

Emotion experience

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Highly divergent accounts exist of the nature of emotional feelings. Following Lambie and Marcel (2002), that divergence is traced back to actual differences in experience that result from variations in the involvement and direction of attention during emotions. The dimensions of variation include first versus second order experience, world- versus self-focus, appraisal or action-readiness focus, and attention mode (synthetic-analytic, immersed-detached). It is argued that the most characteristic form during actual emotional events consists of the more or less immersed and synthetic perception of an emotionally meaningful world or of oneself as emotionally meaningful. Meaning consists of perceived qualities that represent appraisal and action readiness. Although information from one's body is central *for* all emotion experience, it is not central *in* all emotion experience. Feeling of the body in a particular state represents detached analytic self-focused awareness only.

Emotion experience not only represents a perspective on emotional reactions but also contributes to the constitution of those reactions, notably with respect to attention shifts, action initiation and action guidance, and emotion regulation. It is a major factor in constituting a representation of "self" and in establishing social coherence.

What is the nature of feelings?¹ It is a puzzling question, because such very different answers have been given to it. Traditionally, feelings have been described as ineffable *qualia*, as body feelings, or as states of pleasure or pain and felt activation. All three descriptions have something that speaks in their favour, but all three also encounter problems. In the *qualia* view, different emotions correspond to different such *qualia*; at least, different basic or

¹ "Feeling", without qualification, in this paper refers to emotional feelings. The word "feeling" is also used for tactile or somatosensory sensations, or for intuitive judgements ("I feel we are walking in the right direction"). When used in the latter sense, a qualification will be added.

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- Q1 elementary emotions do (Izard, 1977; Oatley & Johnson-Laird, 1987; Plutchik, 1980). Each *quale* is unanalysable, in the same way that colour experiences of red, green, blue, and yellow are. What they have in common is their subjectivity. They are experienced as one's subjective response, rather than as reflecting properties of an external object (Titchener, 1908). One "has" those feelings. They imply a sense of self: They are *my* feelings. But there is a major problem with qualia: there is no criterion for identifying them. How many different qualia are there, and which are they, among the many feelings that we have words for? The only proposed criterion is that words may exist for a small set of basic emotions representing the qualia (Johnson-Laird & Oatley, 1989), in terms of which all other emotion words can be unambiguously defined. This implication, however, is not supported by the evidence (Reisenzein, 1995).

Characterising emotion experiences as body feelings does justice to the prominence of such feelings during emotions. The body feelings result from feedback from muscles and inner organs that are active during the emotional reactions. That of course was James' (1884) proposal, recently renewed, in a fashion, by Damasio (1994, 2003). A main objection has been that it fails to accommodate the feelings of pleasure and pain that are so basic in emotions.

The third answer focuses on that pleasure and pain. It argues that feelings are variations of pleasure or pain, combined with felt overall state of activation (and perhaps with felt tenseness or control). It goes back to Wundt (1902). Russell (2003) presents a modern version. Its major problem it shares with the other two.

That is, that none of these three answers does justice to people's descriptions of their emotion experiences. When asked, they do give such descriptions (e.g., Davitz, 1969), even of so-called elementary feelings. The experiences do not appear as unanalysable qualia, nor do they always contain particular emotion names. They have an entirely different flavour. They present feelings as experiences of the world or of oneself, both carrying meanings, of one's relationship to them, and of one's strivings in relation to them. Instances of felt depression are not just described as pain, apathy, and heaviness in the limbs, nor always labelled "sadness" or "depression", but as feeling to be living in hell to which there is no escaping, or of facing one's utter worthlessness. Experiencing anxiety is reported as experiencing facing a world that offers no hold, with threat lurking everywhere, and with no means to obtain a hold or get away. A given feeling of love consists of witnessing the twins of a roe-deer, to quote the *Song of Songs*, and of the longing to be close to them. Such emotion experience is best characterized as a perception of a meaningful world that is filled with calls for action (Frijda, 1986).

How can it be that something as common as emotion experiences can lead careful investigators to such starkly different descriptions?

Experience and attention

Lambie and Marcel (2002) provided an illuminating explanation. All mentioned views, they argue, are on occasion correct. Emotion experience can take different forms, just like any other experience. Which form it takes depends on the involvement of attention, and on one's mode and direction of attention. Visual experience, for instance, exists before attention is aroused, but cannot be reported or recalled (Lamme, 2003). It can be integrative and synthetic, and then yield size, shape, and colour constancy. It can also be analytic, when attention is focused on one aspect of a viewed scene only, and then the constancies are largely lost. Similarly for emotion experience.

Lambie and Marcel outline four kinds of variation that shape emotion experience. First, there exist two orders of consciousness, characterised by the absence or presence of focal attention. Second, attention can be directed either towards the "world", to external objects of perception or thought, or towards oneself: one's body, one's location in space, or oneself as the conceptual entity that "has" experiences or that is the agent of actions. Third, attention can be directed to how the emotional object, whether world or self, appears, or to one's action (or, I would say, action readiness), whether in the form of perceived action targets in the world, or as body states and strivings of oneself. Fourth, attention can vary in mode: it can be analytic or synthetic, and detached or immersed.

Emotion experience thus is likely to differ according to the circumstances under which occurs or is examined, since circumstances differ drastically in their attentional demands. Emotions often arise in direct confrontations with an object or event with which one urgently has to deal. Attention is tied to what the event means, whether an external event or that of being disgusted with oneself. There is little or no latitude to be aware of one's feelings; one is aware of their object. Attention is quite different from when one can sit back, and wait or watch, or when asked "what do you feel?", or when engaged in self-observation in safe surroundings.

Examination context thus influences the resulting account of emotion experience. Urgency to act in an emotional confrontation is not readily compatible with the awareness of "having" an experience. Emotion experience, in such a confrontation, is not well-designated as a "feeling", with its connotation of "inner" or "subjective" experience. When attentional focus is on the world, the experience is in a sense an absence of feeling. One is coping with a difficult situation. One is immersed in dealing with a meaningful event. One may not even identify one's experience as an emotion. Take infatuation: One is enthralled by a person's attractiveness, which may be taken for an objective fact. No subjectivity, no reference to "the self" is involved. Or take envy. One may merely perceive someone who has received a ridiculous prize, which he or she accepted with foolishly naive pride. One is surprised when others label

one's experience one of envy, instead of one of amusement caused by people so naive.

