

CHAPTER 9

From Emotional Intelligence to Systems Intelligence

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Emotional intelligence helps us to understand and manage our own emotions as well as other people's emotions towards us. Social intelligence, on the other hand, concentrates on social situations like how we interact with other people and how well we understand them. And then there is systems intelligence. Systems intelligence considers that human action always takes place in systemic settings consisting of both human and other kind of elements. Systems intelligent people understand why they act like they do – they understand their emotions. Systems intelligent people also understand social interaction connections. This is why people should, above all, focus on making themselves more systems intelligent.

Introduction

During the last decade emotional intelligence has received exceptional attention and for a good reason. We need to learn to manage our emotions as well as those of others in order to cope with modern organisations. Emotional intelligence provides a fruitful ground for negotiation, cooperation, networking situations but something is still lacking. It is not enough that we understand the people who we are dealing with. We need to understand and manage our own actions in the system in which people are living in with all feedbacks and interconnectivities. We also have to admit that too often we still cannot understand everything in the system but we can still try to work in its favour. And what is incredible, is the fact that the system does not necessarily need a major input in order to work better. Sometimes a minor input can create a snowball effect. This is one of the ideas of systems intelligence.

In this article I will first discuss how evolution has created us emotional intelligence and how it is useful in our everyday life. From emotional intelligence we step towards social intelligence and ponder the behavioural laws in social interaction situations. Finally, I will end describing systems intelligence and how it includes both emotional intelligence and social intelligence in it and how its fundamental form will raise our intelligence onto a new level.

Intelligence Behind Emotions

“We are born with certain potentialities for behaviour” is how Oatley and Jenkins (1996) depict emotions. This means that emotions provide us a certain framework for social behaviour that we need in our everyday life. In addition, these emotions are then elaborated and given content by experience. One could say that our genes offer us a nice survival kit and with time we develop these gifts into good tools.

But how does the survival kit really work? In short, the nature is full of species which are able to work only with reflexes without thinking at all. For example a female tick goes hanging in the tree after mating. It stays there until it perceives the smell of a mammal. Then it releases itself falling with a hope of landing in the fur of a mammal. The warmth in the fur makes it seek its way to the skin to suck the blood. On the other end consider a figure like God. God is supposed to know everything about everything. He has a perfect mental model of the world so it is effortless for him to make decisions. And then there in between is a human. The life of a human being is not so simple that only reflexes would be needed for survival. Even though we have superb brains, the world is still too complex for us to perceive and understand all the interactions and details in it. So what we use is our emotions. Thanks to evolution, we have a heuristic that provides us a tool that is far better than just random guessing (Oatley and Jenkins 1996).

Emotions are the infrastructure of social life.

What emotions really do is that they serve as the language for human social life; they are the infrastructure of social life (Oatley and Jenkins 1996). In modern life we do not have to seek shelter from dangerous animals anymore. The reason, why humans are in the leading position, is social skills and cooperation. For this purpose emotions provide outline patterns that connect people to each other. Two great examples of emotions are happiness and anger. Happiness is an emotion of cooperation whereas anger reflects a conflict situation between people.

What also makes emotions powerful is their capacity to spread within a group. A good example is fear which is a basic survival emotion from the past. If we compare ourselves to other animals, it is truly emotions and the more complex brain that differentiates us from reptiles and other low level animals. Emotions have enabled us the great capability of dealing with other people. As Cummins (2004) says, the social brain evolved to handle the difficult situations and social status problems in a primate group. Later on, the brain developed to cope in cooperation, coordination and competition situations and this was the phase where our brain finally reached its relatively big size.

Still, emotions are not just a way to cope in the wild nature and in social circumstances. Damasio (1999) has studied the importance of emotions in our decision making processes. He investigated people who had had a brain injury in the frontal lobe and because of that had lost the capacity for feeling some emotions. These subjects were still capable of acting logically, but their decision making skills and strategic planning were poor. Especially situations with risk and controversy caused problems.

