reptilian complex, is that the organ is nowhere big enough to store a lifetime's memories, and indeed it is not, any more than the rest of the brain is. The argument is exacerbated by the fact that the subconscious is often perceived as a vast repository of everything we have ever experienced, even "every full stop and comma", while the reptilian complex is measurably small. From time to time an article is published stating that scientists have discovered where memories are stored, but what they are talking about is what part of the neural system is active when memories are recalled.

It is tempting to imagine that memories are stored intact, in the same way as in a computer; but there is a major difference, in that memory in a computer is physical, while memory in the brain is a process. The processes of memory are not clearly understood, though it is certain is that nothing is stored in its entirety but in some way coded so that each individual element is made available for recall when we need it (Radvansky et al., 2022). An important aspect of this is that the more strongly an event relates to an individual's life, to their life experience, the more emotion it is likely to generate, and the stronger the emotion the greater the longevity of the memory. Hence, a 60-second event where there was real fear, whatever the cause, will be recalled in vividly clear detail for many years, while a 60-second everyday conversation with a business colleague soon fades. A recall that a conversation actually happened will last longer, though eventually even that fact will fade, possibly leaving a few remnants if there was anything of more than average importance. Similarly, with even the most exciting movie that has had you on holding your breath on the edge of your seat; no matter what is apparently happening to the characters in the film, it is not a threat to *your* existence but to that of somebody else. In a relatively short time, the event of watching the film can easily be recalled, but the content eventually fades to the point that it can even sometimes seem as if it is an entirely different script from that which is remembered.

So, memories are not stored as an intact event, but as a series of codes, the manner of which has not yet been accurately defined. This coding process is why the recall of any one event varies according to what is happening when the recall is made – whatever triggered the reptilian complex will activate the relevant neural pathways associated with that trigger situation, while taking every other stimulus into account. This means that when a client recalls an event in a therapist's office, it will have different elements, either visual, auditory or emotional, than if it was being recalled in a conversation with a stranger, a child, or an individual who was known to be disinterested in the subject matter. It is almost certain that a degree of confabulation, possibly even based on vicarious experience, will take place. This is to "fill in" areas that are actually incomplete or not fully understood, or perhaps just to impress the listener to the narrative. Rather oddly, those confabulations are likely to be eventually refined and fully incorporated into the original event soundly enough that the individual will not unusually perceive them as being a genuine part of the original.

As for how the reptilian complex reconstructs those code fragments into something representing the original event and then "projects" them into consciousness is still a mystery, though it is evident that the hippocampus (part of the brainstem) is involved to a large extent (Miller, 2005). It is important to recognise that the reptilian complex responds to all stimuli and compares them with all previously stored memory codes and outcomes in order to trigger an appropriate response for survival.

So, an individual who has served in the armed forces with a traumatic battlefield experience might respond to a car engine backfire with extreme anxiety and a profound physical response, rather than the more usual startle of a civilian, as the reptilian complex accesses the recall of being shot at. They might also experience a sweeping feeling of shame if they felt they had failed to support colleagues who had suffered injury or death as a result. That they are not on the battlefield at the time of the car backfiring is of no consequence to the reptilian complex since it has reacted to the sound with that "unsafe" reaction of the tripartite response. To put it simply: if a stimulus triggers the recall of a situation that constituted a threat at the time it occurred, and which has not been resolved, it will trigger an "unsafe" response, along with what would be an appropriate behaviour if that threat was current.

The tenet of the foregoing paragraph (which is the briefest possible description of an enormously complex process involving, among other situations, the possibility of posttraumatic stress disorder) is that the reptilian complex governs the human response to every waking moment dependent upon the codes, the fragments of memory, that are stored within it.

Everyday life

It is often claimed that we exit the womb with only two fears: of loudness and falling; but it is more likely that these are solely the main fears that can be easily observed in experiment, and it is entirely possible that we have more innate responses than just those two (Ren & Tao, 2020). However, while the reptilian complex quietly transmits the code for "safe" to the amygdala (which is most of the time for most people) we are simply not aware of any anxiety, even though every input is being tested for possible threat in the background.

