

Neuroscience, addiction and the gospel

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Introduction

How do concepts in the neuroscience of addiction affect the way the Christian Church shares the Gospel? Relevant neuroscientific concepts include:

- reductionism and complexity;
- mind-brain relationships as they apply to the emotions;
- the relation between reason and the emotions; and
- the concept of emotional dysregulation and how it appears to arise out of poor relationships.

These concepts challenge the way we treat addiction. If the relation between emotions and reason is as suggested, and if good emotions arise out of good relationships, this fundamentally challenges the way we as a Church speak and live out the Good News of the love of God in Christ towards all who are broken and in need of God's love. I particularly ask the question whether dispassionate rationalism robs the Gospel of vital elements and whether insights in neuroscience and addiction might point to a more passionate, integrated and relational way forward.

Integrating faith and practice

Tent-makers are Christians in secular occupations who enter countries closed to the Gospel. They are welcome because of the quality of their secular work. Living by Kingdom values, tent-makers commend the Gospel to those who otherwise would not hear of Jesus. Tent-makers represent a wider view of the mission of the Church. They cross the sacred-secular divide described by Mark Green in the fifth Catherwood Lecture (Green 2008). This is the strong distinction in the minds of the Christian world between the sacred world of church and the secular world of our daily lives. Secular society in turn demands that our faith is private and that our religion should not affect our work and our values! Green argues that the Church recognises people as tent-makers, for example, an oil company executive working in the Middle East, but not Christians (sometimes even the same people) working in the UK.

My vision for ISCAST is of a cohort of scientific tent-makers working in secular Australia. They would be scientifically sound, theologically able, and spiritually discerning. They would be aware of the theological implications of their scientific pursuit and bring their scientific skills to

bear on their theological reflections. Thus they would create an open dialogue between their science and their faith to their mutual enriching. This dialogue would take place both in the secular world of their work and in the sacred world of their faith community. By that dialogue they would encourage their colleagues and their fellow believers to come to the 'light of the world'.

This paper seeks to show the fruits of such a dialogue in the area of neuroscience and addiction, and to illustrate how such a dialogue affects the way we represent the Christian message to the world.

Neuroscientific issues

Neuroscience is made up of multiple layers of different sciences ranging from the simplest, neurophysiology, to complex descriptive narrative psychology as well as sociology and spirituality.

Reductionism and complexity

Francis Crick introduces reductionism well:

You, your joys and sorrows...are no more than a vast assembly of nerve cells and their associated molecules...the idea that man has a disembodied soul is as unnecessary as the old idea that there was a Life Force.

Crick 1994

Hidden within such an understanding is the foundationalist assumption that once the basic mechanisms of neural action are known, the superstructure of the self in relationships will automatically follow. This is described as 'bottom-up causation'.

Counter to this is the concept of complexity and emergent systems described by:

- You cannot understand water by looking only at hydrogen and oxygen;
- You cannot understand wetness by only looking at a water molecule;
- You cannot understand a waterfall by looking at a drop of water.

At each level of complexity new properties arise which cannot be predicted from the lower level. A good example of the mix of levels is seen in the way a clinician thinks about a patient. Clinicians move between the different levels of molecules to neural networks, to pathology, to pharmacology, to rehabilitation and finally to relationships.

Engel's biopsychosocial model and systems analysis

George Engel formalized these moves in his landmark paper on the biopsychosocial model (Engel 1980). His paper describes a hierarchy of systems starting with sub-atomic particles, to the person, understood in

terms of experience and behaviour. This person is involved in social systems within a biosphere.

Engel bases his biopsychosocial model on Weiss and von Bertalanffy's General Systems Theory, understanding that nature is a hierarchically arranged continuum with its more complex larger units superordinate to the less complex, smaller units. Each level in the hierarchy

...represents an organized dynamic whole, a system of sufficient persistence and identity to justify being named. Each system implies qualities and relationships distinctive for that particular level of organization, and each requires criteria for study and explanation unique for that level. Each system is a system in its own right but also a component of a higher system. Nothing exists in isolation, and each system, while it can be studied in isolation must also be studied within the context of the hierarchy in which it is found.

Engel 1980

Contextual study is more than just factor analysis, because the system as a whole affects the individual component within the system.

