Risk Emotions and Risk Judgments: Passive Bodily Experience and Active Moral Reasoning in Judgmental Constellations

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1 Introduction

Experts typically accuse lay people of "emotional" responses to technological risk as opposed to their own "rational" judgment. When people oppose a particular technology, they are said to be lacking information, scientific education, and rational judgment.

This attitude towards lay people judgments is in tune with risk perception and risk communication research that qualifies lay people's responses in terms of bias, affect, or feeling (e.g. Slovic et. al. 2004; Keller et al. 2006). Now there is no doubt that emotions play an important role in risk judgments. Paul Slovic and others have done much to show that emotions play a role in risk perception (Slovic et al. 2004; Tversky and Kahneman 1974; see also the overview presented in Peters et al. 2006 and in Covello and Sandman 2001).[1] But this literature has a normative dimension to it as well: it does not only show that emotions play a role; it also communicates an attitude of mistrust towards emotions when it comes to their role in risk judgment.[2] Consider the concepts used. For instance, emotions are seen as part of a "heuristics", that is, of judgmental short-cuts. While I do not wish to challenge the results of empirical work on heuristics and biases referred to above, using the terms "bias" and "heuristics" suggests that the authors interpret their results as implying that emotion does not contribute to proper risk judgment. Consider also the concepts "risk as feeling" versus "risk as analysis" (Slovic et al. 2004). Although Slovic has

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[1] The results of these studies are in tune with conclusions from neuroscientists and empirically oriented philosophers who have used neuroimaging technology (fMRI scans) to show that emotions play a role in moral judgment and moral cognition (Greene et al. 2001; Young and Koenigs 2007).

[2] A similar remark can be made about Greene's work: Greene observes that emotions are important but, as Roeser has shown, he holds the view that they should not play such an important role since they are reflections of evolutionary formed prejudices (Greene 2003; Roeser 2010).

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recognised the limitations of risk science and has argued for recognizing citizens as partners in the exercise of risk assessment (Slovic 1999), the concepts that frame the discussion tend to merely re-enforce the polarisation between laypeople and experts (Coeckelbergh 2009).

In moral theory, this attitude of risk experts is compatible with a view of emotions as irrational forces that should be separated from moral judgment. Reason, not emotions, should guide these judgments. This view is often attributed to Kant, who made a rigid separation between the moral sphere (freedom) and the empirical sphere (determinism). Since, so it is argued, emotions belong to the latter category, they should be excluded from moral judgment. Moreover, on this view it is unthinkable that "moral sense" or "moral sentiment" could be the basis of morality, as the moral sentiment tradition (Hume, Smith, etc.) has it. As Kant has argued in the *Groundwork* and elsewhere, we should seek the basis of morality in reason, not in sentiment (Kant 1785).

If we wish to oppose such views – at least for what concerns their view of emotions – and link emotions to judgment in a stronger way, what are our options? Do we have to understand emotions as judgments, and reject views that link emotions to the body? Or should we recover such a body-oriented view, and reject the cognitivist view? Many contributions to the contemporary discussion about emotions side with one of these camps. In this paper I attempt to steer a different course. I argue that we should neither conflate emotions with judgment nor separate them entirely, but rather provide an account of the exact relation between the two which does justice to the specificity of both, one aspect of which I characterise in terms of activity and passivity. Using Angela Smith's "rational relations" view and employing the metaphor of a "constellation", I make a suggestion about how to (re)view the relation between emotions and judgment,[3] respond to recent arguments by Sabine Roeser, Jesse Prinz, and Peter Goldie, and explore the implications for discussions about technological risk.

2 Are Emotions Judgments or Bodily Changes? Mind and Body, Activity and Passivity

A straightforward route to give emotions a more important role in relation to judgment than Kantians are willing to and contemporary psychologists of perception unintentionally suggest, is to embrace cognitivism and argue that emotions *are* judgments (Solomon 1980, 2003, 2006), and/or that they are assessable as rational or irrational (de Sousa 1987).

[3] Note that my account does not make the Kantian distinction between moral and prudential judgment. To do so would imply that emotions can play a role in prudential judgment but should not "interfere" in moral judgment, a view which I reject. The account developed in this paper is applicable to both moral and prudential judgments and hence to all risk judgments in so far as they involve such judgments.

In *The Rationality of Emotion* (1987) Ronald de Sousa has argued that while emotions *are* not beliefs (de Sousa 1987, p. 173) and are often experienced as "gut feelings" (198), they can be assessed as rational or irrational since they are a kind of perception, "apprehensions of real properties in the world" (201). De Sousa tells us that we have "emotional repertoires" (236) that frame our "possibilities of experience" (332). This view does not imply that our emotions are determined by our previous experiences and our nature; De Sousa recognises that we can "regestalt" our paradigms and have some control (263).

