

An historical sketch of changing vocabularies of emotions

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ABSTRACT

Historical studies of specific emotions (e.g. anger or joy) and their representations demonstrate that emotions have strong cultural dimensions. The inevitable dependence on representational codes (such as concepts, models or rhetorical figures) for communicating emotional processes means that culture and social attitudes are central not only in the cognition, understanding, articulation of emotions, but also in their artistic expression as well as in the common and scientific discourses (Gouk and Hills 2005).

The relationships between emotions and the soul, between *Passiones* and *Anima*, have been central in the discourses on emotions from the Greeks to the beginning of the twentieth-century, when the "soul" disappeared from scientific and philosophical discourses and was left to low-level poetry, such as pop songs, and to religious discourses.

Professional groups claiming authority to discuss and represent emotions, to identify and categorise them, to propose suitable treatments for excessive emotions or apathy (lack of passions), have varied through time, and their social and political ambitions are never incidental in their claims. Until the origin of scientific psychology and psychoanalyses at the end of the 19th century, philosophers and physicians shared the field and in many cases they also shared explanatory models and definitions.

FROM CLASSICAL TIMES TO THE RENAISSANCE

The word "emotion" did not become a widely used term until the middle of the 17th century, around the time that "individual" took on its modern meaning. The Renaissance words that most closely approximated what we call emotion were "passion" and "affection". We now tend to associate both these terms with amorous or fond feelings but the use of these meanings for the early modern period can be misleading, because they referred to an unfamiliar emotional terrain, where hope, anger and sadness were "passions" together with love and desire, and where one's "affections" could cover different mental and bodily experiences.

Philosophers and physicians of this period worked within an intellectual milieu in which the "passions of the soul" were regarded as an overbearing and inescapable element of human nature, liable to disrupt any individual or social order, unless they were tamed and overruled. In medical theory and in the hygienic tradition of the Middle-Ages, notably in the *Regimen sanitatis* of the Salerno School, the passions of the soul, *passiones animae* or *affectus animae* were included among so-called six non-natural things, *six res non naturales*, necessary for the preservation of health but dangerous if taken in excess. In the same way that is needed to use measure in drinking and eating, regularity and measure in sleeping and waking, resting and working, equilibrium in the *affectus* was also necessary. Andrew Boorde (1490-1549), the author of the first medical text published in English, *A Compendyous Regyment or a Dyetary of Helth* (1542), recognized that the effects of sorrow, anxiety and particularly anger have

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negative effects on the body and its health : “let every man beware of care, sorrow, thought, peacefulness, and of inward anger” (Boorde 1554).

The theory of the humours and animal spirits of the Hippocratic and Galenist medical traditions offered much of the basic vocabulary for early modern discussions of the physiology of the emotions. Rhetorical works, such as those by Aristotle, Cicero and Quintilianus, provided a great deal of material for classifying and manipulating emotions. Some of the distinctive early modern practice of generating long lists of emotions, as well as many of the forms of classification, can be traced to these sources. Popular treatises were sometimes discussed openly and there were important discussions of particular emotions in Renaissance works, such as the treatment of love and melancholy by the Florentine humanists (*in primis* the platonist Marsilio Ficino), or that of "glory" by Machiavelli and Montaigne.

The very vocabulary available to early modern theorists is marked by their historical legacy. The terms "passion", "perturbation", and "affect" are all rooted in choices made by Latin authors such as St Augustine, Cicero and Seneca for translating the Greek *pathos* used by Aristotle. In contrast, "sentiment", which came to be used with increasing frequency by eighteenth century British and French authors, seems distinctively modern.

The word "passion" derives from the Latin *Passio*, which means to suffer or endure, to sustain action from without. The word designates an internal state that remains imperceptible unless there is a movement or a disturbance outwards (there is an emotion, or rather the expression of an emotion) that reveals the inner suffering.