Note that as we ascend the layers of the hierarchy, new properties emerge which were not predictable from the lower level properties. Thus water is quite different from the oxygen and hydrogen molecules from which it came. Further we can understand something of the processes which make hydrogen and oxygen into water, but we would not necessarily say that water is a supervenient property of hydrogen and oxygen molecules.

Supervenience and emergence

What is the relation between the layers in the hierarchy? Engel prefers the term emergence; others suggest supervenience. Emergence seems a more general term than supervenience, but supervenience seems to have been more exactly defined and discussed. Two philosophical dictionaries do not have an entry for emergence, only for supervenience. (Audi 1999, Gutenplan 1994).

Supervenience was initially used to describe the moral qualities of a person (Horgan 1999 pp. 891–2), for instance, the goodness of St Francis. The value of a five dollar note is another example of a supervenient property (Murphy 1999 pp. 147–164). There is a complex literature on supervenience (Kim 1995). Murphy argues that the context in which the supervenient property is perceived is necessary to fully characterise that property (Murphy 1999). Higher level properties are not just determined by lower level properties.

Supervenience recognises that, as the properties at the supervenient level change, there are corresponding changes at the subvenient level. In mind-brain language, mind needs brain, but mind cannot be reduced to brain.

While philosophers try to sort out the subtleties of the differences between supervenience and emergence, clinicians intuitively leap between the different layers of the hierarchy, from neurotransmitter models to neural networks, neural activity areas (Broca's and the like) to the human dimension and the social dimension, without stopping to reflect on whether they have moved from an emergent to a supervenient layer. As Engel points out, this is part of everyday medical practice.

There seems to be quite a difference between the different steps. Thus moving from atoms to molecules and from molecules to quaternary protein structure seems to be an increase in complexity and structure, but that seems to be fundamentally different from the step taken between complex neural networks on the one hand and self-understanding and qualia on the other. Qualia refers to the subjective experience of a neural stimulus—the redness of red, the musicality of music, as examples (Chalmers 1996, p.4).

There is a further dimension to the complexity question when it comes to conveying meaning. Donald MacKay tells the story of two people sitting on the edge of a cliff looking out to sea (Jeeves 1969 pp. 68–9). A light flashes in the distance. The physicist is able to measure the physical properties of the flashes, but his companion recollects his Morse code and interprets the flashes as 'The piece of cliff on which you are sitting is unstable and will shortly crumble into the sea'. The exhaustive description of the physics of the light does not include the aspect of meaning conveyed by the message. The message is in a different dimension altogether.

Similarly, in computing, a PowerPoint file opened in Word will only display rows of meaningless symbols. They only become meaningful when opened in the correct program. Even when the file is opened correctly, the message on the slide is only understood by those who understand English and have some knowledge of the subject of the PowerPoint presentation. The meaning of the slide needs to be interpreted within the correct linguistic and conceptual context to make sense. It makes no sense when reduced to a series of bits and bytes.

Maybe meaning is a special class of supervenience, but meaning is sufficiently distinctive to be put into a special category, especially as there can be a multiplicity of different meanings conveyed especially in the interpretation of a poem, a painting or a story.

Relative autonomy of the layers

There is a relative autonomy between layers of the hierarchy. Thus a molecular chemist interested in the action of DNA does not need to have a detailed knowledge of the bonding forces holding the nucleus of the atom together. A psychologist need not have a detailed knowledge of neurosynaptic transmission. A detailed knowledge of the structure of the atom will not help understand neurosynaptic transmission. Higher level function cannot necessarily be inferred from the lower, nor lower level function from the higher.

Top-down causation

A key point about the hierarchy of systems is that the higher levels causally influence lower levels. There is top-down as well as bottom-up causation. This is not easily explained, but it is an observed reality. George Ellis describes the atomic bomb and the Jumbo Jet as examples of top-down causation (Ellis 2008). Both these entities started as concepts in the human mind. Only by consultation and cooperation between humans do these plans become reality. One set of concepts became a weapon of mass destruction and the other a means of mass transport.

In his paper, Engel describes a clinical scenario in which events happen at multiple levels which sometimes run in parallel and sometimes act causally. Mr. Glover suffers a heart attack at work, but because he is conscientious, he continues to work despite his chest pain. Only when his solicitous employer asks after Mr. Glover's sweating and suggests an ambulance does Mr. Glover feel free to go the hospital emergency. At one level a clot has blocked Mr. Glover's coronary artery and his cardiac muscle starts to die. At another level this event is perceived as an episode of chest pain but it is Mr. Glover's boss who interprets the symptoms as requiring medical attention and acts.