Interestingly, de Sousa explicitly recognises the antinomy of activity and passivity as one of the philosophical problems emotions lead us to. He writes: "The word "passion" suggests passivity; yet in many ways emotions seem to express our most active self." (de Sousa 1987, p. 2) and are "sometimes the very embodiment of the will" (de Sousa 1987, p. 46). How shall we understand the latter claim? Robert Solomon, another cognitivist, writes in his book *Not Passion's Slave*:

> Emotions are not occurrences and do not happen to us. I would like to suggest that emotions are rational and purposive rather than irrational and disruptive, are very much like actions, and that we choose an emotion much as we choose a course of action (Solomon 2003, p. 3).

In tune with his earlier work (Solomon 1980), Solomon thinks of emotions as active and argues that therefore we are responsible for them.[4] He provides the following example. If I am angry at someone for stealing my car, then this is a judgment since I believe that I have been wronged: "If I do not believe that I have somehow been wronged, I cannot be angry" (Solomon 2003, p. 8). He concludes that "emotion is a normative judgment, perhaps even a moral judgment" (8). This does not mean that we are always aware of making such a judgment, making such a choice; they are "hasty and typically dogmatic judgments" and in this sense they are "blind" (17). Emotional judgments are "spontaneous" and "typically not deliberative" (96). Nevertheless, emotions can be rational (or not) in the same way as judgments can be rational (or not) (11, 35). And since judgments are actions, Solomon argues, emotions too are actions[5]: they are "aimed at changing the world" (11).[6]

But what about the passive side of emotional experience? What about feelings? Solomon discusses this question at length in the last chapter of the book ("On the

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[4] A similar view can be found in Sartre's *The Emotions* (Sartre 1948).

[5] Note that recently emotions have also received a more prominent place in the philosophy of action, which seems to support the cognitivist view. In their article "Emotion and Action" Zhu and Thagard argue against the view that emotions are irrational and that they "merely happen to people" (Zhu and Thagard 2002, p. 19). Drawing on research in cognitive neuroscience, they conclude that "emotions contribute significantly to the processes of action generation as well as action execution and control" (34).

[6] This sounds like Sartre, but Solomon rejects Sartre's view that emotions have a "magical" function. He calls wanting to undo the past, stereotype responses, avoiding unusual situations etc. "pathological ways of choosing our emotions" (Solomon 2003, 13). According to Solomon, emotions do not merely change our *view* of the world, the also (make us) change the world. Note also that the cognitivist is similar to the Stoic view of emotions, as Martha Nussbaum (2001 and Miriam van Reijen have shown (van Reijen 1995, 2005).

Passivity of the Passions"). He argues that not all of our emotions are suddenly provoked or "provoked by sudden circumstances" (Solomon 2003, p. 201). *Some* are (226). Often there is a set of events, many emotions are "enduring processes" and last a long time (203). Thus, what he calls the "emergency paradigm" (203) is not the only way to understand emotions. Moreover, Solomon argues against the equation between emotion and feelings. His argument is "the simple fact that we often have an emotion without experiencing any particular feeling" (31). For him, emotions are a way of seeing and experiencing (75) rather than feeling. Solomon does not deny the existence of feelings, of "being in a passion" and "becoming emotional" – he even claims that "emotional judgments are "dispassionate" only in pathological circumstances" (109), but argues that feelings are not the emotion (30). Emotions, he thinks, are rational and have a "logic" of their own (35). They are "a lot like thoughts" (206). Against James (see below), Solomon defends a cognitivist view of emotion that he expresses as follows: "An emotion is a system of concepts, beliefs, attitudes, and desires" (87). For Solomon, talk of passivity is "misleading" (212). He claims that even panic and rage involve cognition and judgment (214). He refers to the Stoics to argue that what is passive about emotions is "nothing more than an indicator about what we ourselves were actively doing, how we were living" (216). Finally, Solomon asks whether or not the *expression* of emotion may be involuntary and connects even expression with responsibility: we are responsible for "the emotion *as* expression" – the two cannot be separated since expression cannot be stripped-down to mere bodily movement (222). Generally, Solomon connects this point about responsibility for our emotions with the following normative ideal:

> Arguing as I have amounts to nothing less than insisting that we think of ourselves as adults instead of children, who are indeed the passive victims of their passions. (Solomon 2003, p. 232)

In other words, Solomon's descriptive view is connected with the normative view that we *should* take responsibility for our emotions. Moreover, with regard to *moral* judgment, Solomon argues that emotional judgments are evaluative and involve "cognition, appraisal, and evaluation" (100).

Thus, both de Sousa and Solomon see emotions as active, cognitive, and evaluative elements for which we are responsible.