I will briefly seek to characterise experience under some of the attentional directions. The analysis owes importantly to that of Lambie and Marcel (2002), but in several aspects goes its own way. It also tries to probe a little further into the details of the various aspects of experience.

First and second order emotion experience

Attentively observing an object introduces something that was not there before paying attention: The awareness that the object is there. Being aware that one sees an object comes on top of seeing that object. Consciousness has indeed been characterised (I cannot retrace by whom) as "awareness of awareness". And indeed, often one sees an object without being aware that one does. Dennett (1991) describes this as "rolling consciousness". He nicely illustrates it by the common experience of driving one's car over a not too difficult road, while engrossed in conversation. One drives adequately, and the surrounding landscape is seen because one hits no trees, and turns when needed. But attention goes elsewhere. Road and landscape are not really noticed. One cannot recall them. That was first order perceptual experience.

A distinction between two modes or levels is common in studies of consciousness, under various names and with different emphases. Sartre (1939) distinguished irreflexive and reflexive consciousness; Farthing (1992) primary and reflective experience; Damasio (2000), core and extended consciousness. Lambie and Marcel (2002) use first order and second order experience, that they also refer to as "phenomenology" and "awareness". I prefer Lambie and Marcel's (2002) distinction, as being the most elementary. Only, it may not so much involve focal attention, as well as "paying" attention, that is, staying with the phenomenology at least a trifle longer—not letting it fade at once or evaporate in response. The content of first order emotion experience is approximated in the immersed mode of second order awareness. You are all in it. There is no separate awareness of here and there, of me and the object. It is a major form of emotion experience, since most immersed experience *is* emotion experience. It occurs in states of ecstasy (not the drug) and love and other raptures. It also occurs during "flow", under extreme concentration (Csikszentmihalyi, 1990). You may come out of each of those, and "come back with one's feet on the ground", as they say, or "back to oneself", when detachment returns.

First order experience is conceivable in nonhuman animals and infants. They can be said to feel, but not to be aware that they have a feeling. The experience is of a piece and only concerned with the object and its here and now. As such, human first order experience is not reportable. If attention does not cling to the experienced object, it is difficult to recall even only a few seconds after. It is

reportable only when focused attention intervenes or clings and a shift to second order experience occurs. Then, one realises that there is a road, its trees, the landscape, one's pain. Words may arise, and thoughts elicited by what one sees and experiences. It may shift and extend into awareness that these are *my* experiences.

Emotion experience as experience of the world

Emotion experience can have the form of affectively meaningful perception of the world: of an object, an event, or the external world as a whole. One perceives a threatening object, a lovely person, an offensive event perpetrated by a nasty offender who blocks ongoing action. If attention is fully focused on the world, emotion experience is out there. The meanings are out there, phenomenally. Experience is of "situational meaning structure" (Frijda, 1986). Different emotions correspond to different such meaning structures.

This way of characterising emotion experience comes from phenomenology, notably from Sartre (1939) and Arnold (1960). It emphasises the intentional nature of emotion experience: The experience is *about* something, not merely *of* something. This characterisation appears valid. Descriptions of emotion experiences, in self-reports, indeed for a large part consist of descriptions of the meanings of objects or events, and different emotions (as named by the subject) correspond to different patterns of meaning (e.g., Davitz, 1969). Ratings of recalled emotion incidents in terms of appraisal questions that seek to catch those meanings lead, in discriminant analyses, to about 40% correct emotion label assignments from among 30 or more labels (e.g., Frijda, Kuipers, & Terschure, 1989; Frijda, Markam, Sato, & Wiers, 1995).

Situational meaning structures consist of perceived felt qualities that lead a person to use epithets like "attractive", "fantastic", "repulsive", "uncanny", "weird", "open", and to identify the event as a threat, a loss, or an invitation, as confusing, oppressive, or yielding. All these are the conscious outcomes of appraisal processes that themselves are largely nonconscious. When explicated, the felt qualities appear to represent fused information of several kinds: Mainly the event's or object's affective valence, the kinds of benefit or harm it may offer or do, and what it allows or prevents one to do to deal with it.

Affective valence, the event's pleasantness or unpleasantness, has several sources. It may originate in innate or learned stimulus-affect connections, in appraisal that the event satisfies or obstructs one's concerns (Ellsworth & Scherer, 2003), or in registering smooth or obstructed functioning generally (Frijda, 2000a). Appraisal of the kind of benefit or harm also comes from previous experience and, in addition, from the actual ongoing interaction of the object or event with the progress of one's plans and actions, the latter's being blocked or enabled. What the event allows or prevents one to do to deal with it—often called secondary appraisal—includes what Gibson (1979) called

“affordances”: Ravines look as places to fall into, smooth skin as appropriate for stroking, and a friendly face as one that allows closer approach. It also includes “hodological space” (Lambie and Marcel, 2002): The paths and barriers in reaching what is desired or in avoiding what is disliked. Perceiving paths and barriers, too, results from interaction between properties of the event and one’s actions. “The phenomenology is of the physical relationship between the body and the world” (Lambie & Marcel, 2002, p. 238).

Perceived situational meaning structure is not knowledge of what evoked the emotion. The disgusting appearance of a slug does not cause disgust but manifests it. It is part of the emotion experience itself. Nor does situational meaning structure coincide with the information that instigates the appraisal processes that instigate action readiness. These processes, as I said, mainly operate nonconsciously, and may differ from one’s presumed knowledge of antecedents, as again the slug demonstrates. Moreover, situational meaning structure not only reflects antecedent appraisal. It also reflects also what the event is inciting or ordering one to do. When having hit one’s head against a kitchen shelf, one sees that shelf as a blameworthy agent and may smash it; one did not see it like that before being angry. Situational meaning structure includes the world-focused experience of one’s motivational state, one’s state of action readiness. The blameworthiness of the kitchen shelf reflects its being the target of one’s angry impulse. The felt qualities include those of being targets for action, perceived instrumentality for ongoing actions or actions one is in readiness for, and the urgency of the action calls. They are related to what Lambie and Marcel set apart as “gerundival properties”.² Action readiness precipitates a host of felt qualities. It transforms a neutral world into one with places of danger and openings towards safety, in fear, or with targets for kissing, and their receptivity to it, in enamoration, with roads stretching out endlessly before one in fatigue, misery, and despair, with insistent calls for entry or participation and with obstacles to make light of, in enjoyment; and to do all that *now*. Action readiness—action readiness itself, not awareness of it—gives objects, places, and locations their demand characters of “to be removed”, “to be distanced from”, or “to be united with”. The demand characters differ subtly from the affordances and hodological properties. The latter reflect appraisal of what one *could* or *could not* do; the former reflect one’s being set to do or actually doing, with its control precedence. With arousal of emotion, the felt quality “desirable” changes into that of “desired!”, of “an object-to-be-possessed-not-in-possession”. With joy, experience shifts from “the world as open and available” to “the world within reach”, “at one’s fingertips”, “to-be-participating-in”.