We also form and use emotional heuristics without consciousness. Damasio (1999) discovered that a man with a long term memory problem was incapable of remembering or consciously recognizing people. Still he ended up asking advice from the same people who had treated him well and he avoided less friendly people.

Extensive research has also been carried out on decision making and emotions. Bechara et al. (1997) have reached the following result. They suggest that our decision making and awareness is

actually purely about feeling and emotions. In their experiment, Bechara's group investigated normal individuals and patients who had some problems with decision making due to a prefrontal damage when they were performing a gambling task. Already before the normal subjects realized having discovered the best working strategy, they began to play advantageously. The prefrontal patients, however, were still choosing disadvantageous options after knowing the optimal strategy. The normal subjects were also reacting on giving responses measured on their skin when they were performing a risky decision. The patients, for one, never realized that there was a risky situation at hand, not even when they knew the correct strategy and when they were answering wrong. This all suggests that unconscious actions in our minds guide our behaviour long before conscious knowledge does. Without the help of these biases, the knowledge might not be enough to provide advantageous behaviour (Bechara et al. 1997).

King-Casas et al. (2005) have also studied the emotional centres in the brain related to decision making. In short, measurements of brain signalling have shown that emotions are crucial for the decision making process. Thus our knowing and decision making is strongly based on feelings.

This all suggest that the difference between our emotionally intelligent behaviour and logical thinking is consciousness. We cannot reason our emotions or evoke them. Emotions just happen and the intelligence is there no matter what. It does not mean that even if we can not reason something, there would not be hard core logic behind it. The nature has just evolved in such a way that we do not have to keep every single connection and event in our minds in order to make it work in a reasonable way. Our emotions work without our need to think and they work well.

Knowing is actually feeling.

Emotional Intelligence in Working Life

The term emotional intelligence was already invented in the mid eighties, but it experienced the final breakthrough thanks to Daniel Goleman's book "Emotional intelligence" in 1995. After that a great emotional intelligence boom has spread and it has received attention both in private and corporate life.

Emotional intelligence has been defined in a number of different ways. Goleman describes in his bestseller book "Emotional intelligence" that emotional intelligence generally relates to behaviour that is ignored in ordinary IQ tests. Emotional intelligence means that a person is capable of dealing well with other people and is able to behave reasonably in difficult situations like negotiation and cooperation. In Goleman's (1998) more recent book "Working with emotional intelligence" he specifies that emotional intelligence is "the capacity for recognizing our own feelings and those of others, for motivating ourselves, and for managing emotions well in ourselves and in our relationships".

Goleman (1998) has shown how emotional intelligence plays a key role in organizations. He asked managers to tell briefly which qualities make a successful worker. His research covered 181 different professions in 121 countries and the final conclusion was that 67% of the workers' qualities were based on emotional intelligence. In the case of top management, the results were shown to be even more drastic. This is not a surprise as it is the leaders who create the opportunities for a good working atmosphere. They decide in what direction the company is going. They can boost remarkably their workers but they can also easily destroy the atmosphere. Goleman mentions an example of a senior leader who did make the company profitable but who at the same time destroyed the spirit in the company. Finally, he was fired. A leader has to be able to listen to the problems of the workers and be enthusiastic. Above all, he has to be an

emotionally intelligent person. McClelland et al. (1994) also found that it is not the IQ that makes a good leader or worker in general. The study was carried out by comparing the success in Harvard's entrance examination with the success in working life later. Actually, it seems that the success in the working life can even have a negative correlation with IQ (McClelland 1994, cited in Goleman 1998). It is the emotional intelligence and a capability of being able to see the whole picture which makes the final difference.

Social Intelligence

In 2006, Goleman published his new book "Social Intelligence". He defines social intelligence to be both social awareness and social facility. Social awareness means that a person understands and feels other people's feelings and thoughts without the other having to express them aloud or explain them. A socially intelligent person is also attuned to the others, which means listening and caring and also that he knows how the social world works and he understands complicated social situations. Social facility means smooth interaction on the nonverbal level, presenting ourselves effectively, shaping the outcome of social interactions and caring about the others. It is not a guarantee that if a person knows how to interact that he would also be able to perform in that way in reality (Goleman 2006).

