



**Emotional intelligence in the age of
liquid modernity: a cultural construct
for the 21st century**

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In the 1990s Emotional Intelligence (EI) emerged as a major phenomenon. Today, its influence can be seen in Psychology, in Organisational Theory, and in Human Resource Management. To date, most theoretical and empirical work on the concept has taken place within the disciplines of Psychology and Management. Remarkably, the disciplines of Cultural Studies and History have remained relatively silent on the issue of EI.

This paper seeks to redress that imbalance. Using Bauman's work on liquid modernity as a starting point, I seek to show how EI is a cultural construct of the knowledge-based economies that characterise the present age of globalisation. In this sense, EI can be seen as a postmodern advance beyond that great construct of modernity: IQ. Certainly, EI is perfectly suitable for a more democratised workplace, where hierarchies of power and managerial control have given way to lateral networks and flattened organisational structures. Considered as a cultural construct, the concept also has much to tell us about the contemporary human subject as well as the contemporary economy.

I shall argue, however, that the concept remains trapped between modernity and postmodernity. This is because it retains many of the essentialist assumptions of IQ, despite superficial appearances to the contrary. Lastly, I shall argue that Cultural Studies and History have much to offer to those who seek an understanding of the potential and the limitations of EI.

It should be noted, however, that although the terms modernity and postmodernity might more commonly be used, and in fact could be used, I shall use the terms 'solid modernity' and 'liquid modernity'. For reasons that I hope shall become clear, these terms seem more evocative in the context of the argument that I make.

Keywords: emotional intelligence; solid modernity; liquid modernity.

Emotional Intelligence and Liquid Modernity: A Cultural Construct for the 21st Century

Introduction

Emotional Intelligence (EI) is a rare concept: it is both an academic and a popular phenomenon. As such, it has generated a vast literature. The narrow spread of the academic literature is, however, anomalous. Remarkably, it is concentrated in the disciplines of psychology, organisational studies and human resource management. Despite EI appearing to be a cultural phenomenon, and certainly an area ripe for discursive and deconstructive analysis, there has been virtually a total lack of interest from the discipline of cultural studies. Furthermore, despite the rather obvious fact that the concept represents a development from the much older concept of IQ, and would therefore seem to be of historical interest, historians have shown the same lack of interest as that shown by their colleagues in cultural studies. This paper attempts to fill a gap in the literature relating to EI by focusing on the cultural, discursive and historical aspects of the term.

In doing so, I shall use the terms 'solid modernity' and 'liquid modernity, but readers familiar with the literature of modernity and postmodernity will appreciate that what I have to say is relevant to that field. The very use of such terms, however, prompts me to add a qualifying note. There is a danger of reductionism in linking IQ to solid modernity and EI to liquid modernity. Thought is undoubtedly located in history and culture, but the attempt to organise patterns of thought into specific temporal divisions and rigid classifications is itself an excellent target for deconstruction. This is a problem common to most forms of intellectual history, but it is particularly acute in this paper. In a paper of this length there is an instrumental impulse to be overly schematic in the manner I have just suggested. Considered in this light, the following argument should be seen as an attempt to outline the framework for a new intellectual trajectory in the study of EI rather than as an attempt at closure.

Solid and Liquid Modernity

In the discussion of the cultural specificities of IQ and EI that follows, I shall draw a distinction between solid modernity and liquid modernity. In drawing such a distinction I am adopting the terminology, and some of the analytical framework, of Bauman (2000). I shall categorise the time period 1870-1970 as solid modernity, and I shall categorise the period since then as liquid modernity. I suggest that solid modernity reached its high point in the period stretching from Taylorism to Fordism, and that the regulated period of the Keynesian consensus, extending from the end of WWII to the collapse of the Bretton Woods system in the early 1970s, was the period of solid modernity that established the preconditions for the transition to liquid modernity. Since the focus of this paper is the emergence of IQ and the subsequent emergence of EI, the question of whether or not a significant period of time prior to the 1870s can also be categorised as solid modernity is not particularly pressing. I have chosen the early 1970s as the marking point for a transition to liquid modernity not only because the forces of solid modernity had ushered in large scale social change during the mid-1960s, which gathered rapid pace in the 1970s, but also because the international economic foundation of post-war solid modernity, the Bretton Woods regulatory framework, disintegrated in the early 1970s. Furthermore, it was in the aftermath of the collapse of the Bretton Woods system that a number of other significant organisational, technological and political developments occurred: globalisation, the end of the Keynesian consensus, the collapse of communism, the

development of the internet, the increasing internal deregulation of Western economies, the emergence of a knowledge economy, and a shift in organisational structures from those displaying vertical hierarchies of power and managerial control to those displaying more flattened forms based on teams, democratisation and lateral communicative flows. In short, there was a shift from standardised mass production and bureaucratic administration to light and flexible forms of production and administration.