Life is more complex than that, though, sometimes leading to the perception of threat where none exists. Millions of years of evolution, where the rapid recognition of threat was more important that recognition of anything approaching pleasure, has resulted in the human animal becoming more readily aware of the negative than of the positive (Relojo & dela Rosa, 2017). Added to this, the human intellect learns at a very early age that things are not always as they seem, that people lie to gain advantage, that "downsides" are often hidden; all of which possibly triggers innate fears of a hidden predator waiting to strike. The result is the immediate rise of distrust in many, maybe most, individuals when encountering something that appears to be exemplary and totally free from threat, be it a product, a person, or just an idea. The response is commonly that it is "just too good to be true" and cannot be trusted, so one must look for the catch. So profoundly embedded is this concept that if an individual claim to have discovered that catch, many people will immediately believe it without seeking confirmation. Then the "bad news messenger" effect ensures that they rush to spread the information as widely and as soon as possible and to many more of their circle than if they had been told that *whatever-it-was* was every bit as outstanding as was being claimed. There are, though, at least three situations which will bypass anxiety and doubt: (1) The product or concept

persists, and people begin to accept that there may not be a threat present after all (because it has been there for a long time, and nobody has died) and start to investigate. This persistence is the basis, of course, of the techniques used by both honest advertisers and confidence tricksters as they add further inducements to the concept; (2) The promoter of the idea or concept engages with their audience so thoroughly that "tribal trust" is invoked by the creation of a feeling that they are a friend or at least a trusted and knowledgeable acquaintance and are therefore not a threat; (3) It becomes evident that others have taken up the offer and far from being dead, their lives seem to have been in some way enhanced, when the fear of others having an advantage can sometimes provide impetus to overcome the initial resistance. This probably is based on epigenetic memories of tribes with better weapons.

Those three responses are, themselves, the product of the fear-based psyche, in each case the well-known situation illustrated by the modern acronym "FOMO": the fear of missing out. Although it can be hard to grasp at first, fear-based behaviour invisibly controls a huge amount of our everyday life, perhaps even all of it in one way or another. We are, at the time, completely unaware of how it governs such elements as: (a) choice of life partner; (2) career; (3) where we decide to live; (4) what we decide to wear; (5) the "balance of power" in our relationships – all of them; (6) the way we present ourselves to the world at large; (7) response to adversity.

That list could be multiplied by a factor of ten and it would still be too short, since just about every decision in life is probably based on the fear, in one form or another, of what might happen otherwise. This applies to the list above. (1) Fear of being alone often leads to a wrong choice, as also does fear of disapproval from others because of unsuitable social status. Also, it is here that the "too good to be true" concept will often raise unfounded suspicion; (2) Fear of insecurity results in the selection of reliable but mundane employment, and fear of looking foolish leads to selection of a low-status employment; (3) Multiple fears about finance, travel, safety, location, resale and more; (4) Fear of looking either flashy, "common" or "ordinary" depending on personality; (5) Fear of being controlled but also of being seen as controlling applies to the workplace and the home (Pilao et al., 2019); (6) Fear that we are not liked or respected or taken account of; (7) Fear of retaliation if we respond, or of some form of subjugation if we do not. These are generalisations, of course, but they will be accurate most of the time, and when they are not, it is likely to be the case that it is simply because a different fear has been activated.

An individual makes choices based on a balance between their need for autonomy and their urge for safety (Chernev, 2004). Even the behaviour of the one who appears be a fearless and intrepid adventurer may be based on the fear of responsibility, while the immovable "tower of strength" who controls a public company needs the security of their army of workers they can marshal to their bidding. The fierce one who rises to livid anger at the least perceived provocation is one of the most fearful of all since we only attack that which we fear or consider potentially dangerous. And by far the majority of individuals experience the fear of not conforming, since from the very beginning whatever the majority were doing was keeping them safe and doing something different was more likely to trigger that "unsafe" message from the reptilian complex.