However, although these accounts succeed in showing the importance of emotions in relation to moral judgment, they do not sufficiently account for the "raw", bodily and passive aspect of much emotional experience. In response to those who accused him of neglecting the body, Solomon opened up the category of judgment to bodily changes: he interpreted such changes as judgments, using the term "judgments of the body" (Solomon 2003, p. 191). But this unhelpfully inflates the meaning of judgment. As Matthew Ratcliffe puts it in his book review, "it might as well incorporate everything" (Ratcliffe 2003). In particular, it is hard to see how "judgments of the body" can be called *moral* at all (or prudential, for that matter). Furthermore, although de Sousa stresses that emotional rationality is not the same as rationality of belief or desire (de Sousa 1987), it seems impossible to reconcile

his view with the passive and bodily side of emotional experience. If anger is experienced by a person as something that happens to him or her, it seems odd to assess the rationality or irrationality of the anger itself (as opposed to beliefs or actions that are connected with it). Of course these beliefs or actions might be justified. But anger, as far as the bodily experience of it is concerned, appears (to the person and those involved) as rational or irrational as natural occurrences.

To account for the bodily side of emotional experience, then, we may want to turn to William James's early view of emotions as the experience of bodily changes (James 1884) and Jesse Prinz's version of this view (Prinz 2004b). This turn has happened and is happening, and, as Heleen Pott has argued, is partly motivated by trying to cope with the problem of the passivity of emotions (Pott 2005, p. 117). People such as Michael Stocker and David Pugmire have put this problem on the agenda. Cognitivist theory could not and cannot sufficiently account for the often involuntary, uncontrollable, and obsessive character of emotional experience (Pott 2005, p. 118).

In his famous article "What is an Emotion?" (1884) William James argues that emotion is not something mental that produces a bodily expression, but is to be equated with the feeling of bodily changes:

> 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.* (James 1884, pp. 190–91; his emphasis)

In his chapter "The Emotions" in *The Principles of Psychology* this definition is repeated (James 1890, p. 1065). James's view that there is an "immediate physical influence" (James 1884, p. 197) explains the passive side of emotional experience. Sometimes emotions follow a kind of short-cut, bypassing cognitive processes. Inspired by James, Jesse Prinz has argued that emotions are embodied appraisals, "gut reactions" (Prinz 2004b). In addition, he recently has embraced sentimentalism, which says that "to believe that something is morally wrong (right) is to have a sentiment of disapprobation (approbation) towards it" (Prinz 2006, p. 33). He connects this to James and his own "embodied appraisal" view in the following way.

> Moral judgments express sentiments, and sentiments refer to the property of causing certain reactions in us. The reactions in question are emotions, which I regard as feelings of patterned bodily changes. (Prinz 2006, p. 34)

Thus, James and Prinz offer us a view of emotions that accounts for their bodily side, but at the cost of downplaying the role of practical rationality. Although cognitivist theories have put too much emphasis on rationality and action, in this account this dimension seems entirely absent. However, Prinz also adapts James. He criticizes James for his "failure to reckon with what can broadly be regarded as the rationality of emotions" and proposes to see emotions not only as somatic but also as "semantic: meaningful commodities in our mental economies" (Prinz 2004a, p. 45). What does this mean? Prinz defines an appraisal as "any representation of an organism-environment relation that bears on well-being" (57). For Prinz, emotions are (only)

like evaluative judgments: “they represent roughly the same thing that evaluative judgments present, but they do it by figuring into the right causal relations, not by deploying concepts or providing descriptions. Our perceptions of the body tell us about our organs and limbs, but they also carry information about how we are faring” (57).

Now this seems to be a purely causal understanding of emotion that has little or nothing to do with moral judgment. In such a view, emotions are like warning lights on a dashboard: they let us know how we are faring. Moral judgment is supposed to be more (complex) than that, especially judgment concerning technological risks is not simply a problem of the relation between organism and environment. And on James’s view, the relation between emotion and judgment becomes one of expression. Thus, judgment as active moral reasoning is either reduced to emotion and therefore no longer moral reasoning and no longer active at all, or it is completely separated from emotion. To refer to James’s example: my judgment that the bear is dangerous is only an expression of bodily changes or if it is “separate” from these changes it is irrelevant and superfluous since the body has already “judged” or “made up its body” (as opposed to “made up my mind”). Both the cognitivist and the Jamesian view tie up emotions and judgment so closely that we can no longer make sense of the folk psychology idea of an emotion and a judgment as two different things. Some may see that as progress, but I would like to try harder to save it, without having to endorse what I have called the Kantian and psychology of risk perception view. Can we steer a middle course between separation (Kant and risk perception view) and identity (cognitivism and James)? Can we describe the relation between emotion and judgment in a way that avoids these two extremes?