Engel believes that a comprehensive approach to a clinical problem requires us to understand systems analysis. This allows us to understand fully Mr. Glover's predicament as well as to solve the problem of his proper clinical care, at multiple different levels. This is particularly relevant to the reason for his cardiac arrest, which happened because an inexperienced junior doctor had too many attempts at a painful arterial puncture. The subsequent anxiety and surge of adrenal hormones led to a cardiac dysrhythmia. Better systems would have prevented such an occurrence.

Neurobiology of emotions

The mind-brain problem is usually discussed from the point of view of the mind's ability to reason and express free will (Murphy 2007), but this paper will centre on the emotions because addiction and emotions are closely related.

Emotions—definition

Emotions are more easily described than defined. The Macquarie Dictionary's definition (Delbridge et al 1987, p. 580) of an 'affective state of consciousness', seems to use slightly different words to say the same thing. The definition identifies the subjective nature of the emotions and distinguishes the affective states from cognitive and volitional states.

EO Wilson described the emotions as 'the modification of neural activity that animates and focuses mental activity'. Emotions are:

...created by physiological activity that selects certain streams of information over others, shifting the body and mind to higher or lower degrees of activity, agitating the circuits that create scenarios and selecting ones that end in certain ways. The winning scenarios are

those that match goals programmed by instinct and the satisfaction of prior experience...

Wilson 1998 pp. 123-4

Paul Ekman persuasively argues that there are a number of basic emotions (Ekman 1999). By this he means that different emotions have evolved to fulfil different tasks to enhance survival of the organism and its species. This view is in contrast to the view that all emotions are the same and differ only in their intensity and pleasantness. He provides some evidence to support his belief that the emotions are hard-wired and biological rather than soft-wired and socially conditioned. Each emotion may also have a different neuro-circuitry. If that is the case, then the concept of a discrete limbic system may need some revision.

David Hume, when discussing what we understand by emotions, tends to use the terms passion and sentiment. Further he divides the passions into calm and violent. Sentiment seems to have a reflective quality, whereas passions are of a lower order (Schmitter 2009). The emotions in Hume's view are perceptions that motivate behaviour and even reason.

Emotions and feelings

Damasio makes an important distinction between feelings and emotions. Not all feelings are emotions. Sensing heat, cold and proprioception are examples of emotionless feelings. On the other hand, the processes of emotions have a feeling component to them. The subjective sensation, or qualia, of these emotions is another dimension of the mind-brain problem. How can neural processes create subjective sensations?

There is something frightening about emotions. The word itself suggests a moving out, a similar concept to that in ecstasy. There is a sense of transport outside of ourselves, being taken beyond the usual, and being in a different space. If that is so, then subjectivity is central to the emotions. This is quite a shift from psychology in the 60's which emphasised behaviour only and rejected any thought of the person's inner world, let alone an emotional inner world that could be subject to scientific scrutiny.

Classification of emotions

The work of Ekman showed there were some basic emotions expressed through common facial expressions which were recognised across a variety of different cultures (Ekman in Evans 2001, fig.1 p. 5). Thus there are pictures of happiness, sadness, fear, anger, surprise and disgust, which are recognised by Americans and tribal New Guinea Highlanders alike. These expressions are regarded by Ekman as the primary emotions. There is still some debate about which are the basic primary emotions. Different writers classify them somewhat differently, although these differences can be overstated.

Then there are the secondary emotions. These are the emotions developed by socialisation. They are grouped into:

- embarrassment, shame, and guilt

- contempt and indignation
- sympathy and compassion
- awe/wonder/elevation, gratitude, pride and
- jealousy and envy.

The primary emotions are thought to be hard-wired, whereas the secondary emotions develop as new neurons and new connections are developed in the brain, according to the principles of Edelman's Neuronal Darwinism (Ellis 2005 pp. 81–119). Neuronal Darwinism describes the development of neural connections in the brain. As children develop, neural connections are made from the primitive brain into the neocortex. Those circuits which are continually used are strengthened. Those that are not used, atrophy. Hence brains of 6-year-olds have a lot more neurones than brains of 25 year olds, but there are far more connections in a 25-year-old brain than in a 6-year-old brain.