The true purpose of life

It should be increasingly evident now that the human animal still is governed by the ancient reptilian complex and the true purpose of life: survival. Sleeping, eating, hunting and breeding are still essential to the survival of species, albeit that two of those elements, in the civilised world, are now dissociated: (1) The hunt is now not directly for the prey, but for the financial wherewithal to exchange for the sustenance that would at one time been pursued directly; (2) Breeding is restricted by morals, ethical codes, taboos and permissions. These create a specific set of circumstances with which an individual must comply before the commencement of the breeding sequence, copulation, can begin. The alternative is to risk the opprobrium of family and society and in some cultures even death.

And this is where we begin to see that while the hunting part of the survival instinct still works perfectly for most animal life, especially in the wild, it does not do so well for the human animal. The problem arises from innate human inventiveness allied to the ability for intelligent thought and manual dexterity that has led to the modern desirability for possessions, many of which have little or nothing to do with survival. This drastically changes the quality of hunting behaviour:

1. The modern human's hunt is no longer only for sustenance to survive but also for any desirable acquisitions.
2. The modern version of the scent of a prey (or perhaps the lure than some animals employ) is seductive advertising.
3. The importance attached to the acquisitions provides feedback to the reptilian complex that the hunted-for acquisition is essential for survival.
4. The initial hunt is for the money to exchange for prey perceived as essential to life *as we know it.*
5. If the hunt fails to produce enough money to acquire the prey it is an indicator to the reptilian complex that the hunting skills are ineffective.
6. Ineffective hunting skills still means survival is threatened, just as it did for our most ancient ancestors, generating anxiety to intensify the hunt which may be experienced as frustration or despair.
7. When the anxiety fails to produce the intended outcome, the reptilian complex eventually ceases to provide stimulus since there is no useful response, and the lack of stimulus is experienced as depression. It is possible that, as mentioned in another paper, depression is an ancient state of low stimulus in order to conserve energy so the organism might live longer.

The inability to acquire the latest mobile phone or gadget, or a recently-registered motor vehicle is probably not the reason for the onset of depression; but the perception that others are more successful hunters might be (Gilbert et al., 2008). This is because throughout the millions of years of hunting solely for sustenance, the less successful the hunter was, the less likely they were to survive. That ancient response is still active and so anxiety is the initial result, decaying to apathy or depression when the hunt is unfulfilled.

The second scenario, which pertains to breeding behaviour, is undeniably crucial in the modern era (Gonçalves & Carvalho, 2019). However, the breeding instinct, typically appearing in the form of copulatory urges, continues to impact the body's chemistry and override fear and even the sense of responsibility, leading individuals to engage in risky encounters. Although individuals may stop before the culmination of the act if they suddenly realise the potential for death or discovery, this does not always happen. When the instinct is fulfilled regularly, even with contraception, there are typically no significant problems. However, when this is not the case, individuals may experience significant anxiety. Young males tend to experience more profound effects due to their incessant urge with little stimulation, but females also experience this issue. The existence of various websites dedicated to involuntary celibates (incels) of both genders attests to the gravity of this problem (Ging, 2019).