These changes should not be seen as an arbitrary list of unconnected historical events, plucked at random in order to lend credence to the organising concepts of solid and liquid modernity. There is a common theme. Solid modernity was exemplified by ontological essentialism, discrete vertical structures, and clear boundaries between each structure. These boundaries were evident in the Cold War, in the fixed exchange rate system that characterised Bretton Woods, in the restrictions placed on the flow of capital and goods, in the doctrine of sovereignty of nations, in the distinction between public and private ownership, in the racial attitudes and policies pursued in countries such as the US, Britain and Australia, in the strength of the class system in countries such as Britain, in the robust and entrenched division between capital and organised labour, in the prevalence of clear gender stereotypes, and in the repressive attitude to homosexuality. Such distinctions divided the world into discrete systems, structures, entities and ideas, all of which were based on seemingly rational and essentialist principles. Each structure was conceived in vertical terms, and at the deep core of each was a bounded essence. These structures were replicated even in the two great, seemingly radical, thinkers of modernity: Marx and Freud. Marx's thought was erected on an architectural metaphor of base and superstructure. The superstructure masked the deeper essentialist reality of the economic base and the appropriation of surplus labour value that arose from it. In the case of Freud, there was a deep primal reality masked by repression and other psychoanalytic processes (Freud, 1964).

Liquid modernity can be characterised by the decline of vertical power structures, the declining significance of clear boundaries between nations and races, the receding significance of the autonomous nation state, the decline of the international doctrine of sovereignty of nations and the concomitant rise of human rights law, the rise of multiculturalism, feminism and gay rights, the shift from tangible to intangible goods, the increased significance of lateral flows of information and ideas, and the shift from an onto-theological conception of a centred self to a poststructuralist conception of a decentred self as exemplified in the thought of thinkers like Derrida (1976) and Lacan (1977). In the field of intelligence, I shall argue that the shift from the vertical and substantive structures of solid modernity to the lateral flows of liquid modernity is represented by the shift from IQ to emotional intelligence. It will become evident, however, that these distinctions are themselves in a state of some fluidity.

IQ and Solid Modernity

Considered from the perspective of the cultural historian, IQ and EI can be understood as constructs of their own respective eras. IQ expressed a desire to attach a single numerical value to a human being. This numerical value was standardised across the entire population of individuals, and hence it allowed each individual to be ranked with respect to the entire population. In this sense, the concept fulfilled a function that class, on its own, could no longer fulfil. Indeed, by the late nineteenth century the concept of class itself needed to accommodate the

rise of the new moneyed and professional groups created by the industrial revolution. From the 1870s onwards the English aristocracy, whose superiority had been entrenched in tradition and supported by heredity, was in relative decline. By that time the industrial revolution had penetrated almost every area of British life. By the twentieth century that revolution had reached explosive dimensions in both the United States and Germany. Increasingly a middle class comprised of technocrats and professionals was in the ascendancy. WWI, by disrupting existing structures, accelerated this trend.

IQ provided a means of measuring the innate abilities of these aspirational groups. The concept also had one other attractive feature: it sought solidity and substance in an essentialist ontology of the self; but it did so in a decidedly modern manner, free of onto-theological foundations. IQ was conceived as a set of attributes or skills that resided deep within the individual (Cianciolo, A & Sternberg, R, 2004: 2-3). Admittedly, there was a counter-current of thought, especially from the 1960s, that placed more emphasis than hitherto on nurture and environment rather than on genetics and heredity, but this perspective was really a challenge to the early and primary tendency, represented by Galton (1869), to see IQ in terms of genes. Indeed, the idea of a fixed, bounded and essentialist category of intelligence has always been the point of reference and departure for those engaged in the debate about IQ.