² For Lambie and Marcel, these are aspects of second order experience only. As sketched here, they can also belong to first order experience, to phenomenology.

Self-focused emotion experience

When attentional focus moves from the world to oneself, experience changes accordingly. The objects now are aspects of *my* body, *my* states, or *my* person. “My” does not mean the same in each instance. It refers to belonging to the totality of the proprioceptive or visual image, to oneself as an agent or subject, or to the conceptual entity on the same level as other persons seen and interacted with.

In emotion, attention may go towards one’s responses, perceived from the inside, so to speak: The sensations from one’s muscles and inner organs, or one’s appraisals of one’s competence or incompetence in the particular situation, of being attracted, of having lost part of oneself, upon personal loss, or as being diminished by failure or insult, one’s feeling at the global level of synthesis, as feeling of sadness or shame, all generating the subjectivity of felt emotion and the notion of “having” an emotion. It may involve awareness that the felt attraction is one’s own, rather than the attractiveness of the external object. And attention may focus action readiness.

Action readiness, one’s motivational state, becomes articulate in self-focus as an urge, and as an urge with a particular relational aim such as for self-protection or escape (which may lead to calling the emotion one of fear), for removal of obstruction or offence (anger), or to deploy one’s energies freely, and broaden and build the scope of one’s interactions (joy; Fredrickson & Branigan, 1999). Lists of modes of action readiness specified by aim have been made (Frijda, 1986; Frijda et al., 1989; Roseman, Wiest, & Swartz, 1994). Many felt urges are more specific, such as the urge to hide oneself, or to strike out. Many others are diffuse, and may contain no more than “seeking change from my present situation”, for instance, which is often called “distress”, or “doing something, I know not what” which is called “excitement”. Some states of action readiness have no aim, which is precisely their distinguishing feature. Some are felt as undirected urge, as in excitement or feeling full of energy; and some as the explicit absence of urge. One feels one’s loss of motivation in depression or fatigue.

All of these may become emotional objects—evaluated objects clad in meaning structures. One perceives oneself as a person of high worth or worthless, and the same for one’s properties like status or power relative to those of others. One may feel ashamed for one’s fear or impulse to flee, or guilty for one’s lustful desire.

Many of these exist as objects in unreflexive experience, first order without awareness, or also second order in which one is aware of one’s state: Notably when lying down in pain, the body burning, or in inability to move and disinclination to face the world in sense of utter worthlessness in depression, or in feeling diminished after loss.

World, action, and body in emotion experience

Note how different experience is under world- and self-focus. Having a feeling of horror or feeling the shivers down one's spine are vastly different from perceiving a horrible event. In one, one's glance goes inward: one feels miserable or shivering. In the other, it goes outward: there is a very evil thing.

And yet, awareness of the world and of oneself are strongly intertwined. What is not focused is still in some way present in experience. World and oneself are related as figure and ground, as Lambie and Marcel (2002) formulate it. In world focus, one is oneself implicitly present. One's location is the reference point against which the event is perceived as close or far away. Something is seen as looming because it towers up over oneself, and appears to approach one; something is seen as grizzly because it projects the pain that might ensue, and as attractive because of the approach urge it evokes. Perception, whether just pragmatic, spatial, or emotional, is embodied perception (Varela, Thompson, & Rosch, 1991).

In self-focus it is the other way around. Awareness of action readiness includes the felt urge to approach or flee—but still towards or away from somewhere. It is awareness of desire and striving to establish or modify a relationship. Action awareness by necessity is situated; otherwise it becomes mere awareness of muscle tension. Take the experience of pointing one's finger: It feels different from stretching one's finger, because the action is guided by orientation towards a point in space.

Shifting focus shifts figure and ground, as they do in visual perception. It modifies the feeling. Perceiving a looming object changes into perceiving oneself as small and vulnerable, or modest and humble, according to degree and kind of synthesis. In world-focused grief the world is an empty place; in self-focused grief, part of what is felt as oneself is missing.

Conceivably, focus and its shift may also be absent. Elements from world and self may be fused. This may be so when attentional focusing has yet to develop, in lower animals and newborn infants, or when world and self dissolve in ecstasy or meditation. Then there only is a dim and inarticulate sense of free-floating pleasure and pain, of stability or instability, of acceptance or nonacceptance. This may well be the most primitive form of feeling, of which even an octopus or slug may be capable.

Experience of action readiness is crucial in emotion experience, in world or self-focused form. The central role of action readiness itself, in emotion, is an inference from behaviour (Frijda, 1986). It is the given moment's manifestation of the organism's basic propensity for striving—Spinoza's *conatus* (Frijda, 2000b). As mentioned, its role in experience appears from the emotion-specificity of verbal self reports, and from the felt difference between emotions and mere affective states like liking and not liking. This crucial role in emotional feeling can be considered supported by the evidence on activity during emotions

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in body sensing and action organising brain regions, such as insular and anterior cingulate cortex (Damasio, 2003; Panksepp, 2003). That activity reflects engagement of representations of one's body state and action readiness of the moment. It also suggests that those representations do not primarily derive from peripheral feedback, as James (1884) surmised, but from purely central processes.

The present analysis converges with those of Lambie and Marcel (2002) and of Damasio (2003), in concluding that feelings are closely tied to information involving the body. However, at the same time one has to take issue with Damasio's general formulation of "the stuff that makes a feeling" (p. 83): "the idea of the body being in a certain way" (p. 85) or "the perception of a certain state of the body along with the perception of a certain mode of thinking and of thoughts with certain themes" (p. 86). The formulations are imprecise, and even somewhat misleading. They suggest peripheral feedback, which is secondary when playing a role at all. More importantly, they distract from making explicit that major aspects of feelings are not properly bodily, which would have come out if what is meant by "state of the body" were specified. One of those aspects is affective valence: pleasure and displeasure. A long controversy has ended in the conclusion that pleasure and displeasure cannot be reduced to body feelings (Arnold, 1960). Pleasure and pain are not aspects of body states, but "glosses" to such and other states, that is, experiences linked to acceptance and non-acceptance tunings (Frijda, 2000a). They also stem from thinking proceeding smoothly or unsuccessfully, which would not seem to fit "the idea of the body being in a certain way".