To reiterate, at this point, the main purpose of this paper: it is to challenge the existence of the "subconscious", which would most of the time be classed as the repository of behaviours such as those listed here. They become far easier to understand – and work with, as will be shown later – when it is recognised that they are simply a manifestation of ancient and basic instinctive urges that are not able to be properly fulfilled for one reason or another, either through personal inhibition or the various dictates of modern life. Indeed, the influence of the ancient sleeping, eating hunting and breeding survival plan is subtle but omnipresent in every activity - it cannot *not* be since the reptilian complex functions as it always did, albeit more extensively in the human than in any other creature as far as we know. But it is still the first responder to the world and still is below the level of rational or selective thought. It is still the organ that has always been responsible for survival by instigating action far more quickly than can conscious thought, and so it is highly probable that it still has only the same tri-partite process that resulted in survival of life for over 550 million years. Our modern life, though, feeds back from consciousness some rather odd ideas about what constitutes a threat to survival, and it is all measured by the intensity of emotional response rather than what the emotion actually is. The higher the intensity the more important the concept; the more important the concept the greater its importance to survival, and the higher the level of anxiety or fear that will be generated in response to the trigger; which might on occasions be an absence of a vital element for survival; an example would be when on a train hurtling over a ravine on a bridge and realising a large section was missing.

It is almost impossible to properly define emotions, though there are several schools of thought (Relojo et al., 2015). It is probable that the human animal experiences the widest range of emotional response, but that whatever is felt, both physically and psychologically, is the product of an amalgam of responses to the sleeping, eating, hunting and breeding "basics" of the survival of life. It is likely

that there are two separate scales involved: the first has the abject fear of death at one end and the triumph of a successful hunt at the other; the second the despair at not having a breeding partner at one end and the unparalleled intensity of sexual release at the other.

There are many references to "subconscious emotions" and how to release them, but the reptilian complex does not itself store emotions (Morin, 2011); they are generated afresh with each trigger of the stimulus, which is why changing the understanding of an event can have a profound effect on the response, either negatively or positively depending upon the direction of the change of perspective. If the emotions were stored, such change would be more difficult to engender and certainly lacking the immediacy that most individuals have experienced at some point in life. It is an easier situation for both client and therapist to consider that emotions are not actually stored intact in some mysterious section of the mind but generated afresh each time we encounter the trigger.

The modern human animal, therefore, is motivated by instincts that are every bit as strong as they were hundreds of millions of years ago. But it has to cope with intellectual thought concerning status, security, career abilities, physical attractiveness and far more; and will frequently experience urges and desires that have to be restricted. At the very least, the modern hunt so frequently leads to despair and depression when the quarry cannot be acquired, while the discharge of the sexual urge, the conscious manifestation of the breeding instinct, is severely compromised by morals and laws.

The conscious intellect with its myriad convolutions of desires and behaviour can never avoid being in conflict with the urges that have sustained life for at least 550 million years, and the common end result, be it anxiety or depression, is the basis of most human psychological difficulties. The thorough understanding of the fact that it is the creation of the brainstem and cerebellum, rather than the almost mystical concept of "subconscious", creates an enhanced ability to either resolve the conflict, or, perhaps second best, create full acceptance of its existence to minimise the somatic effects.

The modern world

In today's world, humans are faced with numerous constraints and controls in the form of technology, laws, moral codes, religious doctrines, international travel, communication, conflicts, and more. While these modern advancements have transformed our way of life, ancient "free range" instincts still evoke the same responses they always have. These primitive responses include getting rid of anything obstructing us, guarding progeny with our own life if necessary, responding to threats with threat, and seeking to defeat the attacker. Furthermore, if an attacker is evidently superior, we tend to retreat. Mating at every opportunity remains the second strongest urge after self-preservation. Taking evasive action to avoid a threat, which includes lying, running, and cheating, is also an ancient instinct that is still prevalent in today's world. Despite the progress that humanity has made, these innate impulses continue to influence our behavior, and it is essential to recognise and manage them to thrive in modern society.