More recently Harvard Psychiatrist, George Vaillant, has drawn our attention to the 'positive emotions' (Vaillant 2008). He describes these as faith, love, hope, joy, forgiveness, compassion, awe and mystical illumination. Vaillant argues that these have been neglected in psychiatry and psychology. The negative emotions work through the sympathetic nervous system to arouse the body to defend itself acutely, whereas the positive emotions work through the parasympathetic system to soothe the body, calm it down and create long-term nourishing relationships. The negative emotions work immediately to protect a human from harm; the positive emotions build up long-term relationships and community. It is these relationships which allowed humankind to find an evolutionary niche and flourish as a species.

The science of emotions

Joseph Le Doux describes studying animal neural systems that control emotional behaviour and associated physiological responses (Le Doux 1999 pp. 101–117). These emotional systems are said to have evolved as 'behavioural (sensorimotor) solutions to problems of survival'. These responses, according to Le Doux, do not require feelings. Subjectivity is not part of his mode of study, nor can it be, for how can we find out how an animal really feels?¹

In responses to danger, the animal freezes. Le Doux describes the physiological responses to this freeze which support or are a consequence of the freeze behaviour. Further responses occur which will anticipate subsequent events like flight/fight. These can then develop into Reaction, Action, Habitual action. According to Le Doux, feelings are a late accompaniment in brains that are conscious, and lead to considered action

¹ Charles Darwin had some interesting observations on this question in one of his last books before he died, *The expression of emotions in man and animals*, where he inferred animal and human emotions from a study of their behaviour. (See <http://www.human-nature.com/darwin/emotion/contents.htm> viewed April 2009).

as opposed to reflex action. According to this reductionist point of view, emotion systems did not evolve to produce feelings. Emotional feelings are what happens when emotion systems are present in brains that are conscious.

While neurobiologists ponder...

While neuroscientists sort out the basic neural mechanisms of the flight/fight response in animals and the other neural circuits involved in other emotions, clinicians continue to see patients who describe a quite frightening and debilitating inner world. Emotional dysregulation is a particularly common problem in addiction. Patients coming off addictive agents often *feel* terrible, not just because they are withdrawing but also because they need to come to terms with the emotional state they were escaping by their drug taking. Further, alcohol and/or other drugs (AODs) make the patients *feel* good, and stopping AODs makes them *feel* bad.

The emotions in addictions can be contrasted with the anhedonia of depression. Addicts often suffer from the opposite, hyper-hedonia. This is the conflict of many and varied emotions described by one patient as, 'that committee in my head'. This committee is not just a jumble of many ideas, but the conflict of many and varied emotions. Another patient who seemed to be inert suffers from a combination of extreme anger at the way life has treated her and significant fear which prevents her from expressing that anger. That potent uncomfortable combination is temporarily anaesthetised by drugs. The next day, along with a return of her anger and fear, there is the self-loathing that her problems have not been solved by the temporary respite.

One of my psychiatric colleagues suggested the term *emotional incontinence*, using incontinence in its original Aristotelian meaning of loss of overall self-control. Indeed the concept of emotional dysregulation, and its opposite, emotional regulation is a key component in Dialectic Behaviour Therapy (Lieb et al 2004) designed to help people to live with and regulate their emotions.

Emotions and reason—negative and positive descriptions

Dylan Evans nicely describes the range of possible relations of reason and emotions, from the very negative to the very positive. One author described emotions as:

...disorganised interruptions of mental activity, or a disorganised response, largely visceral, resulting from a lack of an effective adjustment.

Evans 2001

The wariness about emotions is captured by Publius Syrus in the first century, 'Rule your feelings, lest your feelings rule you'. Evans also quotes Plato, 'Emotions are obstacles to intelligent action'. In the 17th Century John Locke described the 'punctual self' as a person entirely ruled by reason (Taylor 1989 pp. 159ff).

Evans further describes the romantics who saw the world as a conflict between cold reason in society and the natural warm heartedness of people unencumbered by the constraints of society. Therefore people should turn their backs on artificial society in favour of the natural simple lifestyle, where our emotional life can flourish. In both these rationalist and romantic views, emotions and reason are opposed.