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Another major aspect that Damasio's formulations fail to point at explicitly is that the representations underlying feelings correspond to actions and action readiness. Both go beyond body state as such. They include the momentary relation of the body to the world, such as to the location one's finger is pointing to. They also include the relationships of current body state to reference states, as in pleasure and pain. They particularly include the relationship of current state to projected future state, as present in the aim of action readiness and in one's sense of urge. Awareness of the aims of nonplanned actions and of urges stems from information termed "reafference" or "preafference" in behavioural and neural control theory (see Freeman, 1999; Gallistel, 1980). One may indeed expect that activity in the cortices mentioned is influenced by those information sources, and the evidence suggests that indeed they are (Panksepp, 2003).

Characterising emotion experience as body experience makes what James called the "psychologist's error"; perhaps it should be called now the "neurologist's error": characterising experience by what one knows about the information leading to that experience. It makes a category error. Emotional feeling is not more body feeling than experiencing visual distance is. For the same reasons, the "somatic marker" theory (Damasio, 1994) should be considered superfluous and confusing. One should just substitute "emotional

feeling” (or even “emotion”) wherever “somatic marker” is invoked, because it is uncertain what psychopaths and Phineas Gage-like patients lack in response to affectively competent stimuli: arousal of pleasure or pain, responding with a change in action readiness, or body engagement proper.

Attentional modes: Synthesicism vs. analyticism, detachment vs. immersion

In the descriptions of world and self focus, I emphasised the more synthetic and immersed variants. These instantiate the intentional nature of the most characteristic forms of emotion experience. Such experience is about objects or events, in the world or of oneself; and the “aboutness” implies their meanings and their being targets of action readiness and action.

However, both intentional nature and meanings depend on the current mode of attention. They are most distinct in synthetic mode and immersion, and may be destroyed with increasing degree of analyticity and detachment. In self-focus, analytic attention reduces felt bodily engagement to just that. Felt impulse to shrink back from a threat is transformed into felt muscle tension, just as the feeling of pointing can be transformed into feeling one’s finger stretched. One comes to feel dizzy, one’s heart racing, instead of feeling anxious or upset. The differences can be important. Analytic isolation of information sources robs an experience of its emotional character. When dizzy or having high heartrate, one visits the general practitioner, and not the psychiatrist. Notice that such analytic attention is favoured by introspection. It directs attention away from the links between responses and events, towards how the responses are experienced. Hence the mentioned effects of observational circumstances on the nature of emotion experience. Hence also, perhaps, the dominant place of body feelings in the history of examining that experience.

Detachment occurs both in self-focus and world focus. In self-focus it may lead to depersonalised feelings: “this does not happen to me”. In world-focus, it may lead to derealisation, feelings of unreality, so frequent during trauma. You watch your skidding car slide towards the trees, and not also towards the coming pain. Or you watch that man there on the street falling backwards with a red patch spreading on his head: Hey, they shot him! The experience is cold, although the meanings may be present in first order experience and arouse reactions such as wetting one’s pants, and biting one’s lips till they bleed. Detachment is best understood, I think, as a filtering out of the “engagement” (Solomon, 2004), the second order awareness of affect and cues to action readiness. Quite likely, it is partly controlled by voluntary attentional shifts producing focus on factual and action-relevant event aspects, and partly by automatic blocking due to physiological (probably endorphin) mechanisms directly induced by the nonconscious appraisal processes.

Detachment may go as far as causing dissociation of first order phenomenology and reflexive second order awareness. This occurs under hypnosis, when a “hidden observer” coolly observes the pain that the manifest “me” does not feel (Hilgard, 1977). It is also frequent under the mentioned traumatic experiences. Under torture, the victim may observe him- or herself writhing and shrieking on the ground, but as from afar, as if pasted to the ceiling, looking down on him- or herself in a somewhat ironical and distant fashion. Aloof, he or she may coolly scan for ways of escape from a situation experienced non-coolly as unbearable (e.g., Langhoff, 1937).

Q6

Feelings

The fact that attention shapes emotion experience reveals a basic fact about consciousness: Its “creative” nature. Conscious experience is not the immediate outflow of information processes of a given intensity. It is not isomorphic to the underlying information but involves a transformation (Marcel, 1983). It is creative in the sense that some of its properties could not have been predicted from knowing that information, or from the nerve impulses carrying it. Coming from Mars, observing nerve impulses induced by electromagnetic waves of 660 microns would in no way predict something like a colour red. Experience is also usually an amalgam, a synthesis, of underlying information. It does not point for point correspond to the underlying sources, even if it reflects them. Take some simple and basic facts about visual perception. Perceived objects appear to “exist”, they are “out there”, and will still be in a minute or two. They are felt as “real”, except when one is in fever. Even their meanings are “out there”: a given face *is* attractive; another “looks sad”. This may apply even to judgments. Saddam Hussein *is* a scoundrel, just as, to his partisans, he *is* (or was) a daring hero. It applies to basic elements of one’s sense of self, such as awareness of agency. The factors that lead to these aspects of experience are many, and of different sorts (one can walk around objects, they will still be there when one closes one’s eyes, they may hit your head), but in the experiences they blend, in the sense of reality or of “out there”.

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Analysis of feelings points to another important aspect of conscious experience: Not all experience comes from the senses. A sensorialist bias has pervaded psychology. It was present in the early efforts to reduce all experience to sensations or images, and to reduce pleasure and pain to body sensations. But there is imageless thought. There is awareness of urge. There is awareness of what one wants to do before doing it, and of being set for a given action. There are feelings generated by failure or successful completion of the actions one was set for. There are feelings coming from the proper functioning of one’s information processes.

The synthetic and integrative nature of experience has also been argued by Scherer (2004): Feelings integrate the central representations of the various

response components. Synthesis and integration are manifest clearly in what I referred to earlier as “felt qualities”: weirdness and uncanniness, perceived affordances, hodological and gerundival properties. They also appear in the “feelings of sadness”, joy, anger, and so forth. They all integrate diverse information. The felt qualities are amalgams from nonconscious representations of what events can do to you, allow you to do, incite you to do, or are in the process of doing.