As a result, every individual will from time to time feel an urge to destroy another individual, dominate a situation, retaliate, rebel, have sexual intercourse with somebody who is "out of bounds", escape a consequence, ignore restrictions or opt out of a mandatory edict by any means possible. Morals, ethics, official orders and decrees matter not to the reptilian complex; it still perceives any obstruction as a threat to survival and subsequently creates an urge to respond. It is an accepted tenet that "an idea once absorbed into subconscious must be discharged in motor action", which can be also understood in the light of the detail in this paper as: "An instinctive urge once generated by the reptilian complex must be discharged in motor action." It is important to recognise that the urges from the reptilian complex are all associated with survival, and evolution favoured the individuals who responded to such urges. Inactivity can lead to extinction and so anxiety remains the natural response to an unfulfilled urge, which may be expressed in relevant circumstances as an increase in sexual tension. While an individual will usually be aware of the source of sexual tension, they might not so readily recognise the source of anxiety, wrongly ascribing it to some other event, which is perhaps why therapy for the various forms of anxiety is sometimes ineffective or subject to recidivism.

As our understanding of the human brain deepens, it becomes clear that our complex conscious awareness is heavily influenced by an ancient and non-rational survival mechanism. This mechanism operates through the reptilian complex and the limbic system, which both precede the frontal lobes, where consciousness is believed to partially reside. The delay in information processing due to this

transit time means that by the time we become consciously aware of a stimulus, our response to it has already been completed. This lack of conscious control over our feelings, thoughts, and behaviors is a major source of our current difficulties. While we can choose what to do with our feelings, we cannot prevent or modify them, and we have limited control over our thoughts. It is worth noting that even the act of thinking itself is subject to these automatic processes. For instance, consider the word "car". As you read this sentence, an image of a car likely appeared in your mind. This image was triggered by a series of patterns in your reptilian complex, rather than a conscious decision on your part. While the precise mechanisms behind this process are still not fully understood, it's clear that our evolutionary history heavily influences our responses to stimuli. In modern life, we are further exposed to complex concepts such as status, security, wealth, and power. These concepts add an additional layer of complexity to our responses, and often clash with our evolutionary programming. The result is a complex interplay between automatic, non-rational responses and conscious efforts to modify or control them. Understanding this interplay is critical to addressing many of the challenges we face today (Grayot, 2020).

It is as if all of these, conditioned by repeatedly observing the apparent advantages conferred by them upon peers, soon start to behave as the subjects of instincts. Any one or all of them can represent a threat to an individual when a rival appears to have more of it/them and might create as much anxiety as would have done a more tangible threat in the ancient world. Indeed, there is sometimes talk of "making a killing" or a "cutthroat process" and similar in the world of business, which concepts may be the equivalent of tooth and claw or maybe spear and blade. Because the reptilian complex is constantly modified by conscious response and feedback yet is no more sophisticated than it was 100,000 years ago, anything that it is perceived as essential to be present becomes a threat when it is not. And since threat was always associated with survival in the reptilian complex, the perception of having less than one's peers can create varying levels of anxiety.

An interesting facet of all this is that those who voice their anxiety or resentment tend to suffer less ill effect than those who stoically bear it or pretend to be unconcerned (Aggar et al., 2011). This is almost certainly because the anxiety (though it might well feel like some other response) has been at least partly discharged by the motor action of complaint. It is important to recognise that the reptilian complex makes no value judgements of any sort. It has no way of assessing conscious concepts such as good, bad, desirable, undesirable, helpful, unhelpful, indifferent, or any other criterion. It is no more aware of any of those than is a camera sending imagery to the recording medium. Value judgement takes the form of emotion and is only felt post amygdala. Whatever emotion is felt, apart from the innate responses of fear and anger (triggering flight-or-fight mode), is dependent entirely on experience, either personal or vicarious. An individual might never have encountered a crocodile in life but may have seen images, heard about them, and recognised them as a potential threat to survival, which response has been fed back to the reptilian complex. On the other hand, one individual might see a spider and scarcely notice it, while another might scream in terror when their reptilian complex has at some point received feedback that such creatures are a threat to survival.

We can sometimes arrest an action or thought once it has started (known now as "free won't"(Filevich et al., 2013), but we are powerless to stop the impulse from occurring in the first place. Here are a few examples of the reptilian complex in action, all of them devoid of conscious thought.