Philosophers, moralists, physicians and theologians used the language of passions and affections with a variety of different meanings. Passions was used to refer in a vague way to a broad range of impulses and feelings, either positive or negative. In Christian cultures, this condition was mainly associated with the Passion of Christ. And the Latin word remained in Baroque Germany to designate musical compositions referring to the history of Christ's suffering. For the early moderns the verb *patior* combines the idea of passivity with that of suffering, a sense nowhere more vividly conveyed than in the story of Christ's Passion. According to the theologians it was Christ's suffering that made him human, and to imitate Christ was to identify with his Passion and to accept the suffering.

St Augustine and St Thomas produced models of the human soul in which the passions and appetites, which were movements of the lower animal soul and were distinguished from the affections, which were acts of the higher rational soul. The appetites were hunger, thirst and sexual desire. The disobedience of the lower soul to the higher, and of the body to the soul, experienced in sexual appetite and in the passions was a sign of, and punishment for, the original sin of Adam and Eve. Often passions (love, hate, fear and anger) were unruly and disturbed the body. The higher affections of love, sympathy and joy were signs of relatedness to God. On the question of basic passions or emotions, some, such as St Augustine, had reduced all the passions and affections to forms of a single movement - love; others had suggested a long list of four, five or more basic passions or emotions (St Thomas suggested both four and eleven as possibilities).

After the platonic lesson by Marsilio Ficino in 15th century Florence, emotions became medicalised. Consequently, guidance on how to achieve a healthy emotional balance to treat altered or excessive passions were predominantly framed in medical and psychological terms.

However, a significant number of early modern writers accepted the neo-Stoic sense of passions as perturbations, or perilous forces, which acted on the body. That implied the necessity to accept the classical philosophical and moral tradition of controlling affections with other affections. In this way, they translated the passivity of Christian suffering, or the passivity



of perturbations that act upon the body, into a wilful redirection of the very "motions" that constituted the feeling self.

The third more frequent noun used to indicate emotional processes, "affect", was also considered as a mental state different from "effect" (external action). These "affections" are produced in the mind and can modify the body. As put by Thomas Wright:

They are called Passions... because when these affections are stirring in our minds, they alter the humours of our bodies, causing some passion or alteration in them. They are called perturbations, for that (as afterward shall be declared) they trouble wonderfully the soule, corrupting the judgement & seducing the will, inducing (for the most part) to vice, and commonly withdrawing from virtue, and therefore some call them maladies, or sores of the soule. They be also named affections, because the soule by them, either affecte the some good, or for the affection of some good, detesteth some ill. These passions then be certaine internall acts or operations of the soule, bordering upon reason and sense, prosecuting some good thing, or flying some ill thing, causing therewithall some alteration in the body (Wright 1604).

The early term "emotion" referred not to feelings or sentiments, but to physical movement or migration, notably of the humours within the body. Figuratively, this word was used to indicate an agitation or the "moving away" of the spirits, of the mind. Later, passion was used to mean a fact or condition of being acted upon or affected by external forces. The modern sense of "passions" refers to psychological, affective states that imply the expression of sentiment or emotion as forms of subjective agency. And in the seventeenth-century, with the scientific revolution based on a mechanical view of the world and the body, "passions" came to be defined as a natural body relative to and opposed to an action, or one that suffers the intervention of an agent. The passions were hence redefined in terms of "fight" between physical action and rational agency.

Every philosopher of the early modern period developed distinctive terms of art for discussing the emotions. Still, some vocabulary was generally current. The most common term for describing the emotions in the seventeenth century was undoubtedly "passion", perhaps because of the influence of Descartes's *Passions of the Soul* (1649, 1996), perhaps because of a general tendency to see emotions as receptive, passive states.

In the scientific age, after the Scientific Revolution of the XVII century, the aim became to explain psychology and the structure and functioning of mind (and therefore the passions of the mind) in terms of physiology. It was in seventeenth-century France that "passion" first came to be defined in physics as a natural body relative to and opposed to an action, or one that suffered the intervention of an agent. In article 2 of the first part of his treatise on *Les passions de l'âme*, Descartes presents his position on the importance of the understanding of the nature of the mind and body.