Goleman (2006) himself distinguishes emotional and social intelligence as follows: "When I wrote *Emotional Intelligence*, my focus was on a crucial set of human capacities *within* us as individuals, our ability to manage our own emotions and our inner potential for positive relationships. Here the picture enlarges beyond a one-person psychology – those capacities an individual has within – to a two-person psychology: what transpires as we connect."

So social intelligence is more general and thus includes emotional intelligence in it. One has to be able to manage one's own feelings before trying to understand those of the others. The reason why social intelligence is so crucial is that we have to use it in our everyday life. One single human being cannot achieve everything on his own. We have to make social connections and influence through them. As mentioned before, in an evolutionary sense it was profitable for us to start to cooperate and socialize. There are also remarkable results what our social connections mean to us. Goleman (2006) says that our connections both improve our quality of life and make us live longer. Kahneman et al. (2004) studied happiness and found that the most powerful influences on how happy the women felt, were the people with whom they spent their time, not their income, not job challenges nor their marital status. In brief, we, humans, are social and we can not act against our nature.

Some Problems Behind Reasonable Decision Making

It can be tempting to think that rational decision making is something truly challenging and extraordinary, whereas emotional intelligence would be something primitive or just feminine. It is useful to think of the most general problems called biases, researched on decision making behaviour, to see the limits of our understanding. These problems are called representativeness, availability, anchoring and adjusting (Tversky and Kahneman 1974, cited in Beach 2005), sunk costs and the problem of ultimatum game (see e.g. Beach 2005).

The representativeness heuristic describes a situation wherein we mistakenly assume that samples from processes or events really represent the whole process or event. For example if we meet a beautiful girl, we tend to believe that it is more likely that the girl is a model than a nurse even though the relative number of nurses is so high that even if the proportion of beautiful

nurses would be low, the total number of beautiful nurses is higher than the number of models. This means that actually it is more likely that the girl we met was a nurse.

Availability heuristic is caused by the belief that if something is easy to bring in mind, it also has to be frequent or probable to happen. Beach (2005) gives a nice example: we think that rock climbing is more dangerous than swimming, even though every year more people drown than get killed in a climbing accident. This is due to the fact that we remember easily events that are bizarre and this is why we think that they are more frequent.

Anchoring and adjusting heuristic refers to situation where people assess probabilities by adjusting a given number. Typically people are anchored to their starting value and alter their new estimation too little, so the adjustment is just not enough and they get wrong results. In Tversky's and Kahneman's (1974) experiment, students had to guess how many countries are represented in United Nations and they were given randomly a starting number (cited in Beach 2005). If the number was high, the students tended to response too high guesses. However, when it was small, students were anchored to the small number and their response was too small.

Sunk cost trap, for one, is a classical error that we make when we treat non-recoverable earlier expenditures as they were part of the later decision. A typical example is that if we have a computer that has just broken, we tend to continue with it if we have already paid some money for repair in the near past. We feel that it is more reasonable to fix it again but actually we should analyze the situation without taking into account the previous costs.

The so called ultimatum game is also a classical example how people have a kind of inner sense of justice that goes beyond our rational decision making. In ultimatum game there are two players who have to divide X euros for themselves. The first player decides how much money he gives to the second player from the sum X. If the second player accepts the amount, both players will get the share decided by the first player. Otherwise both of them will get nothing. When we think of this scenario rationally, the second player should accept any sum of money because he would still get something, but this is not the case in real life. If the first player suggests a too small amount of money, usually the second player is tempted to punish him. This is where our emotions come into the picture. In an MRI-experiment Sanfey (2003) found that when subjects were told that another player is deciding the sums, anger rose in their brain because of the unequal suggestions, but when they were told that the sum is decided randomly, no anger related activities were seen in the brain and players acted "rationally". The explanation what Mellers (2001) provides to this behaviour, is that when the first player is offering a too small sum, alarm bells start to ring in our brains. We seem to want to prevent this kind of injustice from happening again in the future and thus we punish the other player to guarantee a more fair division in the future. This is why we behave seemingly irrationally in a short term perspective. However, we actually have a long term gain in mind. This all suggests that our emotions and social intelligence are actually more efficient than what we would think.