1. If somebody lobs, say, an egg towards an individual, they will usually try to catch it. If, however, it was hurled hard and fast at them, they would probably try to dodge out of the way.
2. If somebody accidentally knock something valuable of a shelf with one hand, their other hand will shoot out to catch it.
3. A driver does not wonder what to do if something suddenly appears immediately in front of their vehicle – their foot is on the brake pedal before there is any time for conscious assessment of the situation.

Of course, these reflexive actions are conditioned responses, but it is probably evident now that they are "motor triggers" taken on board as important by the reptilian complex. The first two are not likely to be life threatening, but the reptilian complex can only process that something is about to happen, and that action should be taken. Here are more examples of that complex at work, of a slightly different nature this time:

1. Once a piece of music has been learned, there is no need to think of each individual note, since a lot of the time the music is faster than thought.
2. A typist does not think of which keys to press for whatever they want to type; they just think of the words and the reptilian complex does the rest.
3. If an individual finds somebody sexually attractive, they cannot simply stop finding them sexually attractive, no matter how far "out of bounds" they are.

Much of the foregoing is evidence of something which is often viewed as contentious, and that is that the human animal does not have free will in the way it is usually thought of. The first person to discover this was Benjamin Libet in the 1980s (Fifel, 2018) with a famous experiment, the results of which were subject to much ridicule and derision. There are many, even now, who claim it was a flawed experiment, that it was a nonsensical proposition and more. But there have been many experiments in recent years that have confirmed Libet's findings, some of them using modern equipment such as fMRI scanners (Bode et al., 2011). There are claims that experiments about making a decision do not reflect day-to-day life; but that part of the brain is active all the time and does not have the ability to activate only when a conscious decision has to be made. Just as it has done for more than 550 million years, it scans the environment continually via our sensory input, even during sleep, and if anything, that could constitute a potential risk arises, triggers an alert in the form of anxiety. So effective is this process that an out of place sound or event, even if minor, will almost always instantly arouse a sleeper to fully alert mode within seconds.

Before moving on to how modern life is affected and controlled by this same concept a brief summary of what has been covered so far might be useful. The proposal is that:

1. The "subconscious" does not exist and is an outdated concept.
2. The "subconscious" cannot be properly or accurately defined.
3. The brain has around 85 billion neurones. It is generally estimated that only about 5 billion are involved in conscious awareness and are therefore under the control of the other 80 billion.
4. The reptilian complex contains most of those 80 billion and functions in essentially the same manner as it did 500 million years ago.
5. We have no conscious volition over what we think or feel, only how we respond (Das & Relojo-Howell, 2021).
6. The reptilian complex makes only one of three assessments: safe, unsafe, uncertain.
7. The reptilian complex has no rational judgement of any sort: all input is just data.
8. It never sleeps and continually scans the environment via the input from our senses.

It is probable that at the root of every form of anxiety is the possibility that that we are potentially at risk of ceasing to exist, even if the truth is only that life as we know it is threatened. That, or that we are not able to ensure the survival of the species because our sex life is either absent or greatly impaired.

Modern life

Some of the final part of this paper is highly contentions and far from politically correct, for the reptilian complex has no awareness of, or instincts for, what is or is not morally and legally acceptable, only what will ensure the survival of life. While there are many people who do not exhibit the behaviour patterns shown here, the intention is to explore what appears to be a growing trend and examine the underlying reasons for that trend. For various reasons, modern day life has changed drastically even during the last seventy years – a shorter period than one lifetime for most – and one of the most profound changes is that of instant availability.