Next I note that we are not aware of any subject which acts more directly upon our soul than the body to which it is joined. Consequently we should recognise that what is a passion in the soul is usually an action in the body. Hence there is no better way of coming to know about our passions than by examining the difference between the soul and the body, in order to learn to which of the two we should attribute each of the functions present in us (Descartes 1996).

In this way, passion came to mean any kind of feeling, particularly a vehement or overpowering emotion. From this point of view light alterations of the soul, like hope, regret, curiosity, and interest were outside the field of "passions". Desires were also put in the list, even if desires were also the search for the satisfaction of simple physiological needs (fresh air, food, water, sex).



There is no simple demarcation between writers who used "affections" and others who used "emotions". Even when one author uses both emotions and passions, the sense of the words diverges from contemporary usage. Descartes seems in many cases to use the terms interchangeably, but he uses the word *émotions* in two different ways, the first as a synonym for passions, the second in the expression *émotions intérieures* to refer to a restricted class of intellectual and bodily feelings (Hamou 2002, James S. 1997).

The Cartesian physician Marin Cureau de la Chambre (1594-1669) considered passions as linked to a "sensitive soul" or faculty, distinct both from the "natural faculty" responsible for sensations and perceptions and from reason. From this point of view the emotions are "embodied", directly linked to the different parts of the body, but they cannot act without a sort of "natural knowledge" or apprehension. The passions are active responses of the embodied soul to certain changes which it is able to apprehend in the internal and external environment. As a consequence, passions or instincts are conceived as spontaneous and "natural" and their expression, in language, vocalisations, facial expressions and bodily movements, is considered as a the result of a combination of innate "instincts" and cultural influences (Cureau de la Chambre 1660).

From this point of view there is also a connection with taste, because as put by Cureau de la Chambre the senses cannot distinguish the sting of a bee from the prick of a needle, but the ensuing inflammation in the former case indicates that the natural faculty is able to discern the difference and react to the venom of the bee sting, (p. 161), exactly as when we vomit some harmful food which has appealed to the sense of taste (p. 162).

Passion was not the only term used: "affect" and "sentiment" also appeared, as did "perturbation", or "emotion", although these are not usually terms of art, and "emotion" usually meant little more than "motion". The choice of terminology often marked intellectual allegiances: Descartes saw himself as introducing a new theory, in which "passions" are a species of perception, while Spinoza's "affects" signalled his debt to Stoic ethics, as well as distinctive features of his metaphysics. In his *Pensées* (1670), Pascal introduced "feelings" or "sentiment" [sentiment], sometimes contrasting them with the corrupted passions and marking his neo-Augustinian understanding of love (Pascal 1981).

The earliest use of the term "emotions" in its modern sense occurred in the school of Scottish empiricist philosophers and mental scientists from David Hume's *Treatise of Human Nature* (1739-40) (Hume 1978). The absence of passions was called "dullness" (Hobbes) a dangerous lowering of the living movements, the abandon of something vital: " for as to be without Desire is to be Dead, so to have weak Passions is Dullness, and to have passions indifferently for everything, giddiness and distraction; and to have stronger and more vehement passions for anything than is ordinarily seen in others is that which men call madness " (Hobbes 1904).

The word "emotion" comes from the Latin *emovere*, to move out, to move away. Since the sixteenth-century, the word "emotion" has been used to refer to an agitation or disturbance of the mind, which "moved away" from normal activities. In music, the rhetorical expression "movere gli affetti" underlined the idea that emotion is the movement of the "affects". Only in the nineteenth-century did the term become established in common use.

Since Charles Le Brun's (1619-1690) codification of the facial expression of affects (Le Brun 1668), the reading of the emotions has tended to concentrate on individual feeling subjects, whose external features have assumed to disclose or disguise personal interior states. Emotions are the result of external events brought to bear on the self. Le Brun, perhaps through the influence of Cureau de La Chambre, devised an anatomy of emotion elaborating forty-one models illustrating simple and complex passions.



Wherever they occurred, these emotive formulas designated a wellspring of inner feelings. The ancient gestures of motion constituted a bodily revelation of emotion. In each illustration one witnesses the outward, somatic expression of an inner impulse. The artists of the time assumed the empathetic recognition of the feeling through their gestural rendering.

