

Philip Harland

Introduction to **HOW THE BRAIN FEELS**

Working with Emotion and Cognition



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INTRODUCTION

Let my heart be wise. It is the gods' best gift. Euripides

Models of facilitation (therapy, counselling, teaching, coaching, health management, etc.) have rarely dealt with the inter-relationship of emotion and cognition. In the 1980s, NLP developed the concept of the structure of emotion (consciously change a sub-modality of a feeling and you can change the feeling itself). Work in the 1990s on Meta-States addressed the modulating of primary emotional states with cognitively led meta-levels of feeling. Here we explore the neurolinguistic basis of *emotional intelligence*, relating recent scientific research on the structure and inter-dependency of emotion and cognition to David Grove's work in Clean Language and Therapeutic Metaphor.

A Greek poet writes of a woman who has waited more than twenty years for her beloved husband to return home. He embraces her passionately. She is cautious and anxious, unsure of him. He is upset. She is sorrowful. He is angry. She is fearful. So Homer in *The Odyssey* describes the reunion of Penelope and Odysseus in terms we can readily understand today. In 3,000 years the language of the emotions has hardly changed. It may not have changed much in six million years.

EMOTION AND EVOLUTION

After all these years of human evolution, how far have we come in terms of our emotional development?

The costs of emotional dysfunction – the inability to respond appropriately to our emotions – can be counted many times over in the negative effects of anger, addiction, fear, anxiety, depression, intolerance, fanaticism, and sociogenic illness.¹ Emotional dysfunction is contagious. Indeed, the word 'pathology', study of disease, comes from the Greek word '*pathologia*', study of the emotions. Disease of the emotions can be passed from generation to generation. Doctors calculate that one in five of the children they see has emotional stress-related problems.

A particular kind of dysfunction – lack of sympathy for the feelings of others – is readily programmed into vulnerable people by psychopaths who bluff or bully their way into positions of corporate, religious, or political power.

It's not all doom and gloom, however. As relative newcomers (there were four thousand million years of life on earth before we appeared a mere six million years ago), perhaps we are not doing badly. Compassion, joy, altruism, and sympathy are in plentiful evidence. And we know that every negative emotion, however vexatious, has a positive intention, or may be useful in some situations, or may be a signpost to a meaningful value.

Where do we want to be emotionally? The development of emotional sensibility is a necessary prerequisite for reducing fear and violence in society; for helping us live and work well with our fellows; for managing change; for using our intuition creatively; and for developing the learning potential of the human mind.

So what has to happen? What further adaptation do we need to make in order to thrive? It has always been easy for us to think we think. But now how do we think we feel?



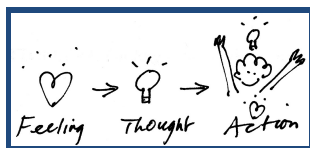
EMOTION AND INTELLIGENCE

After all these years of heartache and joy, we could be ready to take a huge evolutionary step in emotional intelligence as we start to recognize what is generally accepted nowadays among neuroscientists – that emotions are not independent of the brain. They are functions of the brain.² They are constructed and represented in that tangled web, and have a direct inter-relationship with its cognitive functions. The mind produces feeling as much as thought. To grasp this fact and accept its implications is to make a giant step on the road to taking responsibility for ourselves.

It may no longer be useful to separate emotion and cognition in the conventional way, because far from interfering with rationality, as philosophers have traditionally maintained, a sense of emotionality is increasingly cherished as *necessary* for reason to operate usefully.

EMOTION AND COGNITION

To talk of emotion is to talk of a brain function arising directly from information input, and to talk of cognition is to talk of a brain function arising *indirectly* from information input. We shall look at this in more detail later, but if you want a simple distinction for now, that is it. Disengaging thinking from feeling is like trying to separate light and shade or the crest and trough of a wave. The difference between them could hardly be more obvious, yet one cannot exist without the other. I invite you, therefore, to make the direct/indirect distinction.



Feeling (direct) comes first. Thinking (indirect) comes after. The urge to mental or physical activity that results derives from a combination of the two.

You might like to believe that there is such a thing as ‘pure’ reason, or ‘abstract’ thinking – the kind mathematicians and philosophers are said to employ. Well, rational thinkers are not cyphers. There has to be an emotional motivation behind – or rather, before – any intellectual activity. A desire to know more, the frustration of not knowing, excitement at the challenge, envy of a rival mathematician or philosopher, and so on.

EMOTION AND DEFINITION

Just as we can make linguistic distinctions between emotion and cognition, we can also make them between ‘emotion’ and ‘feeling’, and ‘feeling’ and ‘sensation’. The differences are largely academic and researchers vary in their attempts to characterize them. In fact, a great deal of ambiguity surrounds all our feeling words, which is hardly surprising given our invariably subjective and frequently equivocal experience of what the words represent.

This ambiguity of meaning may relate to the notion that one cannot have *any* experiential sense, including an emotion, without *at the same time* (it happens so fast, it seems to be at the same time) interpreting it. And interpretation, willful or not, is a cognitive act. Ergo: the thought about the feeling *is* the feeling. This is one of those academic distinctions!

Meanwhile for the sake of a shared understanding here are my working definitions, gathered from an assortment of sources.

COGNITION	A broad term applied to those mental activities related to thinking, conceiving, or reasoning, where the underlying characteristics involve symbolizing, imagery, memory, belief, intentionality, insight, judgment, problem-solving, etc.
EMOTION	Subjectively experienced moving, stirring, or agitated mental state or feeling. Sometimes limited to the strongly felt 'basic' emotions ('sad', 'glad', 'mad', 'bad') and often used interchangeably with:
FEELING	A consciousness of, or belief about, something in the bodymind. Can be distinguished from, but is also used interchangeably with:
SENSATION	An experience, or awareness, of conditions within or outside the body, produced by the stimulation of a sensory receptor or receptor system.
MOOD	A relatively short-term state of the feelings.
STATE	A mixture of any or all the above at a given moment.