By contrast, Evans' sees emotions as an organizing response which adaptively focuses cognitive activities and subsequent action. Emotions are processes that arouse, sustain and direct activity, and as such are vital to individual and social existence. He claims that emotions are the thread that weaves together the fabric of society. It is rational to be emotional. No science of the mind is complete without also addressing the heart. Thinking more clearly is not opposed to feeling more deeply, and emotions are a universal language that binds humanity together into a single family.

Likewise Antonio Damasio, in his seminal *Descartes Error* (Damasio 1994), describes in his neurological patients that reasoning is impossible without intact emotional neurological apparatus. Hence Descartes' error was not only separating the mind from the brain but also reducing the mind to pure reason rather than the integration of reason and emotion.

This is somewhat different from the Aristotelian approach, taken up by Thomas Aquinas, which has influenced a lot of Roman Catholic anthropology. Here reason is the arbiter of actions which are implemented by the will to the control of feelings (Maher 2003). This view allies the decision making drive with reason, against the emotions.

In contrast, David Hume allies the will with the passion and sees reason as directing the passion. His famous contentious phrase is, 'Reason is and ought only to be the slave of the passions' (Hume 1739). Hume locates all our motivations in our passions. The will is part of direct passions, the will being the internal impressions we feel and are conscious of, when we knowingly give rise to any new motion of our body, or new perception of the mind. Essentially what Hume argues is the inertness of reason, without the drive of the passions. It is probably over-interpreting his quote to suggest that our reasons are just rationalisations to justify a position taken on emotional grounds.

Do we really need the passions? Dispassionate assessment is regarded as the key to legal disputes. Indeed the whole formal apparatus of the law seems to squeeze out the emotions and emotional responses, unless one includes all the rhetorical devices by barristers to influence juries! Clinicians too need to assess a clinical need dispassionately. Here again on further reflection the emotions are involved, for a good clinician will monitor the patient's emotional response to the story of their illness. These are important clues to what is really going on in the patient. In my clinical experience the dispassionate are quite limited in dealing with psychosomatic disorders precisely because they have not factored in the patient's emotions.

In the end the emotions are like fire: a good servant but a bad master. Some emotions enhance reason and some emotions cloud reason. Every sportsman knows that one of the ways of unsettling an opponent is to stir up their passions, to the point where the opponent becomes distracted and no longer plays well. On the other hand, every sports coach seeks to stir up morale and passion in a team to ensure focus and commitment. The most studied emotion, anxiety, is a necessary component of any good performance, but too much anxiety paralyzes performance.

Emotional intelligence

Emotional intelligence has been described as,

...the ability to monitor one's own and others' feelings and emotions, to discriminate among them and to use this information to guide one's thinking and actions...

Salovey, Mayer 1990 pp. 185–211

Business especially has used this concept as a way of understanding social behaviour and to improve inter-personal effectiveness within their companies. In this model emotions and reason are in partnership rather than in conflict. Further they describe emotional maturity as arising out of good relationships, and creating good relationships. But the very fact that they need to understand emotional intelligence and define it in mature/immature terms implies that there are emotionally immature people whose emotionality is a defect rather than an asset.

Neurobiological circuits in addiction

Addiction is now understood to involve a number of different dimensions. The reward pathways are:

...circuits that serve to color an experience with emotion and direct the individual's response to rewarding stimuli, including food, sex and social interaction...

Nestler 2004

But addiction is not only the pursuit of pleasure, but also a drive to use, which raises interesting questions about the relation of addiction to other compulsions like obsessive/compulsive and eating disorders. Addictions also involve cravings as well as memory and control. Nora Volkow describes location of these four dimensions in various parts of the brain (Volkow 2003).

A fuller view of addictive behaviour

At a higher level of emergence, the level of meaning, the taking of addictive substances has been described by Aldous Huxley as, 'chemical vacations from intolerable selfhood' (Huxley 1956). This raises the question why a person wants to have temporary relief from themselves. This resonates with the earlier observation that patients would like some

temporary relief from the 'committee in my head', the hyper-hedonia or emotional incontinence.