After the scientific revolution of the 17th century, the mechanistic views considered passions as mini-agents in their own right, delocalised in the body, rather than as acts of the individual will. Change of meaning of the same word followed scientific and intellectual revolutions. "Passions" had a resonance of sin and the fall in the religious context, but became linked to animal spirits and perception in the mechanical philosophy. The discourse of "moral sentiments" and the culture of sentiment was typical of the eighteenth-century, an age of passions as much as an "Age of Reason".

THE ORIGIN OF SCIENTIFIC PSYCHOLOGY AND THE NEW DEFINITION OF EMOTIONS

At the beginning of the nineteenth-century a single over-arching category of "emotions" replaced the more differentiated typologies (appetites, desires, affections, passions, feelings, sentiments, tastes) of the previous centuries. This category was conceived in opposition to reason, intellect and will, as a set of morally disengaged, bodily, non-cognitive and involuntary feelings (Dixon 2003).

In many languages, especially in English, psychological writers discontinued using "passions", "affections" and "sentiments" as their primary categories and start referring instead to "emotions". The most important text which introduced this reduction was Thomas Brown's *Lectures in the Philosophy of the Human Mind* (1830), in which "emotions" was the term adopted for all those feelings that were neither bodily sensations nor intellectual states (Brown 1830).

If language of passions and affections in the early modern period was embedded in a network of religious concepts and categories, the category of emotions in the nineteenth-century was extraneous to the traditional religious thoughts and was part of a newer and more secular network of ideas. For example, emotions, unlike "affections", "passions", "desire" and "lusts" did not appear in any English translation of the Bible (Sorabji 2000).

In classic literature emotions meant cognitive acts of the soul for some and epiphenomenal feelings of either cerebral or visceral activity for others. This in addition to the fact that "passions and affections of the soul, a little like the "phlogiston" of the pre-chemical revolution natural philosophy (or intelligent design of creationism of the pre-Darwinian biology), have been dropped from the scientific vocabulary altogether (Dixon 2003).

In this context, the word emotion belonged to a linguistic and conceptual domain different from the domain of "passions" or "affections", which used a semantic domain based on words as soul, fall, sin, grace, spirit, will, conscience, appetites, agitation, temptation, etc. To the contrary the word "emotion" belongs to a different constellation, which contains words like psychology, observation, evolution, organism, brain, expression, behaviour, nerves. This shift in the constellations of words, conceptually related, should be carefully reconstructed and analysed.

Influential figures in secular science and culture in the mid-nineteenth century, such as Charles Darwin, Alexander Bain (Bain 1859) and Herbert Spencer (Spencer 1855), were among the early "emotions" theorists. Although there is a large amount of overlap between the extensions of Descartes', Hobbes', and Hume's category of "passions", Darwin's and other contemporary theorists' emotions, and what Spinoza, Kant and many modern psychologists



call "affects", it would be difficult to hope that the list of the items in this categories' extensions would be more or less the same, or interchangeable (Baier 1990).

The strong dichotomy between thinking, intellect and reason on the one hand, and emotion on the other, has been mainly the result of the influence of the non-cognitive "feeling" theories of emotions proposed by Bain, Spencer and Darwin.

Bain suggested a very comprehensive definition of emotion: " Emotion is the name here used to comprehend all that is understood by feelings, states of feeling, pleasures, pains, passions, sentiments, affection ". (Bain 1859, p. 3)

The medical literature contributed to the diffusion of a physiological approach to affective psychology, which was to be philosophically and scientifically developed, systematised and popularised by Bain, Spencer and Darwin in Britain, Magendie, Claude Bernard and Paul Bert in France, Lotze and Wundt in Germany, Mantegazza in Italy.

The new scientific psychology can be called physicalist or physiological because it privileged physical facts and experimental methods. This meant that there was an unknown reality that underlayed both a physical or objective and a mental or subjective side. In saying that every mental phenomenon is also a physical one, Bain and Spencer were not saying that mind was nothing but nerve force, but that mental feelings and physical nervous processes were two sides of the same (unknowable) coin, the same event being looked at from the mental point of view or the physical point of view. According to Spencer, emotional feelings were the subjective aspects of objective nervous changes. The feelings and the nervous action are " the inner and the outer face of the same change ". (Spencer 1855 i, p. 128).