Social Context and Rational Decision Making

The social context and social interactions have a strong impact on everything in our life ranging from learning to the moral code we follow. Laland (2001) has investigated learning especially in social settings. Social rationality or social learning means that an animal or a human being learns by observing or interacting with others. However, social learning differs greatly from imitation since we can imitate a lot and still learn nothing. Social learning enables individuals to make fast decisions. If our neighbour is solving a problem well, why should we not try the same as well? For example animals see what the others are eating and because these others are still alive, their

eating choices cannot be bad. The same thing also works well when it comes to mating and choosing a mating couple. Gigerenzer (2001) mentions that in our modern world the media works pretty much in the role of the others. It tells what kinds of people are more appropriate “to mate with”. We see what the popular ones look like and we then try to achieve the same either by changing ourselves to be a bit more “appropriate” or by choosing similar partners what the media suggests.

Social environment affects us in other ways too. People tend to do less when they are working in a group or in a team than what they would do alone. This phenomenon is called social loafing (Williams et al. 1981, cited in Sadrieh 2001). Zajonc (1965, cited in Mellers 2001), on the other hand, has found out that social context is highly arousing. This means that we make easy tasks better but we fail with more difficult ones. The group brings us comfort but also expectations. March (1994, cited in Mellers 2001) notice that doctors, professors, secretaries etc. tended to adapt heuristics for decision as part of their identities. These social norms free them from analysing the appropriateness of their behaviour. It makes their life easier.

The great contribution of social context is that it keeps us on the straight and narrow. People do not deceive others as often as they could since shame and guilt are present. We have very powerful social constraints and norms. A leading high-tech company Gore has also discovered the power of social context. The management has found out that the ideal size of an organization is less than 150 employees. When the size is below this, the employees are able to be in connection with everybody. So if for example marketing managers think that certain type of development would be beneficial for the product at hand, they can walk directly to the engineers and give them their opinion. In these kinds of organizations workers have to meet the peer pressure which is a much more powerful way to deal things than to use a vast hierarchy and middle management that makes things formal and destroys the innovative environment (Gladwell 2002).

When we step forward from social contexts into the world of emotions, we start to find interesting things. Fessler (2001) among others describes how emotions, especially pride and shame, have a strong impact on self-esteem. Shameful events lower one’s self-esteem whereas success boosts it. The crucial thing with low self-esteem is that it leads to conservative behaviour. People with low self-esteem try to avoid situations where they may be humiliated. Paradoxically, at the same time, when these people encounter a shameful situation, they react without considering the risk of becoming humiliated because they try to avoid being seen to fail in a social setting again. In general, young people tend to take more risks, since their place in the social hierarchy is still open. Behind all these powerful emotions lies a neurotransmitter called serotonin. From an evolutionary point of view, our social behaviour has developed on top of foraging process, where low amount of serotonin produced risk tolerating behaviour which again made us commit to reckless decisions when hunting or collecting food (Fessler 2001).

*Young people take more risks,
since their place in hierarchy is
still unclear.*

In general, emotions work to parse the world into decision categories. They help to prioritize and constrain our options. Emotions signal us whether something is good for us or not, that is, they help to escape from bad situations and move into good ones. Emotions also influence decision making by affecting the relative salience or weight of costs versus benefits (Gigerenzer 2001).