Following the integration processes in the inverse direction, feeling and felt qualities appear as pointers to the information at their source. The feelings represent a dim sense of the paths to those sources, or of the mere existence of such paths and sources. Feelings generally do, even nonemotional ones. Their paradigm instances are the feeling of knowing, and one’s awareness that one understands a verbal message. These clearly are pointers. Consider that someone speaks a sentence, and you nod: You understood what he said. What is it that you nod to? In his research on imageless thought, Bühler (1908) studied people’s understanding of complex texts. A proverb was read to them; they had to press a button when they understood its meaning, and report their experience. Subjects generally acknowledged that “understanding” did not imply explicit thoughts or images representing meaning. No such thoughts or images were yet present when they pressed the button. Bühler called these experiences “*Bewusstheiten*”, “consciousnesses”, and in later studies simply *thoughts*. Subjects were able subsequently to explicate the meaning. The feeling of understanding thus can be considered a pointer to the possibility of explication.

Emotional feelings and felt qualities can be regarded as similar pointers. If the conditions are right, and the subject has the necessary cognitive abilities, the sources (or presumed sources) can be retraced by processes of explication. The diffuse and ineffable feelings of anger, joy or sadness can be explicated by reflection, and yield articulate awareness of appraisal and action readiness. So can felt qualities. Importantly, the pointers do not primarily point to declarative information. They point to affectations (going to be hurt, satisfaction etc.) and to access (or lack of access) to action programs, and perhaps to their actual activation. These are, I think, the most elementary targets of their pointing.

Feelings of pain and pleasure may form an exception. They are the only affective qualia that indeed appear irreducible (Frijda, 2000a). The feeling of pleasure, or the felt quality of pleasantness is a pointer to the action tuning of event or state acceptance; that of pain to event or state change (Frijda, 2000a). Yet, pleasure and pain as such are abstractions of actual feelings. Of old, controversies existed on whether the pleasure of sweet taste and of discovering a truth involve the same pleasure, and whether physical pain and anguish involve the same pain. The answer can only be: yes and no. Yes: because both in each pair share being pointers to acceptance tuning or readiness for change, and may involve the same underlying processes. No: the experiences are syntheses of pleasure and pain per se with what these are about, with the sweetness or the

discovery of truth and so forth, that each trigger quite different actions to implement the acceptance or nonacceptance.

Second order experience

Emotion experience as explicability and explication

Second order awareness considerably adds to first order experience by articulate awareness and permitting reporting and naming. But it can add much more by explicating the feelings and felt qualities, that is, by following up the paths that these are pointers to. Explication yields the main substance of full second order emotion experience. In that its forces are joined by elaboration. Thoughts roam around the event and one's reactions: What more could happen, what might one do, what might the consequences be. The outcomes of both, in turn, modify the phenomenology, deepen the felt qualities, modify action readiness. Take perceiving something that stands out as unique, say a different pencil among a set of similar ones. One may realise that the uniqueness confers distinction or, by contrast, that choosing it makes one conspicuous. It leads one to either prefer or reject the unique pencil, depending on one's concerns. In fact, in an experiment in which students were offered a pencil as a present, American and Korean American students indeed tended to choose the unique one, but not so Korean students and Korean Americans after a five weeks stay in Korea. Their preference shifted towards one of the identical ones (Kim, cited in Mesquita & Markus, 2004).

Explication and elaboration can go in many directions. They can lead to articulate momentary appraisal and action readiness, and what one's emotion was about, the kind of things mentioned in emotion self-reports. They can trace what was contained in the felt properties and they can yield awareness of inhibition. They may go into the past that shaped the appraisal, and into the future, by bringing up the likely consequences of the event and one's actions. These realisations modify the feelings. An insult known as the tenth in a row makes it suffocating. Depth of loneliness differs between that due to this Sunday's absence of one's friends, or to having fled one's country, being cut off from one's language, one's history, and the sources of one's social identity (Apfelbaum, 2000).

Explication may also articulate the concerns that underlie the event's meaning: What was threatened when felt as a threat, or why what was lost caused sadness. Experience differs with the concerns involved, because the implications of satisfaction or threat are different for each concern. Consider the range of concerns that may underlie anger. An event may be appraised as blocking one's ongoing action, or as disturbing social behaviour habits, or as threatening one's power or status, or as damaging social esteem and self-esteem, or as threatening one's suprapersonal values, to name but a few possible concerns. The different concerns may also differentially specify the aim of anger's

hostile action tendency: As the aim to block or ward off the offender's progress, or to annul a change in a power relationship, or to support one's social prestige, or to remain human and civilised when terminating offence, and to keep one's self-respect. These different aims, in turn, induce different types of action, such as physically going against the offender, seeking to gain social ascendancy, or withdrawing into oneself. All this makes for differences in phenomenology, the event's felt qualities like "offensive", "insulting", "demeaning", "bastardly", "cowardly", and so forth.

Explication may bring awareness of important consequences for who one feels one is, and for one's relations with other people. In explication, a dim sense of comfort or discomfort may come to take the contours of feeling proud or ashamed of one's emotion. It may bring realisation that it attracts or repels others, or conforms with or deviates from, shared values. All this constitutes what I have called the emotion's "significance" (Frijda, 1986), which mediates emotion regulation. Again the felt qualities change. An emotion that one approves of feels different from one that one rejects, or one that unites from one that leaves one alone.

Examining explication and elaboration shows how much and in what regards the experiences of similar emotions can be different, in different occurrences, individuals, and cultures, even if they are all exemplars of "anger", "joy", or "sadness". The differences in concerns, expectations, and actions with their consequences may make that words considered as close translations—say, *anger* and the Japanese word *ikari*—still denote different experiences. *Anger* that is felt to upset social harmony by retaliation feels different from *ikari* that, by falling silent, respects the other and keeps social options open (Mesquita & Markus, 2004).

Virtual emotions and small emotions

Many emotion experiences do not correspond to the above descriptions. They lack distinct changes in action readiness and lead to no actions. They may lack body feelings. Yet, they lead subjects to the use of emotion labels, and to describe their experiences in largely the same terms as full-blown emotion experiences. The experiences concern emotional objects or events that are in principle appraised in a similar way as in true emotion experiences. The "in principle" bears on the absence of appraisals of reality and imminence; there is no control precedence. Changes in action readiness do in fact occur, but only as representations, as images or thoughts. One can and does imagine striking out in anger at some thought—of person; one can imagine shrinking back protectively.