It started with credit cards, allowing individuals immediate access not just to necessities, but also to items that would previously have either had to be waited for, needed the agreement for a loan from the bank, or might never have been acquired. For those who had already achieved adult status, this was an exciting innovation; but for those who were still in what can be referred to as the "developmental stage" it soon became the natural order of things. This meant that a vital conditioning of the "hunting" part of the survival process was bypassed: that a hunt is not always successful straight away so that it is sometimes necessary to patiently stalk the quarry and wait. In other words, learning to tolerate a delay in gratification and continuing the pursuit of what is required until it is achieved. In the time when it was normal to have to wait for things, the neural

pathways associated with persistence were activated at an early age, and so there was a relatively easy acceptance of the situation among most individuals. While the wait was not always appreciated, the reward, in the sense of elation on the final completion, far surpassed the experience of instant acquisition for most people.

A "side effect" of this instant availability is the adjunct of instant disposability of any item or situation that is not as the individual wishes it to be. This even manifests itself strongly in relationships where people used to "go through a bad patch" and exit to a reasonable degree of contentment, if not happiness, and not infrequently discovered their union to be stronger as a result. There will always be dissent in a relationship, since the human animal is evolutionarily disposed to polygamy, but it is expedient in our socialised and civilised world to attempt to manage monogamy, even without the pair-bonding gene that would make it easier. Now, however, the sense of immediacy militates against waiting for things to improve, and instead creates an urge to move on to a better and more situation. Sadly, however, that better and more situation soon pales to normality, and so the cycle repeats.

Another modern phenomenon is possibly associated with the copulation part of the urge toward the survival of the species, though this particular aspect might be hotly disputed by many. But it is a fact that the emergence of social media allowed people to compare themselves with a far greater number of other individuals than ever before, and for many, it began to seem that they were somewhat lacking in sexual attraction. That physical perfection does not universally exist is of no consequence; the idea of being able to take a selfie or appear on webcam looking seductive is seductive. So, many individuals employ technology to filter and enhance their image and where the results are still considered lacking, Botox, fillers and surgery may be contemplated. Cosmetic surgeons that were once difficult to find and whose costly administrations were out of the reach of many, are now instantly contactable via social media. Their services automatically suggest that "you too can become one of the beautiful people" and the credit card means that an appointment for the pursuit of perfection can be booked immediately.

It might well be that case that many or most of the individuals concerned, most of whom are females, would dismiss this concept as wildly inaccurate and it might equally be the case that they are correct; it is entirely possible that they just want to look as attractive as they can. But it is difficult to reconcile that concept with the fact that the enhancements they seek are largely to sexual characteristics, such as boosted breasts, buttocks, and plumped lips. Males might also protest but are equally prone to accentuate sexuality and overt masculinity via head angle, gaze, hair style, and clothes; although that last is exhibited more usually in underwear.

From the foregoing, it would appear that many individuals are becoming more self-oriented and fixated upon immediate gratification than generations past. The apparently contrary "woke" movement is in reality, again, a focus on self, an apparently justifiable cause or concept through which to assert their presence, irrespective of the views of others. This is not to say that the modern generation are in any way inferior to their forebears, only that their life lessons have taught them a different "way of being" from earlier generations. As children, they are often reared with few disciplinary boundaries, few opportunities to experience recovering from losing, little need for resilience or persistence, and with a belief that that it is quite in order to want something immediately and just as in order to tantrum when demands are not met. This is the conscious feedback upon which their reptilian complex creates the "rules for life".

The sense of purpose

A true sense of purpose gives an individual's life meaning and can enhance health and longevity. There is no awareness or common consensus as to why this is so but research has shown that it is definitely the case and it is likely that it is because having a sense of purpose creates a centralised focus in life (Windsor et al., 2015). There is nothing mysterious about this; a centralised focus means more energy expended in repeated patterns of behaviour just as it would have been thousands of years ago, indicating that much sleeping, eating, hunting and breeding is likely to be happening. This confirms that the true purpose of life is still being fulfilled and so there is a need to ensure survival as far as possible. It may not be immediately obvious why this can result in increased longevity but there is possibly a very sound explanation.