In the modernity of the early twentieth century the concept of IQ drew boundaries around the potentially ceaseless process of social change. In attributing to the liberal autonomous individual an innate and unchanging set of techno-ontological attributes, the concept of IQ mediated between stasis and change, between solid and fluid. Culturally situated in this stage of modernity, the concept allowed entry into the upper classes at a moment when economic, industrial and political change rendered existing rationales for the existence of entrenched classes, unrelated to any consideration of merit, inconsistent with new democratic imperatives. If the concept of IQ provided a rationale for such upward socio-economic movement, then it did so only on the basis of the innate superiority of the new entrant to the middle and upper classes. Accordingly, the concept could be meshed with existing concepts of class. It measured cognitive abilities which, in a society characterised increasingly by a mental-manual division of labour, were necessarily seen as higher order skills. Moreover, these skills were innate in the sense that they were present at birth and were thought to change very little over the course of an individual's life, and even then they did so for reasons that were essentially biological. IQ was thus based on a new techno-biological form of ontological essentialism. Considered as such, it was implicitly free of the moral and theological aspects that characterised preceding forms of ontological essentialism.

In this regard, IQ was startlingly modern. In every sense, the concept promised to fuse technical and cognitive skills with a static or enduring metaphysics of individual substance. Individuals with innate abilities that were clearly defined, scientifically based and statistically measured could gain entry to class positions that would hitherto have been denied to them.

This class was increasingly managerial in its orientation. In this sense the concept of IQ fitted perfectly with the ideal organisational form of modernity: the bureaucracy. In the industrial imagination, all organisation forms showed some bureaucratic features: they were organised hierarchically, and they were based on the assumption that all jobs could be broken down into discrete and standardised units or skills that were therefore amenable to scientific management.

Conceptions of Emotional Intelligence: Straddling Solid Modernity and Liquid Modernity

EI has its antecedents in the age of solid modernity. Thorndike (1920) developed a concept of 'social intelligence', which was taken up by Gardner (1983) when he incorporated it into his theory of multiple intelligences. The concept was taken to a higher level of conceptual sophistication in the early 1990s by Mayer and Salovey (1990, 1993) when they colonised Gardner's personal intelligences, both inter and intra, and subsumed them in their own concept of emotional intelligence. In the mid-1990s Goleman (1995) imprinted the concept on the popular imagination when he drew on the work of Mayer and Salovey and wrote a bestseller. In the late 1990s he followed this with another popular work in which he examined the concept's specific relevance to individual success in the workplace (Goleman, 1998).

In the discussion that follows I shall deal mainly with the work of Goleman, but in order to highlight what I take to be his paradigmatic expression of the concept it is useful to distinguish his work from that of Mayer and Salovey, as well as from the work of some other authors who also use the concept. The reason for making these distinctions is to clarify why Goleman's work is situated in the culture of liquid modernity, whereas the work of Mayer and Salovey, while still displaying most of the features of liquid modernity, shows a greater link to solid modernity than does the work of Goleman. Others, such as Simmons and Simmons (1997), can be situated at an earlier stage of liquid modernity. Their conception bears more resemblance to that of Gardner than it does to that of Mayer and Salovey. Gardner broadened the concept of intelligence, but his boundaries were still fairly tightly drawn and his focus was still predominantly cognitive rather than relational and self-reflexive. His work did have elements of these, but to some extent Gardner also thought that his various intelligences were related to the structure of the brain. In this search for an innate physiological basis to intelligence there is a strong residue of solid modernity. This element of ontological essentialism found in Gardner is present to a lesser extent in Mayer and Salovey, and almost entirely absent in Goleman. It is, however, very significant in the work of Simmons and Simmons. They cast a wider net than Gardner did, and they also cast it more in the direction of emotional elements than he did, but to the extent that they work with 26 relatively unchanging character traits their understanding of EI still represents a skills-based form of ontological essentialism, albeit one whose boundaries are wider than those of both IQ and Gardner's multiple intelligences. The human subject, however, is still centred, and this is expressed by a structured set of innate attributes. In this sense, their theory straddles solid modernity and liquid modernity.