3 Emotions and Rational Relations

To further reflect on the relation between emotions and judgment, I seek inspiration from Angela Smith’s “rational relations” view. In her paper “Responsibility for Attitudes: Activity and Passivity in Mental Life” (2005), Smith argues that there is a normative connection between spontaneous attitudinal reactions and our underlying evaluative judgments and commitments (Smith 2005). Let me briefly explain her position. Against what she calls the volitional view of responsibility, which holds that choice and voluntary control is a necessary condition for responsibility (Smith 2005, 238), she points to “different ways in which our attitudes and reactions can be said to reflect our evaluative judgments” and argues that these connections are sufficient for responsibility (Smith 2005, p. 237). However, these “reactions” are not the “gut reactions” or “bodily changes” Prinz and James have in mind. Smith makes a distinction between “brute sensations, which simply assail us” and “spontaneous reactions” which “reveal, in a direct and sometimes distressing way, the underlying evaluative commitments shaping our responses to the situations in which we find ourselves” (Smith 2005, p. 250). Both “do not arise from conscious choice or decision” (Smith 2005, p. 250), but the spontaneous reactions are rationally connected to our evaluative commitments and are therefore morally relevant. She argues that

physical reactions can serve as "moral indicators of our evaluative judgments", but that this relation is "purely causal", whereas our attitudes "are not merely the causal effects of our judgment" but "active states, in the sense that they essentially involve our judgmental activity" and therefore we are responsible for them (Smith 2005, p. 258). The latter are "judgment dependent" whereas the former are not.

Let me now apply this "rational relations" view to the discussion about the relation between emotions and judgment. Are emotions like the attitudes and the spontaneous reactions Smith describes? Or are they more like "brute sensations"?

We need not deny that there are emotional experiences that can be described as "brute sensations", as "bodily changes", and as "gut reactions". With regard to such experiences, we can study the causal relations, discover how the body works. But the emotional experiences that are relevant *morally* are usually not of this kind. Consider the emotional experiences relevant to risk judgment. For example, in response to a picture of people who died from an atomic bomb explosion, we may feel direct, causal fear of death, but the morally relevant fear is our fear of the technology being used for this purpose. This fear is related to the "raw" fear of death, but it is much more: it is part of a moral judgment which also involves other elements. When it comes to emotions that are morally relevant, my thesis is that these emotions – however passive, bodily, overwhelming etc. – are rationally connected to judgments and the values on which we based them, or are at least always open to such a connection. Thus, by distinguishing between two kinds of emotional experience, I am able to account for both the passive, bodily side and the active, reasoning side. Emotions are not judgments, as cognitivists claim, but they can be rationally related to judgment (or not), and this *relation* is open to assessment. Emotions are strongly related to action, but the connection need not be seen in causal terms. And James and Prinz are right to call attention to the bodily and passive side of emotional experience, but they fail to distinguish between emotions as "gut reactions" and emotions as a mental state similar to attitudes that can be rationally connected to our normative commitments. The latter have a passive side as well, but this passivity is not best described by reference to causal processes in the body, but by reference to the normative, evaluative commitments we have, the values and beliefs we hold. Such commitments bring us in a position that Harry Frankfurt has described with Luther's phrase "I can do no other" (Frankfurt 1988, 1999). However, in contrast to Frankfurt, we need not understand this as being necessarily a question of "voluntary necessity". It can also be a case of "rational" necessity: "I can feel no other" since (for example) I care about X. There is a rational connection between my care for X and my emotion, and this connection renders me in a situation of passivity and "necessity".

The term "necessity" is perhaps not the most adequate term since it might be taken to refer to gut reactions that have a causal connection. The emotional experience considered here must instead be located in the sphere of freedom and morality.[7] By making such a distinction between freedom and necessity, I arrive at Kant again,

[7] Note that our emotion and judgment can also be non-moral, but here I consider (risk) judgment as moral judgment.

perhaps, but without buying his denigrating view of emotions. Emotional experience, now, can be understood as partly belonging to the sphere of necessity when it is re-action (think of the bear), but it must also be seen as *possibly* having its home in the sphere of freedom, in cases when it is rationally related to our deepest moral commitments. In such cases, our action taken on the basis of the emotion can rightly be called free, since it is *my* commitment and *my* judgment which is rationally related to *my* emotion. At the same time, we must also recognise the deep passivity involved in the emotional experience, a passivity that can be felt, bodily.

4 Emotions as Part of a Judgmental Constellation

If this view is right, does it imply that emotions can be only consequences of evaluative commitments? Or can they also change those commitments? Let me say more about the nature of the "rational relation" between emotions and judgment. Angela Smith argues that if fear involves the judgment that something is dangerous, there is not just a causal connection but a "conceptual connection" or a "rational connection" (Smith 2005, p. 270). But her examples mainly suggest a one-way process: there is a rational connection in the sense that our evaluative commitments give rise to attitudes or emotions. This view remains too close to views that see emotions merely as expressive. In these views emotions are not given their full significance as experiences that themselves can give rise to further reasoning and judgment, perhaps even change of our evaluative commitments. Rather than conceptualising this connection in terms of "expression" or "reflection", I propose to understand the relation between emotions and judgment in the following terms: emotions are part of a "constellation of moral judgment". I coin this concept in order to avoid both identity and separation, and to allow a two-way process. A constellation is a group of "somethings" and a group allows for mutual relations. In astronomy, stars form groups as they are related by way of gravity, but they are separate entities. Similarly, emotions are not judgments. The two are not identical, but they are related. A large part of the emotional experience that is morally relevant in risk judgments and other judgments is not of the "bear" kind, not of the re-active kind, but stands under the influence of the gravity field constituted by evaluative commitments, values, beliefs, and concerns, and vice versa.[8] Together, these elements form a judgmental constellation, a group of elements that together constitute moral judgment.