The reptilian complex and brainstem is not associated solely with human psychology but is also the controller of the autonomic nervous system (Porges, 1998). So, when it appears that the purpose of life is being fulfilled, the more priority is assigned to the protection of the organism via the immune system and maintenance of the cardiovascular system and respiratory organs. This could be why there so often appears to be a rapid physical deterioration when an individual retires from work and no longer has an important central focus in life. It is also why psychoneuroimmunology can be so powerful when properly applied, since it makes changes to the physical conscious wellbeing and focus, and this feeds back to the reptilian complex and brainstem that the organism is still capable of fulfilling its function.

It does not seem to matter much whether the sense of purpose is associated with an essential aspect such as being a carer for one who is dependent, career development, a personal goal, or anything else as long as it is a chosen main aspect of an individual's existence. In other words, the individual must be at least content with the situation. Sometimes, however, the central focus in life is adopted because of a belief instilled, usually by parents or parent figures, that it is the only thing of value in life. So, where the surgeon who is a surgeon because of a vocational calling will have a strong sense of purpose and will in all probability live and work longer than an individual with no particular life focus. But the surgeon who is a surgeon purely because their parents were surgeons, and who insisted their child continue the family tradition, might fare differently. Even if they achieve eminence, they might eventually commit suicide as a result of (1) the stress of working with life and death on a daily basis; and (2) increasing regret and resentment that the life they craved as, say, a musician, was now an impossibility. As far as the reptilian complex was concerned, the lack of intent and energy coupled with despair in the conscious feedback was an indication that life as it was wished to be impossible and *Thanatos*, the death instinct, manifested itself.

The individual, therefore, with a sense of purpose that complements the true purpose of life in some way, or at least does not contradict it (if it involves life threatening behaviour, for example) is likely to live a longer and more active life than if they did not have that focus. Equally, the person who, when losing a life focus for any reason, quickly alights upon a new one, will frequently 'bounce back" very quickly to the surprise and inspired interest of those who know them.

Therapy

In many therapy models, the term "subconscious" is commonly used, but it may be more beneficial to refer to the "lizard brain" or "reptilian complex" instead. However, a comprehensive comprehension of the reptilian complex is necessary to gain a better understanding of the following. Firstly, the reptilian complex is non-rational, non-judgemental, and lacks any emotional response. It stores memories as data and retrieves them for relevant behavioural matches that are likely to ensure survival. Secondly, memories are not stored intact in the brain but are reassembled on each recall and are susceptible to confabulation. Thirdly, emotions are not part of the reptilian complex, but the patterns that generate them are and can be modified. The reptilian complex will seek to maintain its response codes as they are associated with survival, and the slower any change will take place if it is indirect. If a response code is changed solely through conscious interaction, a "reminder" may be required in the form of an anchor, trigger, or psychological device. If the change is made by bypassing the consciously observing part of the mind, it may be more permanent, but can unintentionally be restored by life events. If the change work is done directly to the early part of the reptilian complex and cerebellum before the amygdala, change can be immediate, and some therapies claim to work directly with that part of the physical brain. Enlightening the client about the nature of the "subconscious" and its true function will provide a clearer and more rational understanding of their psyche.

CONCLUSION

The ideas presented in this paper have significant implications for the field of psychotherapy. While these ideas may not be provable beyond doubt, they have been utilised effectively in at least one therapy model since 2013, namely Brain Working Recursive Therapy (BWRT). This model claims to offer a theory-based scientific method for accessing the coded patterns stored in the reptilian complex. As of January 2022, BWRT appears to be the only therapy model that employs this particular method of accessing the reptilian complex. The efficacy of BWRT and other therapy models that rely on the understanding of the reptilian complex warrants further research and investigation. It is

essential for therapists to be aware of the potential implications of these findings on their practice, particularly with regards to the use of the term ‘‘subconscious’’. Educating clients about the nature of the reptilian complex and the function it serves in governing human behavior could offer a clearer and more rational understanding of the workings of the human psyche. This understanding could potentially lead to more effective therapeutic interventions and improved outcomes for clients.

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