Mayer and Salovey's work moves much further towards liquid modernity than does the work of other theorists of EI, with the exception of Goleman. Their categorisation is significantly relational and self-reflexive, but it also contains a strong cognitive component that bears some resemblance to technical, task-based conceptions of IQ (Mayer and Salovey, 1997: 5). Their position does, however, represent a significant departure from IQ, because their conceptualisation of EI undercuts the modern, and indeed pre-modern, binary opposition between emotion and reason. This binary conception of the human subject stretches all the way back to Plato (Despret, 2004: 149-151), and is even embodied in Freud's architectural conception of the human subject. In Freud, one of the emblematic thinkers of solid modernity, there is a primal reality residing beneath a rational layer. In his conception, the primal forces are mediated by the calculative reasoning of the ego as it goes about attaining a rationally optimal balance between pleasure and pain in the context of a given external reality. In Freud's metaphysics of substance, however, the human subject cannot really know or change the emotional states that arise from deep primal

forces, except, of course, through extensive psychoanalysis. As a result, civilisation involves discontents (Freud, 1961).

Generally, Mayer and Salovey have cut through this binary separation of emotion and rationality. At the very least, they do not see them as antithetical. On the contrary, they see them as working together. There is, however, a sense in which they still adopt a weak binary position. Although their work assumes a kind of liquid relationship between emotion and cognition, it must be said that there is also a sense in which emotions are thought to work in the service of cognition by fast-tracking, or streamlining, the cognitive function. At some points (Mayer et al 1999: 267) they come close to resurrecting a vertical architecture of the human subject, of a sort that is more relevant to the conceptions of solid modernity than to those of liquid modernity. In their conception of this vertical hierarchy they posit a technocratic self that can draw on underlying emotional content, as if it is a resource, in order to achieve efficient outcomes. The individual subject, they say, 'can reason and problem-solve on the basis of' emotions. In this sense, Mayer and Salovey effectively invert the Freudian conception by positing rational managerial control over a knowable and malleable emotional resource base: whereas in Freud the emotions are dominant, albeit disguised, in Mayer and Salovey the technocratic, or managerial self, is in control. In conceptualising the relationship between emotions and rationality in this way, Mayer and Salovey also invoke remnants of a technical, or problem-solving, conception of IQ: There is a sense in which this is both an essentialist and technocratic ontology.

There is also another element that needs to be considered. To think of EI in this way is to see it in economic terms. Considered in this light, the rationale for EI is similar to the rationale for the firm put forward by Coase (1937). He argued that by providing a framework for the huge number of small contractual exchanges between resources that would otherwise take place, the firm was able to lower its search and transaction costs and thereby enhance its economic efficiency. Mayer and Salovey's conception appears to contain such Coasean elements. So conceived, EI expedites the cognitive process and thereby renders it more technically efficient. It is not difficult to understand why such a conception might seem culturally attractive in the 21st century. By performing a streamlining function for the intellect in a fast, diverse and complex world bedevilled by information overload, Mayer and Salovey's understanding of EI promises to empower a human subject cut adrift from stable organisational structures and institutions.

The remnants of solid modernity evident in Mayer and Salovey's work remain distinctive features of their conception of EI (Mayer and Salovey, 1997). To a greater extent than Goleman, they place considerable emphasis on perception, appraisal and analysis of emotions, and generally they seek to show the significance of emotional analysis to knowledge and intellectual growth. Indeed, the elucidation of links between emotion and thinking are strong features of their work. While recognising this orientation, the elements of solid modernity in their work should not be overstated. There are aspects of their work that are very liquid. Along with Goleman, Mayer (and presumably his colleagues) believes that emotional intelligence is not innate, fixed or rigid, but is something that develops throughout the life of the individual. It is even something that the individual can work on. (Goleman, 1998:239-240). In this regard, the conception of the human subject posited by Mayer et al is far more malleable than the human subject of solid modernity.

If Mayer et al straddle solid and liquid modernity, then Goleman is situated very decisively in liquid modernity. Although he developed the work of Mayer and Salovey, he should in no way be seen as a mere populariser of their work.