Of all the nineteenth-century psychological writers it was probably Darwin whose work had the most direct influence on late psychological theorising on emotions and their expressions. His work had its roots in the physiological and developmental turns taken in physiology and psychology as well as in earlier works of moral philosophy and natural theology. He gave a privileged tool to information about the body (especially the body of animals, infants, "savages" and the insane [and the actors]), but at the same time Darwin reintroduced history in psychological theorising, not just the history of the individuals but the deeper history of the species that evolutionary hypothesis invoked. The main agencies in the physiological and historical psychologies were brain, bodies and the evolutionary past.

For Darwin, emotions must have stereotyped spontaneous and automatic expressions. Because love, envy, jealousy or resentment seem not to have the requested stereotyped bodily expression they are not considered as emotions, but as thoughts, that we can also keep secret or discrete, easily concealing them, much more than we can keep concealed the "basic emotions", such as anger, joy, shame or disgust.

Darwin attributed many emotions to animals. He described the expressions and attitudes of angry bees, proud, loving and humble dogs, impatient and sulky horses, irritated bulls, enraged deer and grieving, jealous, curious and depressed monkeys,

Man himself cannot express love and humility by external signs so plainly as does a dog, when with drooping ears, hanging lips, flexuous body, and wagging tail, he meets his beloved master (Darwin 1872).

Emotions are presented as occurring spontaneously within the feeling subject (often in relation with the soul) and subsequently either manifesting themselves externally through the body (facial expression, vocal cries, gestures), or communicated socially by other conventional means.



Darwin's work had a particular impact on two of the most significant psychological thinkers at the end of the nineteenth-century, namely Sigmund Freud and William James. Freud in particular was enthusiastic about Darwin's explanation of emotions as inherited habits, as history-laden states of mind (Baier 1990).

At the end of the nineteenth-century the most influential publication in the field of emotional studies was William James' article published in the journal *Mind*, with the suggestive title "What is an emotion?". This paper made explicit the new physiological-evolutionary theory of emotions (James W. 1884).

James' definition of emotions as felt awareness of visceral activity was the theoretical reference of the new scientific psychological profession. James inverted the traditional assumption that the outward bodily manifestations of emotions were caused by either the activity of the soul or even - as in the case of the physiological-evolutionary school - by the activity of the brain; the viscera were made primary and the brain and its mind secondary.

Our natural way of thinking about these standard emotions is that the mental perception of some fact excites the mental affection called the emotion, and that this latter state of mind gives rise to the bodily expression. My thesis on the contrary is that the bodily changes follow directly the Perception of the exciting fact, and that our feeling of the same changes as they occur IS the emotion. Commonsense says, we lose our fortune, are sorry and weep; we meet a bear, are frightened and run; we are insulted by a rival, are angry and strike. The hypothesis here to be defended says that this order of sequence is incorrect, that the one mental state is not immediately induced by the other, that the bodily manifestations must first be interposed between, and that the more rational statement is that we feel sorry because we tremble, and not that we cry, strike or tremble, because we are sorry, angry or fearful, as the case may be. Without the bodily states following on the perception, the latter would be purely cognitive in form, pale, colourless, destitute of emotional warmth. We might then see the bear, and judge it best to run, receive the insult and deem it right to strike, but we would not actually feel afraid or angry.

The emotion, then, was not originally a psychic act that then affected the body, but was originally a bodily state that was subsequently felt as an emotion. The final sentence of this quotation makes it clear that James was simply assuming that emotions were feelings (rather than, for instance, judgements or voluntary acts).

It is notable that James in this famous paper (reproduced in his later book) used the terms "passions" and "affections" without giving any conceptual role or clear definition, and they are subsumed along with "moods" and "sentiments" under the broad category of "emotions".