Let me give an example in the context of judgments concerning technological risk. Many lay people, while benefiting from nuclear technology through the consumption of energy produced by it, reject the technology. Is this irrational? Is it a typical case of bias? Is it an "emotional" reaction? Perhaps it is a matter of emotions, but not of emotions alone and not of emotions as mere "gut reactions". Of course imagery of death and destruction may strike us with horror in

[8] Note that I have a more pluralist definition than Roberts (see also his contribution to this volume): the value dimension enters not only via concern.

a very direct, re-active way. But most part of the emotional experience involved here – which can also be quite strong, be felt physically, and testify of deep passivity – may be rationally related to strong moral convictions and commitments, to knowledge and belief, etc. For example, imagine that people believe that there is a problem with potential transfer of technology from the context of energy production to that of warfare and that there is a problem with nuclear waste. Furthermore, imagine that they are committed to peace, and they care for future generations. If their emotions concerning nuclear technology are rationally related to these beliefs and commitments, then these emotions can adequately be regarded as forming a part of, and co-constituting, a judgment, a moral judgment concerning the technology.

For discussions about technological risk, this implies that we (experts and others) should apply a principle of charity or openness when we meet other people's expressed views that involve emotion: we should assume that they behave as the rational and emotional beings that they are, and that their emotions are part of a judgmental constellation.

This argument can be seen as an interpretation of, or an addition to, the "ideal speech situation" requirements Habermas has argued for, conditions which are meant to enable what he calls "free discourse" and "communicative action" (Habermas 1981). It also refers to Kant's idea that we are, or should be, moral equals.

Of course, as with all judgments, questions can be asked with regard to the quality and/or rightness of the judgment. To say that emotions should be taken seriously since there is a good chance that they are part of a judgmental constellation, is not to say that all judgments made in a particular case with regard to a particular technology are right. For example, commitments may be morally problematic, and the way the various elements are related may show some irrationality. In the best case, this can be clarified in further discussion. But the emotions themselves are not rational or irrational. The rationality is not atomistic but holistic here, in the sense that the rationality of the constellational relations as a whole must be assessed in order to say something about the quality of the overall moral judgment. Finally, it may be that there are limits to the degree to which we can assess a moral judgment as right or wrong, or in terms of its rationality. And even if it would be possible to a large extent, it need not mean that a judgment is absolutely right or absolutely wrong: between these extremes (if they exist at all) lies a universe of moral possibilities.

5 Comparison to Recent Interpretations of Cognitivism and James

In order to further clarify my view, let me compare it with three recent contributions to the philosophy of emotions that seek to adapt cognitivism and James towards a "middle way" between both extremes.

5.1 Roeser's Cognitivism

According to Roeser, we need emotions in order to judge the moral acceptability of technological risks (Roeser 2006). She justifies this claim by arguing that emotions "have cognitive and affective aspects at the same time" (Roeser 2010, p. 11). She gives examples such as feelings of indignation, shame, and guilt. Thus, she subscribes to the cognitivist idea that emotions are value judgments, but in contrast to standard cognitivism she argues that they are feelings at the same time – thereby incorporating the Jamesian insistence on the affective aspect of emotions. Drawing on intuitionism and arguing against Greene she claims that we need emotions in order to have access to objective moral truths: they can be "a form of judgment and insight into objective moral truths" (21).

This view stays too close to the cognitivist view that equates emotions with judgments. When we feel indignation, this feeling is not itself a judgment; it is more adequate to understand what goes on by saying that there can be a rational relation between the expression of emotion and the moral judgment. Roeser's position that emotions are a form of judgment and can provide insight into objective moral truths seems to imply that emotions can be right or wrong. But this does not correspond well to some of our intuitions. For example, when we say (perhaps following Aristotle) that emotions can blind judgment and make a debate impossible, we distinguish between emotions and judgment. If we equate emotions with judgment, as Roeser does, we have no way to account for this experience. Roeser could respond that this is a case of a failed, inadequate perception of moral truth. But such a description does little justice to the adversarial, hostile relation between emotion and judgment experienced in these cases. A rational relations view can do a better job. If there is no rational relation between our emotion and the rest of our judgmental constellation, then it is appropriate to either say that there is an internal struggle between the emotion and the other elements of the constellation or say that "emotion blinds judgment": while the other elements of our judgment are intact, emotion (temporarily) blocks off our judgment, renders the other elements of the judgmental constellation mute. If, on the contrary, our emotion is rationally connected with the rest of our judgment, the emotion enables us to see the world in the light of our judgment, provides a window for judgment, and offers – to others – a royal entry into our judgmental constellation. This enables mutual understanding – although it does not guarantee a consensus. In contrast to Roeser, I do not need to make a claim about the objectivity or rightness of the judgment. My account only claims that emotions can, or cannot, be rationally related to other elements in a judgmental constellation.