Significantly, his 'Emotional Competence Framework' is almost entirely self-reflexive and socially relational (Goleman 1995, 26-27). This stands in contrast with the greater emphasis on cognitive skills that is evident in the work of Mayer et al. Goleman also emphasises motivation, which is virtually absent from the concerns of Mayer et al. Furthermore, his emphasis on empathy, social skills, self-awareness and self-regulation reflects a desire to keep the emotional process in a constant state of motion. Indeed, Goleman seems more concerned with emotional flows and circuits rather than with the creation and development of emotional and intellectual stocks. In Mayer et al there is a latent desire to transform emotions into knowledge, and thereby to fix them in a manner that gestures towards the precepts of solid modernity. Furthermore, there is a sense in their work of an internal separation between emotions and thought. Indeed, there is a replication, albeit in a compressed form, of the subject-object distinction even within the internal workings of the human subject. By contrast, Goleman's orientation seems to break down the internal distance between emotions and thought. Considered from this perspective, Goleman's orientation is towards a fluid concern with intermingled flows rather than with establishing a cognitive distance from emotions in the interests of appraisal and intellectual development. For Goleman (1998:239-243) the human subject can be in a constant process of making and unmaking itself, of learning and unlearning habits and patterns of thoughts. Whereas the early advocates of IQ were influenced by Darwin, Goleman seems to be more influenced by recent concepts of neurological Darwinism. If early theorists of IQ regarded cognitive abilities as innate, Goleman believes that the human subject can mould its plastic mind and lay down new neural networks and circuits. For Goleman, flows are important, and the human subject is capable of riding these flows in a continuous process of change, conceived broadly to encompass neuronal, psychological and emotional elements.

In this regard, Goleman's theory of EI is remarkably liquid. This becomes clear when it is appreciated how Goleman considers the relationship that his twenty five emotional competencies have to different occupations and work situations. There is no sense here in which it can be thought that Goleman has in mind a single measurement of EI; and nor can it be thought that his concept of EI is either fixed or bounded. His competencies are the equivalent of designer labels: they can be woven, and mixed and interrelated in creative ways, to develop a flexible and malleable emotional product that can be pitched, as the product equivalent of a one-off, at a target niche in the workplace market (Goleman, 1998: 259-262). This is boutique EI in a fashion-conscious consumer market of rapidly moving lateral flows.

The value that Goleman places on the creation of human networks also reveals the importance he attaches to flows. For Goleman, the emotionally intelligent individual will be constantly moulding, shaping and weaving emotional connections with others who may be of value. Both internally and externally, the emotionally intelligent human subject is making and remaking itself according to shifting currents. The cultural specificity of such a conception will soon become evident when I discuss briefly the organisational context into which the emotionally intelligent subject of liquid modernity must pitch its product.

Before doing this, it is useful to draw attention to one very small part of Goleman's emotional competencies that might reasonably be said to evoke the idea of solid modernity. It is 'trustworthiness'. This concept is surely based on a metaphysics of depth and presence lacking in liquid modernity. As Sennett (1998) has argued, we live in times that have witnessed a corrosion of character. Furthermore, we can really only trust another when we believe that that person will commit to a principle and not yield to compelling utilitarian reasons that he or she not do so. In a world of rapidly shifting contacts and connections with others, we need, as Dunn (1990: 85) argues,

'to economize on trust in persons'. The idea of trustworthiness, rooted as it is in the onto-theological essentialism of the early period of solid modernity, is therefore inconsistent with Goleman's other emotional competencies.

EI and the Transformation of the Organisational Context

The collapse of the Bretton Woods system was inevitable from the moment that the post-war economic expansion created levels of private wealth sufficient to overwhelm the aggregated foreign exchange reserves held by central banks. The faster, more liquid and more competitive world that emerged after the collapse shifted pressure to the rigid barriers that existed within each country. In the 1980s this pressure ushered in a rash of policies: these included Thatcherism, privatisation, microeconomic reform, competition policy, financial and other forms of industry deregulation, and public sector reform. In the corporate sector there was a shift to leaner and more flexible organisational structures. Alongside corporate downsizing and outsourcing, there was a dismantling of vertical power structures and the creation of lateral structures based on teams (Galbraith, 2000).

These new organisational structures accelerated information flows and directed them to where they were needed. This had obvious benefits, but it also generated greater complexity. Specifically, employees freed from rigid managerial control from above could more easily find themselves in conflict with others in the organisation. The need for emotional flexibility became paramount (Kilmann, 1985).