Emotions and relationships

Emotional incontinence can often be traced to poor relationships, especially in childhood, but also in adult life. My clinical approach includes exploring the person's feelings about their 4-fold relationships to themselves, others, the environment and the divine, as well as trying to deal with the conflict of emotions that make up so much of their chaotic emotional world. Alcohol and other drugs are very useful in numbing the person from that world, and the simple strategy of stopping alcohol and other drugs without addressing these underlying emotional and relational issues often leads to relapse.

Defence mechanisms

Humans have developed a whole range of defence mechanisms which shield them from the full impact of their negative self-perception. These have been well described (Vaillant 1977). They include denial, rationalisation, reaction formation and others. Denial is one of the commonest defence mechanisms encountered in addiction consultations. Thus patients may deny they drink to excess, or deny that their intoxication is damaging to them, or deny that that damage is significant, or deny the impact of their intoxication on their family. The defence mechanisms prevent emotional pain. Their confrontation can be quite fraught, for both the patient and the clinician. An astute therapist gently confronts these denials only when the patient has the necessary skills to handle the information and the emotions they are denying. Because there is often considerable grief and shame about their behaviour, and a lack of courage to face the full impact of all that has happened, patients need to develop greater ego-strength to cope with such a confrontation.

A good example of denial is the story of the man born blind in the ninth chapter of John's Gospel. The blind man sees and gradually understands who has given him sight. He comes to the Light of the World and follows him. The Pharisees, the religious elite, refuse to see what is happening. Jesus' telling phrase at the end of the chapter, 'Because you say you see, your sin remains' (Jn 9:41), is a sad indictment on their blindness. Blindness is a wilful refusal to see the obvious. There is a moral component to that refusal.

Relationships are central to the gospel

Relationships are central to the gospel story. Before the beginning of the creation of the universe there is the relationship of love between the three persons of the Trinity. That love spills over into the creation, an act described as 'kenotic love' by a number of modern theologians and scientists (Polkinghorne 2001). The infinite God created space within which creation can form, separate from God but dependent on God.

The story of creation is the story of the whole universe and humankind's role within it, relating, as the image of God, both to the created order and

to God. The story also describes the broken relationship with God because of sin (Adam and Eve)—and its flow-on effect towards others (Cain and Abel).

However, the story does not end with the Fall, for it tells of the God of love who seeks and saves a people for Godself so that all the families of the earth may be blessed. When the law was given to Israel, the relationship between God and God's people was described as one of love (Deut. 6:6). The New Testament describes the transforming love of God in Christ, which restores us to God and to each other, thus creating a new community of love united to each other and to the triune God.

The life of Jesus shows God's love by the way in which he sought the outcast and transformed them from within. It is also shown by his atoning death on the Cross whereby he bore our sins that we might be liberated and enjoy God's freedom. God's transforming love does not leave the sinner unmoved or unchanged, for God gives His Spirit to dwell within us transforming us and renewing us. Further that transforming love is expressed in a community in which old barriers have been broken down and all those who are Christ's are one with one another (Eph. 3:14–21).

John's epistle describes the love of God in considerable detail, culminating in that wonderful observation that 'there is no fear in love, for perfect love casts out fear' (1 Jn 4:18). Brian Edgar observes,

The notion of an unchanging, passionless God is a view more in tune with a philosophical view of monotheism rather than with the dynamic, relational, Trinitarian understanding of God who is essentially love expressed in the incarnate Jesus Christ.

Edgar 2004 p. 61

What is Christian love?

Christian love is usually translated from the Greek term *agape*. Charles Taylor described a sixteenth century form of *agape* as, 'a passionless condition of strenuous benevolence'² (Taylor 2007 p. 115). This is hardly an attractive quality. It suggests that recipients of grace are working very hard to provide for the poor, but in a very rational, controlled and apathetic way. Care, compassion and neighbourliness seem here to be replaced by obligation and reward, almost as if the lover is straining towards some high civil award for good service, honourably conducted.

Similarly ADH Mayes³, in a commentary on the *shema* of Deuteronomy (Deut. 6:6, 'Hear O Israel, the Lord your God is one. You shall love...') states, with references, that love can be commanded and that in

² Taylor describes this form of *agape* as arising out of the amalgam of Christianity with Stoicism invented by Justus Lipsius, which was very influential in sixteenth century. Taylor goes on to say that Christian theology has always steered clear of this Stoical reading because of the compassion of Christ, whose cries from the cross hardly amounted to *apatheia*.