Thus, if there is no rational relation, emotion can be seen as separate from the other elements. In this case some may call the emotion "irrational", but in my view it is not the emotion that is to be described as irrational; it is the rational relation that is missing. The relation is to be evaluated, not only the separate elements.

Are emotions necessary for (a right) moral judgment? One might argue that emotions are a necessary part of a judgmental constellation or that the judgment is not *complete* without the "right" emotion – right in the sense of being rationally related to the other elements in the judgmental constellation. But completeness is neither

necessary nor sufficient for the rightness of a moral judgment. Someone can have a well-built judgmental constellation but the judgment can be wrong. And the judgment can be right, but the emotional expression may be missing or the judgmental constellation may lack completeness if there is no rational relation between emotion and the rest of the constellation. Another response is to say that emotions are not a necessary part of a judgmental constellation, but that its completeness depends on there being a rational relation between emotion and the rest of the constellation. If there is a rational relation, the constellation is more complete. However, if completeness is not related to the rightness of the moral judgment, why care about it at all?

Although completeness is not necessary for the *rightness* of the judgment, it enhances the *quality* of the moral judgment. A more complete judgment is not more *right* but *better*. This is not only so since it employs the capacities we have as cognitive and as affective beings but also since actions following a complete judgment have a broader motivational basis: if our judgment is emotionally robust, we will also feel like acting upon it. Moreover, an emotionally complete judgment assists the agent in developing and maintaining a harmonious mental life and has communicative and rhetorical advantages as compared with the "merely" right judgment. Someone who defends a "right" judgment without being emotionally committed to it will have more problems trying to convince others of his judgment in a discussion than the one who lines up his emotion with his beliefs, commitments, and other elements that are part of his judgmental constellation. Completeness makes the person's judgment more transparent to others (and to himself) and renders it more convincing.[9]

One could object that looking at emotions this way is to neglect their passive and bodily aspect. If my emotions are drawn into the judgmental sphere, it may seem that they are part of active moral reasoning, and although they retain their bodily aspect, they appear to become the mere expression of judgment. But this impression is misguided. First, the advantage of the rational relations view is that relations can be considered in two directions. Sometimes emotions are the expressions of our beliefs, commitments, ideals, values, etc., but sometimes they *change* our beliefs and commitments. They can change not only our view of the world, of our partner, of our life, etc. but also our commitments, values, and other judgmental elements. As I said, the relations within a judgmental constellation are not one-way; emotions are not only the result of other elements but can also change these elements. Second, if this happens, it can have a strong passive aspect. Consider again Frankfurt's point that sometimes what we care about puts us in a situation of passivity (Frankfurt 1999). Commitments can also put us in such a situation: sometimes we cannot but have a particular emotion on the basis of a particular deep commitment. However,

[9] Note that there are more criteria to evaluate the completeness and the quality of a judgment. In his paper "Emotions and Judgments about Risk" Roberts proposes a number of epistemic criteria that can be used to evaluate judgments. For example, a judgment is better if it is epistemically justified and if the subject understands the judgment. Both are unrelated to what Roberts calls the "truth" of a judgment (see Roberts in this volume).

this relation must also be considered in the other direction: if we have a strong emotional, bodily experience in a particular situation, this may change our beliefs, values, commitments. For instance, if someone first holds the belief that a certain job is not really "her thing", but upon doing the job finds out that she likes it and feels good doing it, then that person is likely to change her beliefs and related cognitive elements.[10]

These possibilities for change are good news for moral discussions: if neither our emotions nor the other elements that play a role in our judgment are entirely fixed, they are open to change as a result of communicative processes, which is essential to keep open the practical possibilities for reaching agreement. This assists the process I take Slovic and others to aim for with regard to risk judgment: a collective, communicative process aimed at consensus in which both lay people and experts participate as partners (Slovic 1999). It gives people the opportunity not only to integrate their own judgmental constellations (e.g. by testing their coherence by confronting them with other judgments) but also to build a collective constellation that owes its robustness, harmony, and stability to the fact that both cognitive and emotional elements are shared between the partners and rationally related to one another.

This two-directional view can accommodate the cognitivist intuition that emotion teach us something about what we value, without equating emotion and value judgment. If there is a rational relation between what we feel and what we value as a result of our judgmental constellation, our emotion indeed shows what we value, and, as I said, it can even change what we value by influencing other elements in the constellation.

Note also that this view renders it unnecessary and incorrect to distinguish, as cognitivists and many other emotions theorists generally do, between so-called "moral emotions" (e.g. guilt) and "non-moral emotions" (e.g. fear). On my view, *any* emotion can stand, or not stand, in a rational relation to morally relevant elements of a judgmental constellation. To take an example from risk discussions: our fear of a particular technology may be rationally related to the value we attach to our lives and those of others.