In this context, Goleman's conception of EI is perfectly suited to meet the demands that arise from these new organisational structures. In effect, Goleman has developed a concept that assumes the individual human subject can make and remake itself on a more or less continuous basis. This is fortunate, because organisations are also in a constant process of change, and the information flows within organisations, and the people who mediate them, may also be in a constant process of change. Fluidity, emotions and the demand for emotional intelligence are everywhere in this age of liquid modernity. It is truly a cultural construct for the 21st century.

Conclusion

There is a need to liberate EI from the confines of management theory and psychology. The concept is too problematic to remain exclusively within those disciplines. A cultural studies approach, infused with a sense of history, can reveal just how problematic the concept is. On the other hand a study of EI, and the discursive strategies employed by many of its theorists, has much to offer to the student of contemporary culture.

References

- Ahmed, S (2004) *The Cultural Politics of Emotion*, Edinburgh: Edinburgh University Press.
- Bauman, Z (2000) *Liquid Modernity*, Oxford: Polity.
- Cianciolo, A & Sternberg, R (2004) *Intelligence: A Brief History*, Oxford: Blackwell.
- Coase, R.H. (1937) 'The Nature of the Firm', *Economica*, November, 386-405.
- Derrida, J (1976) *Of Grammatology*, trans. G. Spivak, Baltimore: Johns Hopkins University Press.
- Despret, V (2004) *Our Emotional Makeup: Ethnopsychology and Selfhood*, trans. M De Jager, New York: Other Press.
- Dunn, J (1990) 'Trust and Political Agency' in D. Gambetta (ed) *Trust: Making and Breaking Cooperative Relations*, Oxford: Blackwell.
- Freud, S (1961) *Civilisation and Its Discontents*, trans. J. Strachey, London: The Hogarth Press.
- Freud, S. (1964) 'The Ego and the Id' in *The Standard Edition of the Complete Psychological Works of Sigmund Freud*, vol. 14, trans. J. Strachey, London: The Hogarth Press.
- Galbraith, J.R. (2000) *Designing the Global Corporation*, San Francisco: Jossey-Bass.
- Galton, F (1869) *Hereditary Genius: An Inquiry into its Laws and Consequences*, London: Macmillan.
- Gardiner, H (1983) *Frames of Mind: The Theory of Multiple Intelligences*, New York: Basic Books.
- Goleman, D (1995) *Emotional Intelligence: Why It Can Matter More Than IQ*, New York: Bantam Books.
- Goleman, D (1998) *Working with Emotional Intelligence*, New York: Bantam Books.
- Herriot P, & Anderson, N (1997) 'Selecting for Change: How will Personnel and Selection Psychology Survive?' in N.Anderson & P. Herriot (eds) *International Handbook of Selection and Assessment*, London: Wiley, 1-38.
- Kilmann, R.H (1985). *Contemporary Organization Development*, Glenview, Illinois: Scott, Foresman.
- Lacan, J (1977) *Ecrits: A Selection*, trans. A. Sheridan, London: Tavistock.
- Mayer, J.D and Salovey, P. (1990), 'Emotional Intelligence', *Imagination, Cognition and Personality*, 9, 185-211.
- Mayer, J.D and Salovey, P. (1993), 'The Intelligence of Emotional Intelligence', *Intelligence*, 17, 433-442.
- Mayer, J.D and Salovey, P. (1997) 'What is Emotional Intelligence?', in Salovey, P. and Sluyter, D. (Eds), *Emotional Development and Emotional Intelligence: Implications for Educators*, New York: Basic Books, 3-31.
- Mayer, J.D, Caruso, D.R & Salovey, P. (1999) 'Emotional Intelligence meets Traditional Standards for an Intelligence', *Intelligence*, 27, 267-298.
- Mayer, J.D, Caruso, D.R & Salovey, P. (2000) 'Selecting a Measure of Emotional Intelligence: the Case for Ability Scales' in R. Bar-On, and J.D.A Parker, *The Handbook of Emotional Intelligence: Theory, Development, Assessment and Application at Home, School, and in the Workplace*, San Francisco: Jossey-Bass,
- Sennett, R (1998), *The Corrosion of Character: The Personal Consequences of Work in the New Capitalism* New York: W.W. Norton.

Thorndike, E.L (1920), 'Intelligence and its Uses', *Harper's Magazine*, pp 140, 227-235.