³ He goes on to describe love in the Wisdom literature as meaning 'respect and filial obedience' (Mayes 1979 p. 177).

Deuteronomy, 'Love is virtually synonymous with obedience' (Mayes 1979 p. 176). I agree these references support obedience as a strong component of the love of Israel towards God. Indeed our Lord also related love and obedience (Jn 14:15), but since God also loves Israel and indeed Israel's love for God is a response to God's love for Israel (Deut. 5:10, 7:13), it is a considerable simplification to reduce love (especially of heart and soul and strength) to obedience. There is a strong affective and attractive component to love. Deuteronomy calls for a response of gratitude to God's redemption from slavery. Israel's love is a response to God's ongoing care for God's people.

Anders Nygren's famous book *Agape and Eros* (English title) also makes a strong distinction between the selfless love of God (*agape*) and selfish human love (*eros*) (Ramsey 1950 pp. 115, 119). This distinction can be pushed too far, however, and stands in distinct contrast to Paul's description of husbands and wives loving each other as Christ loved the church (Eph. 5:21 ff.). While there are differences between *eros* and *agape*, there are also similarities. The history of the devotional reading of the Song of Solomon bears further witness to their similarity as well as their difference.

Kenotic love—a misconception

In describing kenotic love, creating space to let others be themselves, some of my patients say, 'I always do that'. Further questioning indicates that they are the doormat and that their partner is domineering. The courtesy they give is not returned. Their low self-esteem drives this distortion of relationships, in which they are continually and unfairly demeaned. Thus although the kenotic example of Christ is one of unilateral self-emptying, it is clinically counterproductive to promulgate such an action unthinkingly. True love is a mutuality of kenosis and there is an element of self-assertion in true kenotic love.

Gospel relational issues in addiction practice

Guilt and shame are very common burdens carried by our patients, affecting their emotional make-up and their relationships. Further, they are often either denying or ineffectively dealing with unjust treatment suffered in relationships. This includes sexual abuse, sometimes perpetrated by clergy, or emotional or physical abuse which has stunted their emotional development. Their stories make me realise that often they have been 'more sinned against than sinning', and that for them the issue of righteousness is not just dealing with their own responsibility, but demanding justice for a very unjust situation. Forgiveness, atonement, restoration, accepting injustice and moving on are daily issues in counselling addicts. They go a long way further than just insisting on the addicts' own sinfulness and providing forgiveness for their own sins.

Some of the rawness of the struggle is captured in these direct quotes taken from clinical consultations:

- Bashing yourself is not a way of changing your behaviour;

- Forgiveness is great, but it is hardest to do it to yourself;
- Forgiveness by itself is not enough—how do I move on? How can I forget?
- I had a fear of emotion, I am gradually learning to accept how I feel and to live with that...and to be gentle with myself.

These sorts of comments require empathetic engagement rather than just rational analysis.

Sharing the gospel

What I am arguing is that the sharing of the Gospel of Christ is not just a well-argued case in a sermon. Just as Christ, the Word of God, testified by word and deed to the riches of the fullness of the love of God, we too would do well to integrate our words and our deeds. Further, we need to recognise the emotional component in sharing the love of God. Love is not something debated or passionately talked about, it is expressed in relationships which allow us to experience the full impact of the transforming power of the Gospel (Eph. 3:14–21). Gospel representation therefore is not best expressed by proclamation by an individual, but demonstrated by a transformed community which expresses the love of God to each other and to the world through substantial action.

In sharing the good news we need to recognise and work with the defence mechanisms which are part of the reason why people may resist the truth of the Gospel. The other day I encountered a very defensive response to a factual query about attending AA. 'You're talking about one of those Baptist evangelical organisations....' It was the way in which the word 'Baptist' was spat out that alerted me to the patient's anger which was a clue to a history of religious coercion and abuse that left the patient with such bitterness. This sort of person cannot be argued into the Kingdom. They need to gain confidence in their therapist, then gently allowed to explore their pain and hopefully resolve their conflict.

Conclusion

As we read the two books, the book of nature and the book of Scripture, God can cast new light from one to the other. This may cause us to reinterpret the way we perceive God's word in either or both of these books. In neuroscience, emotional research resonates with theological insights suggesting that Gospel ministry is the ministry of a transformed community which proclaims God's love in word and deed and which proclaims the Gospel...affectively!

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