I call them virtual emotions. Virtual emotions fill an important part of an individual's waking life. They occur in various forms. As emotion antici-

pations, they play a major role in behaviour regulation. One abstains from showing anger when envisaging that showing it might result in shame. One performs actions when the thought of omitting results in the image of feeling guilt. One hurries on faster to catch the bus just by the fleeting image of otherwise feeling regret. Virtual emotions also form the substance of empathy. In empathy one does not experience the same emotions as the other person, but has images of them that, true enough, on occasion proceed to motor innervation. They thereby play an additional role in behaviour regulation. One abstains from actions that may cause distress to others, or that may elicit their anger. Virtual emotions also form the substance of one's *mimesis* (Oatley, 1992) when immersed in the fate of other individuals in film or fiction. They also are what an actor experiences. When playing Othello, he is not jealous. His jealousy is gone when meeting Desdemona in the dressing room. He plays jealousy, and to be convincing does so with the help of virtual emotions, of generating the images of appraisal and sketches of action readiness. But here, as well as, or more than, in other forms, virtual emotions may blend over into real ones when appraisals become real and movements made wilfully become driven by them.

Somewhere between full-blown and virtual emotions resides a vast multitude of "small" emotions. They are fleeting feelings that may possess physical components, but as well may not. Examples are the little jolt of sadness when, during one's work, a thought about terrible events from the past crosses one's mind, or of yesterday's having been slighted; or the wave of discouragement when seeing a picture from a current war.

These small emotions do not interrupt one's work. They at most make one stare out of the window for a second or two. On retrospective analysis, they appear to contain everything that an emotion experience should contain: the image or thought of an object or event-as-appraised; a brief feeling of pleasure or pain, of acceptance or rejection, of mentally nodding yes or shaking no; some inkling of an attitude to take: of drawing back or going against or of welcoming the event. They may include the feeling of tears somewhere far away behind one's eyes, or a brief image of how one would jump for joy.

These small emotions may make one's daily life hilly rather than a flatland. They are small but not really weak. They may be sensed as the germs of something greater and more powerful, if one would focus on these feelings, would yield to what they signal, or were actually facing the event concerned. The effects of small emotions may be considerable. They may be the source of thoughts and consequential decisions. One needs no strong felt emotion to decide to buy that desired object, to visit that friend one has not seen in a long time, or to risk one's life to shelter a fugitive from persecution. That, indeed, is the conclusion one is led to when reading accounts from those who did the latter (e.g., Block & Drucker, 1988).

What is emotion experience good for?

What is the function of emotion experience? That is: how would human behaviour and beliefs be different if emotion experience were absent?

The question may appear silly. Feelings may seem to be what emotion is all about. It is not that silly, though. Much of emotion experience reflects non-conscious appraisal processes, states of action readiness, action, and physiological changes, in neat William Jamesian fashion—processes that would largely occur whether experience follows or not. Emotions, if defined by these processes and their outcomes, can occur without consciousness; so, what does experience add?

That emotions can occur without conscious experience is suggested by extensive research on automatic arousal of various kinds of emotional responses. It has been reviewed by Bargh (1997) and by Öhman and Wiens (2004), among others. Automatic arousal means that the subject is not aware of the eliciting stimulus or of its emotional valence or content. He or she may also be unaware of the responses, or of the fact that they were due to the antecedents they were in fact due to. The elicitors include affectively valent stimuli that were rendered nonconscious by backward masking (e.g., Murphy and Zajonc, 1993; Öhman and Wiens, 2004) or very brief exposure times (Moors, De Houwer, & Eelen, 2004), or of which the cognitive aspects were rendered largely inaccessible by cortical lesions (LeDoux, 1996). The responses include conscious affective judgements (liking or dislike) of subsequent consciously presented neutral stimuli, a slowing down of extinction when the conditioned stimulus was a backwardly masked affective stimulus, such as the picture of a spider or a snake (Öhman and Wiens, 2004), freezing, startle, and autonomic upset to such a stimulus (LeDoux, 1996; Öhman and Wiens, 2004). The effects may be even stronger for nonconscious than for conscious stimuli (Murphy and Zajonc, 1993; Rotteveel, 2003). All this led LeDoux (1996) to make his notorious remark that the study of emotion experience is a red herring in the investigation of emotion.

Is that remark warranted? No, it is not. The above list of nonconsciously elicited reactions contains only a fragment of what emotions consist of. It includes response parameters, or simple and stereotyped responses. Other responses of that nature may have to be added to this list, such as unsheathing nails, baring teeth, hissing, getting sexually excited by visual and olfactory stimuli, ejecting ink (in the octopus),. But emotions in humans and other higher animals manifest two further major response domains. The first of these is action readiness that results in open-defined sets of actions that each flexibly vary according to circumstances. In desire, one goes in search of an object. In anger, one can observe hissing, barking, or shouting of insults, taking up aggressive postures with fierce facial expressions, engaging in power struggles or malevolent gossip, search for occasions to retaliate, damaging property. Also, goals and actions are sustained over time, even in the absence of a stimulus. The

actions may be shown after a delay only; readiness can be held in abeyance and retaliation may follow at a future moment. During the delay, one may be unresponsive to other events. And there is control precedence: Actions do not emerge reflexely, but flexibly compete for priority with other activities. More importantly, emotions occur not only in response to simple stimuli but also, and mainly, to complex events representing concern relevance.

The second response domain in full-blown emotions is that of emotion control or regulation. Regulation extends over all components of emotion processes: over stimulus exposure, appraisal and action readiness, as well as over action proper (Frijda, 1986). There is no need to stress the pervasive effects of regulation on personal and social functioning. Though perhaps not as pervasive in other animals, emotion regulation is in no way absent there (DeWaal, 1996).

Emotion regulation results largely from the anticipation of aversive response consequences—that is, aversive consequences of unrestrained emotions. The consequences range from social rejection to failure of emotion-instigated actions and loss of self-esteem. They hinge on awareness of such consequences or, at least, of their being aversive. Research with psychopaths and orbitofrontal patients supports that assumption (see Damasio, 1994; Hare, 1976).