5.2 Prinz's Adaptation of James

My presentation of Prinz's view so far was a little unfair, since I understood him as holding a view very close to James. But in this book *Gut Reactions* (2004b) and in his recent paper "Was William James Right About Emotions?" (2007) Prinz defends a modified Jamesian view of emotions that leaves room for cognitive and

[10] The situation here is similar to what psychologists call "cognitive dissonance", except that here the constellation contains emotions as well as cognitive elements. We could call it "emotional-cognitive dissonance". And similar to the usual response to cognitive dissonance, it is likely that the person will change her beliefs.

judgmental aspects of emotional experience. The Jamesian view of emotion can be summarized as follows:

event ▶ perception ▶ bodily change ▶ emotion

To use Prinz's example: I perceive a snake, my body reacts, and I feel fear. So far, cognition is not involved or only minimally – in so far as perception is a cognitive activity. There is certainly no place for anything like "moral judgment" in the usual sense of the word. But Prinz modifies this scheme by opening it up for cognitive assessment:

event ▶ perception and/or cognitive assessment ▶ bodily change ▶ emotion (Prinz 2007)

Perception can bypass cognition, but there can be also plenty of room for (conscious, deliberate) cognitive assessment. For example, when my expectations are violated, this may also cause a bodily change and an emotion. Emotions are not just a matter of stimulus-response; there is space for cognitive operations.

Compared to the cognitivist view, this model manages to keep judgment and emotion separate (but related). If we replace "cognitive assessment" with "judgment" we get the following model:

(expectations ▶) event ▶ perception and/or judgment ▶ bodily change ▶ emotion

Compared to my view, there is a crucial difference: this model describes causal relations. Judgment is related to emotion, but the relation is purely causal. A rational relations view is not necessarily in contradiction with a causal model: it need not deny that there are these causal relations. But it is another way of making sense of emotional and moral experience.

Note that a person need not be aware of the rational relations. Compare this perspective with what happens when philosophers ascribe "reasons for action" to persons: they may "have" good reasons to act in a certain way without explicitly knowing that they have them, without describing what they do and deciding in this way.

Note also that Prinz's causal view can be enhanced by considering the causal chain in *the other* direction:

emotion ▶ perception and judgment

Emotions can make us see the world differently. But this does not happen in a magical way, as Sartre argued (Sartre 1948). There are causal and rational relations between emotions and the way we perceive and judge.

5.3 Goldie Beyond Cognitivism and James

Peter Goldie's "middle way" between cognitivism and James starts from the claim that emotions are intentional – they are directed towards objects, e.g. I fear *something* (see also Solomon 2003) – but that feelings should not be left out of the picture

(Goldie 2000, p. 4). He understands emotions as involving various elements, including "perceptions, thoughts, and feelings of various kinds, and bodily changes of various kinds" (12). So whereas I open up the term "judgment" to a number of elements, Goldie does so for emotions. This reminds of cognitivism, except that feelings and bodily changes get a place at well. But what place exactly? Looking at Goldie's account of the intentionality of emotions, it first appears that there is little room for the passive aspects of emotional experience. Goldie speaks of "feeling towards" (19), which means "*thinking of* with feeling, so that your emotional feelings are directed towards the object of your thought" (19; Goldie's emphasis). The emphasis is on active cognition rather than feeling. However, Goldie sees no tension between the bodily and the intentional. Against mind-body dualism, Goldie argues that "our entire mind and body is engaged in the emotional experience" (55). My view is compatible with such an anti-dualist position since it brings emotions as passive bodily experience together with cognitive elements and other elements of active moral reasoning in one judgmental constellation. Moreover, as I read Goldie he overcomes the activity/passivity dualism, which is interesting given my own purpose in this paper. It is not the case that thoughts are active whereas feelings are passive. Goldie reminds us that passivity is at the "heart" of the cognitive side as well: "the emotions are *passions*: your thoughts and feelings are not always as much under your control as you would want them to be" (58).[11] For instance, fear turns otherwise harmless features of the world into dangerous and threatening elements. Put in the terminology I proposed, it means that a particular judgmental constellation, its relations, and its elements are not necessarily under our complete control. Not only emotions, but other elements as well are potentially wild horses – to use a Platonic metaphor. This is a further good reason to reject views that tend to stigmatise emotions as "irrational" as opposed to cognitive elements that are supposed to be "rational".

To conclude, I doubt whether "the reasons of the heart" are *always* "perfectly intelligible", as Goldie seems to suggest at the end of this book (Goldie 2000, p. 241), but they often are intelligible, there frequently are rational relations to be discovered and to be understood. There is no reason to presume otherwise when we meet people, their emotions, and their judgments. Rather, we should apply a "principle of charity" and seek out the rational relations between elements in their judgmental constellations.[12]

[11] Note that, apart from elements *within* the judgmental constellation, Goldie suggests that there is a sense in which our *actions* themselves can reveal a "passivity". In his analysis of jealousy he writes: "The passionateness of jealousy is revealed not only in its aetiology and in the way jealous thoughts and feelings can be out of our reasoned control. It can also be revealed in our actions. We can, so to speak, *find ourselves* doing things (. . .)." (Goldie 2000, p. 231) This suggests that we should not only look into the relation between these emotions and the other elements in our judgmental constellation, but also to the relations between elements of that constellation (for instance emotions) and our actions.