Systems Intelligence

Goleman (1998) says that a leader needs three qualities in order to be excellent in his job. Two of them are included in emotional intelligence. The first one is a composition of ambition, self-confidence and commitment. The second, for one, comprises empathy, influencing and social skills. The third quality is however completely different and it is based on knowledge and know-how. The best leaders are great in strategic planning. They also acquire information from different sources and are able to form a good overall picture, where details do not confuse the big picture. This is where systems intelligence introduced by Hämäläinen and Saarinen (2004) comes into the picture. Systems intelligence also relates to emotional and social intelligence. The key difference is though that the context is now different. We do not cover only social systems and social interactions but we take all kinds of systems and ways to influence into account as well. The key thing is to see the whole picture, all the separate key factors and influences and feedback connections between them. In social intelligence the key factors are always human beings but in systems intelligence the environment, the system, is also a key factor. TABLE 1 summarizes the key differences between these three intelligences as I see them.

In general, systems intelligence finds the big system more important than the pieces that form it. This does not mean that the individual is without a role in the system, on the contrary. A great example comes from Gladwell's book "The tipping point: How little things can make a big difference" (2002). Gladwell shows that little things which at first seem to be without any influence can, as a matter of fact, create a huge snowball effect. This is what happened with the crime rate in New York City. In the beginning of 1990s, there were a great amount of violence and crimes. But then something happened. It was like an anti-crime virus that spread. The violence just broke down and how the police did this was by cleaning the graffiti off. The theory behind this phenomenon is also known as "broken windows"-theory among criminologists. It suggests that crime is the inevitable result of disorder. If a window is broken and left unrepaired, people passing by will assume that nobody really cares and this will cause more broken windows. The system which is the broken windows area starts to affect to the individuals in it. A systems intelligent move is to repair the windows and thus change the system. When the streets are clean, people start to assume again that there are caring people around and are not tempted to behave irresponsibly.

In this broken window example emotional intelligence or social intelligence would not have been sufficient to solve the problem. If these intelligences were used this would have needed a direct contact between the police and the criminals. Such an approach could have worked in a long run but it would have needed a lot more effort. The systems intelligent approach is thus able to change the system of the environment in New York. This tiny input of repairing broken windows immediately strikes gold and suddenly the whole system is changed. In this environment the criminals start to behave in a new way since the system is pushing people towards it. In brief, the individuals alter the system but the system also alters individuals.

TABLE 1. The key elements in emotional, social, and systems intelligence. The table of emotional and social intelligence, presented by Daniel Goleman (2006), is extended with systems intelligence.

<i>Emotional intelligence</i>	<i>Social intelligence</i>	Systems intelligence
<i>Self-awareness</i>	<i>Social awareness</i>	Systems awareness
<i>Acknowledging one's own emotions</i> ¹	<i>Primal empathy, empathic accuracy, listening, social cognition</i>	Seeing systems, feedback connections, critical factors, one's own role
<i>Self-management</i>	<i>Social facility (or Relationship management)</i>	Systemic facility
<i>Managing one's own emotions to produce a positive outcome</i> ¹	<i>Synchrony, self-presentation, influence, concern</i>	Initiations, action, intervention, emergence, positivity, influencing, feedback, acting, sustaining

Conclusion

It is important to understand how to manage our own emotions, to be emotionally intelligent. It is more the emotional intelligence that defines whether we are going to succeed in our life than the IQ that we have. We are extremely social species, which is an excellent thing since it has enabled us to develop into such a high level by evolution. This reflects the value of social intelligence in addition to emotional intelligence. Every day we interact with a lot of people: friends, family, colleagues, bosses, children etc. In collaborating with these people, we use social intelligence. Relationships make our life both more comfortable and easier.

But in our lives and relationships we sometimes encounter complex situations where we need more general skills than social intelligence. It is here where systems intelligence has a possibility to complement emotional and social intelligence. A positive attitude towards the systemic possibilities will help to find hidden connections and inputs that can be of significance for the problem solution. Systems can be often changed with little interventions. Identification of such will be a rewarding challenge for us.

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¹ Author's interpretation of Goleman's concept of emotional intelligence.

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