Actually, James characterised moral, aesthetic and intellectual feelings as "purely cerebral" emotions, as opposed to the "standard" visceral emotions. The line took was that in fact these were not emotions at all.

Unless in them there actually be coupled with the intellectual feeling a bodily reverberation of some kind, unless we actually laugh at the neatness of the mechanical device, thrill at the justice of the act, or tingle at the perfection of the musical form, our mental condition is more allied to a judgement of right than to anything else. And such a judgement is to be classed among awarenesses of truth: it is a cognitive act.

Within the context of the development of scientific medicine, starting from the second half of the 19th century, and the consequent shift of psychiatry from a fundamentally moral discipline (in the sense of Pinel and Esquirol) to a more biologically oriented discipline, emotions have been deeply "medicalised". The traditional emotion language, based on subjective feelings, has been replaced by a more objective psycho-medical discourse. The



traditional emotions "worrying" and "fretting" have moved to "anxiety" and "stress", "fear" has been changed to "phobia", "loneliness" into "alienation". A moody or temperamental individual became a cyclothymic individual affected not by emotions but by "a chronic bipolar disorder consisting of short periods of mild depression and short periods of hypomania". Melancholy from a temperament or a disease, with its extraordinarily long history of philosophical and artistic implications (Starobinski 1960, 1981), has been changed into "depression". And despair was transformed into "severe depression". This vocabulary shift is significant because the first terms designate things we do, the latter things we endure. Despair, anger, joy, fear and grief are not pathologies, but normal human responses to particular circumstances, typical of human experiences. Their transformation in medical categories can probably explain why affective disorders are so fashionable in present day medical system (number of specialists, high proportion of diagnosis), but this transformation of the vocabulary of emotions changes their epistemological and social status and raises different sets of questioning, interpretation and actions.

THE REDISCOVERY OF THE RICHNESS OF THE EMOTIONAL EXPERIENCES

In the last 30 years scholarly interest in emotions has considerably grown and we have witnessed a authentic "emotional revolution" (Reddy 2001), which seems to parallel for its scientific and philosophical implications the "molecular revolution" of the 50s and 60s. The literature is dominated by medical, ethical, philosophical and psychological publications in which emotions are often assumed to be natural entities amenable to scientific analysis. At the same time, emotions and their expression are at the center of the interest in philosophy, art and music.

According to our present understanding, emotions are both biologically determined and culturally mediated. Emotions are often conceived as "natural" or spontaneous and only their expression is regarded as being acculturated. The assumption here is that there exists an intimate or direct relationship between feelings and their bodily (mainly facial) expressions, often figured as "authentic" or culturally and historically unmediated.

The 19th century rigid dichotomy between bodily feelings and cognitive acts has been challenged by the most recent studies on emotion. Therefore one of the first tasks has been to more carefully define what exactly is meant by emotion. This term, used widely in everyday language, constitutes a hypothetical construct, i.e., a conceptual and operational definition of an underlying phenomenon that constitutes the object of theory and research.

The question of the definition and classification of emotions remains elusive, because of the variety of the emotions themselves and the confusion between two levels of analyses, the individual, subjective emotional processes and the need for understanding and classifying emotions as natural kinds. This situation is analogous to the distinction used in medicine between illness or sickness (the feeling of "being ill or sick") and disease (an identifiable pathological status or process).

Individuals usually report verbally a multitude of subjective, qualitatively different feelings, using a rich and highly variable and culturally laden emotional vocabulary. These internal sensations, which have also necessarily conscious experiences, constitute irreducible qualities of feeling unique to the specific emotional experience of a particular individual (Frijda 1986, Lazarus 1991, Ortony and Turner 1990).



The analysis is a consequence realised at three different levels: the subjective emotional experience, the expression and communication of emotions, and the discourses or representations about emotions (including science, art, literature, and music).