Rapid, reflex-like emotional responses and affect arousal by stimuli may thus not form the best starting points for evaluating the role of conscious experience in emotions. Full-blown emotions would seem to require other provisions, notably a different type of availability of relevant information. They may require information on affective state and affective objects to be available even when attention is not at that moment directed to it. Such availability may well be required to maintain action readiness, to remain set to obtain change, or to maintain current action when circumstances vary, and to select nonstandard actions. To do all this might need a signal that has effects even if the subject is engaged in other exploits and that can alert a large variety of response processes, including goal settings and purposive behaviours, and cognitive activities like visual exploration and memory search.

Emotions thus can only have their more elaborate properties if the information eliciting and guiding them has the functional properties generally ascribed to consciousness, and to pleasure and pain experiences in particular. Baars and Dennett, among others (Baars, 1997; Dennett, 1991) have outlined them. One is that conscious contents “broadcast” their message. Pleasure and pain experience do so in particular. They are distinct alarm bells, with their strongly attention-absorbing qualities that, for pain at least, have been abundantly demonstrated (e.g., Crombez, Eccleston, Bayens, & Eelen, 1998). Conscious experience is “heard” by an indeterminate number of action dispositions. It may activate some actions, and stop or interrupt others, more or less regardless of circumstances. It modifies expectations. The best overall characterisation of the central role of conscious feeling in motivation and learning is given by Dickinson and Balleine (2002). In clever experiments, they

- showed that affective feeling is the vehicle by which expectations are informed of the outcome of previous affective outcomes. If an aversive outcome has remained nonconscious, the cognitive expectations that a stimulus raises remain unmodified by learning. Indeed, LeDoux (1996) found that conditioned fear could only be established with cortical connections intact, whereas it could be maintained with such connections disrupted. Acquiring affective expectations is, of course, the core of forming “affective schemas” (Fiske, 1990) that constitute most attitudes.
- Q14
- Q15

Conscious experience is also vital for initiating action that is not triggered automatically by stimuli. How vital is evident from the absence of self-initiated action in blindsight. Although adequate actions with respect to objects in the blind field are possible when subjects are induced to act upon “guesses”, they will not do so spontaneously (Marcel, 1988). They have no reason to act, except reflexively; a blindsight patient is deeply handicapped (Weiskrantz, 1997).

Finally, conscious experience represents integrated information from different sources, as argued above. That information is kept available during delays in the planning and execution of actions. Consciousness represents working memory for planned action (Baars, 1997). It allows the human ability to have emotions that are not expressed but only experienced, but that nevertheless may influence the conduct of life, by pondering, considering and planning, by goal-settings independent from immediate action and by shifting future priorities after the eliciting events have gone by.

All this is more or less standard functional theory of consciousness. It distinctly accounts for a functional role of conscious emotion experience.

Beyond adaptation

Yet, the main functional role of experience may be elsewhere. It is not primarily that it may render adaptation more efficient. The most important effect of emotion experience, I think, is that it provides novel motivations and new knowledge. It creates novel concerns that form the basis for further emotions and actions. And it creates future: The awareness of future that is constitutive of true intentions. Emotion experience extends the environment that people and animals seek to adapt to, rather than that it only improves adaptation to the environment that exists.

Going beyond adaptation is evident in pleasure seeking. The experiences of pleasure and pain allow achieving or decreasing them to become ends in themselves. They can do this because of their inherent self-sustaining and self-terminating motivational properties. It is not restricted to humans. Mice self-administrate morphine that produces experience that asks for more; bonobo apes as well as humans masturbate (De Waal & Lanting, 1997). Pleasure seeking and seeking pain decrease can only be conceived of as stirred by feelings. There is independent evidence for that conclusion. Interference with the opiate system

takes away sniffing and whisker-trembling in mice confronted with formerly preferred foods (Berridge, 2004). Battery-animals indulge in self-injurious behaviours and odd behaviours like crib-biting, presumably because these increase endorphin levels that presumably reduce felt discomfort (Wiepkema, 1990). Of course, pleasure seeking and pain reduction can be expected to enhance reproductive fitness, but that is not explain how it operates. And it certainly does not explain its most prominent consequence: The generation of abundance or luxury motivations that seek to get more than one needs, like gluttony, greed, seeking more possessions or more power, up to the unquenchable search for it in all-powerful individuals like Nero and Stalin.

But experiences of pleasure and pain, and of what causes them, not only expand motivation beyond homeostatic or similar concerns. They extend it to novel domains. Humans seek fine wine and chilli peppers; evolution surely has not shaped taste mechanisms for them. They use cars not only to gain time but to lose discomfort, and go for the pleasures of driving Ferrari. Through pleasure seeking, novel object domains are drawn into the individual's range for free. Climbing mountains may be useful for finding roads to food, water, and nice views; but having found the pleasure to do it under difficult circumstances, it provides a motive on its own. It expands the domain of activities and skills actively sought. The same for interest and curiosity. Curiosity, again, is no doubt useful for getting one's bearings and detecting friends, foes, and resources. But there is little automaticity in sustained interest and curiosity. The feelings self-reinforce by their outcomes. They lead to feeling at home in a wider environment, or to being thrilled by ever novel challenges and ever novel success. The environment gets very much larger because it comes to include moving about in the worlds of knowledge and imagination. In the wake of all this, people may go and seek discomfort for the pleasure that follows: The icy wind on the mountain top, the suspense of a horror movie, the chilli peppers again.

Such growth goes along with a growth in the world of emotions. Owing to experiencing them, pleasure and pain can turn from signals of well-functioning into goal objects. Well-functioning itself can become such an object. Death can become a sting, and love a glory. Many things that are stumbled upon as sources of pleasure or pain turn into objects of striving and desire. Several emotion domains make this clear.

The first is that of self-conception. Much second order emotion experience consists of making sense of one's emotions, in terms of the history of events and the content of one's sense of identity. One locates one's emotion within a causal nexus, with the incumbent discoveries about oneself and the world, and the bases of new emotions that these discoveries provide.

A second domain is that of beauty. Beauty only exists as experience, and it only leads to behaviours that serve to enhance experience. Very little if anything adaptive is gained in addition to that, except in the case of sexual beauty. Beauty is created as well as sought for the purpose of experiencing. Whence does the

experience of beauty come? I do not know, except that experience of beauty satisfies concerns for certain other types of experience: of understanding, of perfection, of the well-functioning of the competences involved in grasping the beautiful event, and of coherence with the world.