EMOTIONAL MANAGEMENT

One of the expectations on me as a Clean Language facilitator is to be able to acknowledge and facilitate the thoughts, beliefs, judgments, emotions, feelings, sensations and moods ('states') of my clients without complicating them with my own. In order to have the remotest chance of doing this, I have had to become familiar with my own beliefs and feelings. I have had to recognize, name, and manage them. And I have especially needed to understand them in relation to my cognitions, with which I have generally been more familiar. This paper is a further stage of that journey. In my childhood, the theatre of the emotions was a desolate place. Feelings hovered in ghostly silence in the wings or erupted in frightening, inexplicable explosions backstage. The whole thing was a mystery. As Matthew Arnold said:

*And we are here as a darkling plain
Swept with confused alarms of struggle and flight,
Where ignorant armies clash by night.*

One of the reasons people go into therapy – as clients or therapists – is because they think or feel that their feeling and thinking are somehow opposed. Passion and intelligence are ignorant armies in a permanent state of attrition. Acknowledging the conflict is a necessary preamble to the negotiations that the parties must enter

before peace can prevail. It may also help to know that emotions don't just happen; they are constructed over time. This is normally a very short period of time, a fraction of a second, but it can be broken down into five distinct parts that make problems associated with difficult feelings more amenable to intervention.

THE STRUCTURE OF EMOTION	
Stage 1 AROUSAL	Instigating Stimuli How the emotional process gets going. What sets it off.
Stage 2 SENSATION	Physiological Correlates What emotions actually are. How we know we have them.
Stage 3 CONSTRUCTION	Systemic Coherence How emotions are created in the body/mind. How they inter-relate with cognitions.
Stage 4 APPRAISAL	Cognitive Evaluation How we consider and communicate our emotions/cognitions. How we may track them in others.
Stage 5 VOLITION	Motivational Impulse The urge to act. What happens as a result of arousal, sensation, construction, and appraisal.

A sixth stage, **ACTION** (physical or mental), will be the outcome of this five-part process. Here is a personal example. It happened over a period of days, but the stages are much the same as in feeling-thoughts that happen in an instant. Recently I realized was seeing a number of clients who were angry and others who were phobic (1 **AROUSAL**). It stimulated a complex of physiological activity in my body and brain (2 **SENSATION**). I characterized this as a gap in

my knowledge of anger, fear, and emotions in general, and I felt frustrated, anxious, and incompetent as a result (3 CONSTRUCTION). Thinking about this, I became curious and excited at the prospect of learning more as I realized that I could neutralize the feelings I didn't want and enhance those I did (4 APPRAISAL). I was moved to do something in order to improve my knowledge and understanding (5 VOLITION). I went off researching and wrote up my findings (6 ACTION). Doing this helped me feel useful and fulfilled.

Whether the behaviours that result from our experience of a feeling-thought are beneficial or not will largely depend on the degree of emotional intelligence involved. Emotional intelligence is simply learning to use our emotions intelligently and this happens when the brain's amygdala and cortex are able to communicate well as one circuit. At this present stage of evolution, there happen to be many more neuronal connections from the brain's 'emotional centre' (the amygdala) to its 'rational centre' (the cortex) than there are the other way round. But we are not fixed entities. Neurophysiologist Susan Greenfield suggests that as emotional intelligence evolves and the pre-frontal cortex becomes more active, neuronal connectivity from the cortex to the amygdala will increase and even up the present imbalance. At the same time, the survival value of the emotions as they cope with anything the world might throw at us will keep us from retreating into over-introspection: more grounded in the here and now, with greater self-awareness, healthier self-control, increased empathy with others, and enhanced social skills.

CONCLUSION

You are not thinking, you are merely being logical.

Niels Bohr to Albert Einstein

The existence of a five-part structure to feeling allows the possibility of intervening at some point before the feeling becomes disabling. The question is, at what point and how? How can a fraction of a second be extended to allow access to the information we need in order to feel better rather than worse? The rest of this paper goes further into the stages of Arousal, Sensation, Construction, Appraisal, and Volition, and offers an answer to the question.

It may be time to update the sentiment of the Greek poet who wrote, "Let my heart be wise, it is the gods' best gift." This is a gift that facilitators of all kinds can help people give themselves. Not

just in the cause of individual fulfilment, but to help further the mutual trust, shared values, and common purpose that are the requisites of a progressive society.

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Philip Harland is a psychotherapist specializing in Clean Language, Therapeutic Metaphor, and Emergent Knowledge. He is the author of *Trust Me, I'm The Patient: Clean Language, Metaphor, and The New Psychology of Change*, and *The Power of Six: A Six-Part Guide to Self Knowledge*.

This Introduction and the five parts of the rest of the paper – Arousal, Sensation, Construction, Appraisal, and Volition – make up a 66-page guide to be found in the Books section of the www.wayfinderpress.co.uk website under the title *How The Brain Feels*.

Notes to the Introduction

- 1 *Sociogenic illness*: genuine symptoms induced by fear and anxiety. Three weeks after the World Trade Center attacks, 35 people suffered nausea, headache, and sore throat after a man sprayed what turned out to be window cleaner into a Maryland subway station.
- 2 *Emotions as functions of the brain*: in its association with the body. There is more on the role of the bodymind in emotion and cognition in Parts II and III.

Acknowledgments

Earlier versions of this article appeared in Rapport, the journal of the UK Association for NLP; in Suppose, the journal of the Canadian Association of NLP; and at www.cleanlanguage.co.uk