The categories of emotions can vary within a wide range of different degrees. At the level of their intensity they can vary between vehement (rage, joy, fear, panic, disgust) and mild (amusement, fascination, resentment). At the level of their function in the individual and social behaviour they can be functionally disruptive (ecstasy or despair), functionally restorative (hope and resignation) or functionally nearly essential (minding, attention, curiosity). Furthermore, emotional behaviours can vary from the short-term, stereotypical responses common to all animals under threat to the highly variant, fine-grained, conscious behaviours of the human being, feeling shamed, angry, jealous, or sad for reasons that may not be intelligible from one culture to another. Furthermore, the inevitable dependence on representational codes for communicating emotional states means that culture is central not only in their cognition, understanding, articulation and expression but also to their policing and articulation, which is in turn intimately related to issues of cognition.

Three major reaction components of emotion have been isolated and defined: physiological arousal, motor expression, and subjective feeling (the emotional response triad). Behaviour preparation (action readiness, action tendencies) as well as the concomitant cognitive processes that elicit and differentiate emotional reaction patterns, are also part of the list of components (Scherer 1984, Scherer and Ekman 1984).

According to the traditional theory, the diverse expressions of emotions are produced by fixed "neuromotor affect programs". Basic emotions are defined as affect programs, triggered by appropriate eliciting events, that produce emotion-specific patterns (such as prototypical facial and vocal expressions as well as physiological reactions), based on the evolutionary functions of emotions and their expression. The concept of "affect program" implies the existence of a rather limited set of multimodal expressive actions, specific to each distinct emotion.

Most modern emotion theorists have however adopted a componential approach to emotion, suggesting that an emotion episode consists of co-ordinated changes in several components (Ellsworth and Scherer 2003, Sander, Grandjean and Scherer 2005, Scherer 2003, Scherer and Ellgring 2007). According to this model, emotions are processes which also have a cognitive component (componential appraisal models): the appraisal processes drive the coordinated changes in every single component of the emotional process. Emotional reactions are determined by the subjective evaluation of events with respect to their significance for the well-being and goal attainment of individuals. In addition, emotions often have strong effects on perceptual and cognitive processes such as attention, thinking, memory, problem solving, judgment, decision making and the like (see several contributions in (Dalgleish and Power 1999)).

The appraisal–response sequence is necessarily recursive, as the evaluation of an event as dangerous or utilitarian may produce respectively fear or pleasure, which in turn may affect the ensuing evaluation of subsequent events. The relevant "judgement" that forms the "core" of an emotion is always "an appraisal of the significance of the person-environment relationship". This theoretical statement implies a fundamental Darwinian perspective in which emotions "played an important role in shaping both the unique and the common features which these emotions display as well as their current function" (Ekman 1992).

Finding variable expressions rather than prototypical patterns seems consistent with the notion that emotional expression is differentially driven by the results of sequential appraisal checks, as postulated by componential appraisal theories. The multimodal organization of expressive action is seen as determined by particular appraisal configurations (which may be



constituents of several emotions) rather than by affect programs that are specific to and unique for particular emotions.

The emotions that are usually studied by psychologists, anthropologists and neurobiologists in emotion research must have played a utilitarian role in the evolutionary history of the different animal species, including humankind. The utilitarian function of these emotions is based on a priori analysis of the behavioural meaning of events for the needs and goals of the individual, taking into account the latter's power and coping potential (see the comprehensive summary of appraisal approaches in (Scherer, Schorr and Johnstone 2001)). Basic emotions as anger, fear, joy, disgust, sadness, shame, guilt have major functions in the adaptation of individuals to events that have important consequences for their well being and reproductive success, by preparing action tendencies (fight, flight), recovery and reorientation (empathy, grief), motivational enhancement (joy, pride), social obligations (reparation, shame, guilt). In addition, some of these emotions (especially anger, shame, and guilt) are shaped by the appraisal of the compatibility of actions in terms of justice or compatibility with social norms or moral standards.

A century after the original publication of *The expression of emotions in man and animal* by Charles Darwin (Darwin 1872), a book considered as irrelevant and "anti-darwinian" until very recently (Dixon 2003, Friedlund 1992), emotions have found their place in the Darwinian view, confirming Theodosius Dobzhansky statement that "nothing makes sense in biology (including emotions) except in the light of evolution" (Dobzhansky 1964).

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