[12] If Goldie is right about the passivity of actions (see the previous footnote), we might also want to seek out the rational relations between judgmental constellations and actions.

6 Back to Risk

How can we apply the view I developed to risk? I have argued that emotions are not *necessary* for judgment or for the rightness of a judgmental constellation, and therefore I disagree with Roeser's claim that "emotions are an indispensable normative guide in judging the moral acceptability of technological risks" (Roeser 2006). However, while they are not indispensable with regard to the judgment's rightness, they enhance the quality of our risk judgments, and this gives us a good reason to take them seriously in discussions about technological risk. Furthermore, if we want to evaluate someone's risk judgment, we should not only look at the risk emotions themselves (or their verbal or bodily expression), but ask about their potential relation with that person's beliefs, commitments, and other cognitive elements.

One difficulty that arises when we turn to risk, however, is that the discussion above and the rational relations view from which it draws some inspiration, is made on the individual level. But moral judgments concerning risk and technology (1) do not happen in a vacuum but in a social and cultural context, (2) are matters of social and political concern and therefore are, or should be, part of the public sphere, and (3) are sometimes collective judgments. However, this need not be a problem for the account presented here. It implies a direct relation between public and private in the sense that the elements that make up the judgmental constellation – beliefs, emotions, commitments – are potentially shared and public. This makes public communication and discussion about the moral aspects of risk possible.

These insights can be used to critically assess the concepts used in the psychology of risk perception. Here I will limit myself to the term "bias" and the "perception-judgment" dichotomy. As I said in my introduction, both terms are used in the psychology of risk perception, and tend to have the implication of increasing polarisation by opposing the expert "judgment" and the "facts" to the "bias" and "perception" of the public (see also Coeckelbergh 2009). To avoid this, I propose to redefine the terms in the following way.

First, I propose to understand the term "bias" not as the opposite of a fixed external truth only accessible by experts, but as the description of an emotion that may or may not be rationally related to beliefs, commitments, and other cognitive elements. In this way, we can make sense of the view that both experts and lay people can have emotions, can make judgments, and can have emotions play a role in these judgments. As I argued above, the existence of a rational relation between emotion and other judgmental elements is neither necessary nor sufficient for a judgment to be *right*, but to consider the relation between emotions and judgment in way proposed above is a good route to taking seriously risk judgments by lay people. Before rejecting so-called "emotional" responses as irrational, experts and others must inquire into the possible rational relations between these (expressions of) emotions and the other elements of the judgment of their dialogue partners. In this way, people are regarded and treated as rational (and emotional) beings.

Second, the discussion above allows us to bridge the gap between "perception", ascribed to lay people, and "judgment", ascribed to experts. It has been shown that both elements are related. The possible relations can be approached from two angles.

First, we can describe the *causal* relations. This can be done, for example, by creating a theory that integrates Slovic's two systems – the system of feeling and the system of analysis (Slovic et al. 2004). We might also want to turn to Prinz's model, which links perception and judgment as potential partners at the same stage in the causal chain. In this way, perception and judgment are indirectly connected by emotion. Second, we can link perception and judgment by considering the possibility of *rational* relations between them. This requires a conceptual framework that departs from Slovic and Prinz. On the view defended here, perception and emotions can be part of a judgmental constellation. On both views (the causal and the relational), the opposition between perception and judgment as found in the risk literature can rightly be called a form of bias: it is not rationally related to the insights about emotions and judgment we gained in this discussion.

7 Conclusion: Emotions and Moral Risk Judgments

If the view of the relation between emotion and judgment sketched here is plausible, we must take seriously people's so-called "gut reactions" to technological risk as being potentially rationally related to, but not identical to, judgment. Sometimes they may be "gut reactions" indeed, merely causal reactions to the sight of horror. But more often they are emotions that are rationally related to evaluative elements which, together with the emotions, constitute what can be rightly called a moral risk judgment.

In this view, emotions are not themselves understood as cognitive elements. It recognises the passivity and the bodily aspects of emotional experience. However, it also regards both experts and non-experts as moral, emotional, and rational beings, who have the possibility and a duty to take up responsibility for their emotions, attitudes, and judgments. On this basis, they can communicate and discuss with one another.

An important condition for such a process is the possibility of changing judgments and the willingness to do so. Within the framework of risk judgment understood as a conversation between moral equals, emotions and judgments can change, perhaps *must* change if we are to move forward in discussions about risk. Sometimes this can happen to us. Indeed, the view proposed here recognises the possibility of actively changing our attitude to risk if we judge that there are good reasons to do so, but appreciates that if sometimes technological risk strikes us with fear and horror, that experience teaches us much about what we judge to be important.

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