Coherence

This is the third domain in which emotion experience shapes behaviour: That of achieving coherence with the world. Its most noticeable instantiation is the formation and maintenance of intimate social interactions: love, friendship, and social belongingness. The interactions are driven by the felt satisfactions of the intimate interactions, the suspense and excitements when they are in the making, and the anxieties and loneliness when they are broken or out of reach. Much of the behaviour is directed towards obtaining or maintaining the positive experiences that range from the sensory experiences of body warmth and of staying out of the wind-stream (which, I am told, motivates geese to fly as they do) to mental exchange and felt mental closeness.

This is particularly prominent in emotion sharing (Rimé, Finkenauer, Luminet, Zech, & Philippot, 1997). Exchanging emotion experience is what much of social interaction is about; in social sharing it is explicitly sought. As Rimé has shown, people in diverse populations and cultures share between 75% and 95% of their emotion incidents with at least one other person—mainly a spouse, parent, or friend—within a few days after the incident. Emotion sharing does not aim at solving one's emotional problem, and it does not help doing that. It appears primarily motivated by being inherently satisfying. Happy as well as distressful experiences are shared. The people whom one shares one's emotions with like being the target of sharing. Most often they subsequently share the shared incident with third parties, thus weaving a social intimacy network (Rimé et al., 1997).

Emotion sharing forms one of the building blocks of intimate human relationships. Most sharing, as I just said, is with intimate partners or kin. Intimate relationships based merely on mutual interests, or on sex without such sharing, tend to be felt as unsatisfactory. Much of the pleasures of sex indeed derives from sharing the pleasures (Hatfield & Rapson, 1993), just as the joint pleasures of child rearing help to offset the burdens of such rearing.

Felt emotions often form the glue that hold people together: enthusiasm for common goals, joint indignation for common offence, joint experience of rituals, and experience of jointness when partaking in them. Pleasure probably is involved: Damage to opiate systems appears to damage social inclinations (Panksepp, 1998).

At a deeper level, emotion experience forms the very substance of what cements much social interaction: Empathy. Empathy is defined by awareness of

the emotions of others, not cognitively but in virtual emotions. It is what allows social sharing, but also altruistic behaviour such as comforting and helping others. Comforting and helping have been observed in non-human primates: A chimpanzee rescuing another chimpanzee trapped in a ditch, by lowering a ladder into that ditch; or a chimpanzee consoling a group member who shrieked in distress upon just having been defeated in a power struggle (De Waal, 1996). The subtle interactions in flirting, too, rest on awareness of what the other feels, as in a young male baboon who very carefully attracts a female's attention by silently positioning himself close to her, looking at her, looking rapidly away when she looks at him, and so forth, in a way that is familiar from young humans (Smuts, 1985).

Social interactions, like emotion sharing and friendship, appear in fact as manifestations of a wider emotional aim: Establishing a sense of coherence with others and with the world. Sense of coherence is again experiential by definition. It is pervasive but yet hardly noticed until it drops out in derealisation experience and loneliness. And it makes itself felt when emotional meanings are absent. Emotional flatness is one of the major complaints in boredom and depression, and one of the reasons that a depressive may feel life itself to be meaningless.

Emotion experiences of any kind represent a felt link with the world or with oneself. Coherence is sought, both as a sense of external reality and as a background sense of self, even if only in the experience of the one bumping into the other. It is of course explicitly sought in a mystical sense of unity with the world.

Why does emotion experience provide a sense of coherence? The explanation may lie in the basic function of pleasure, to signal well-functioning. Sense of well-being may be viewed as the superordinate level of well-functioning monitoring. Loneliness indicates that social desires, propensities, and capabilities run on empty. Boredom indicates that emotional and cognitive functions do not function properly; recall that sensory deprivation phenomena were, at the time, studied under the perspective of the psychology of boredom (Hebb, 1972) and that one of these phenomena was disturbance of one's sense of self. Coherence mirrors high level adequacy of functioning.

But perhaps the explanation is simpler and unsurprising. It is experience of actual coherence. The world impinges on one's body and actions, and one modifies the world in return, or sets to it, in action readiness and action. The world shows an open road for access, and action readiness prepares to dive into it: Joy. Or the world blocks progress, and one pushes against the block or withdraws from it, in anger and fear. Even hatred represents a relationship. Even one's sadness is a dear experience one does not willingly let go of, because as long as the sadness is there, the lost one is not entirely gone.

CONCLUSION

In this paper I examined the nature and functions of emotion experience. I discussed the structure of such experience, that generally contains conscious reflections of the four major nonconscious components of the process of emotions: affect, appraisal, action readiness, and arousal. In addition, it may include the emotion's felt "significance".

The way in which emotions are experienced differ in a number of regards, outlined primarily by Lambie and Marcel. It depends on awareness of experiencing emotional objects, and on attention being directed towards the world or oneself and towards appraisal or action readiness and action, and its being synthetic or analytic, immersed or detached. In its most characteristic form, as during actual emotional interactions, emotion experience consists of perception of the world or oneself (one's state, one's reactions, one's body, one's person) permeated by meanings, manifest as perceived felt qualities ("dangerous", "upset", "powerless", "attractive"). Feelings thus are not generally feelings of one's body in a particular state. Although information from one's body is central *for* all emotion experience, it is not central *in* all emotion experience. Feeling of the body in a particular state represents detached analytic self-focused awareness only.

Explication and elaboration in second order awareness of feeling extends experience beyond the core of phenomenology to structured awareness of appraisal and action readiness, their history, one's expectations, and one's concerns involved, as well as to the links they provide or disrupt with one's social and cultural environment.

All these are not epiphenomena of the nonconscious processes at their root. Experience is of consequence for motivational states that outlast presence of what evoked them and for initiating and flexibly executing nonautomatic actions. It also contributes to the development of nonhomeostatic concerns, such as those for beauty and for coherence with the world and others, and for a coherent representation of "self".

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- Q1 2 Plutchik (1980): not in the References
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- Q4 9 as above
- Q5 10 'and not also': not clear
- Q6 11 Langhoff (1937): the date is 1935/1958 in the References
- Q7 11 'mµ': this has been changed to 'microns': is this OK?
- Q8 11 perhaps change the word 'scoundrel' as a description of Saddam Hussein. He is rather more than that!
- Q9 16 Murphy & Zajonc (1993): not found in the References
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- Q13 16 as for Q10
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References

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