

Risk, Affect and Emotion

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Abstract: For a long time theorising has underestimated the importance of affect and emotion in decision making and the management of risk and uncertainty. In relatively one-sided interpretations emotions were often interpreted as threats for rational decision making, and could be triggered by uncertainties, which would go along with social change. Recent interdisciplinary research has shown the importance to acknowledge the more complex link between reasoning and emotions. The article outlines different perspectives on emotion in risk research of economics, psychology and sociology and argues for further research.

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1. Introduction

In theorising and empirical research on risk the influence of emotion on risk-perception and risk-taking has been generally underestimated and underconceptualised. The traditional concept of emotions as the opposite of prioritising rationality becomes as questionable as the view that negative emotions (especially anxieties) are triggered by unstable social structures in general. Latest research supports the idea of emotions and rationality as insolvable connected in several ways, and the question appears, whether action is actually possible without referring to emotions at all. Additionally, the link between social structure and individuals seems to be far more complex than the unidirectional thesis proposes. [1]

However, recent developments in economics, psychology and sociology have supported a growing interest in the link between emotion and risk. The limits of rationality in decision making led to an opening up of economic research for psychological concepts of the actor/subject. Since the cognitive models in

psychology of decision making reached their limits, emotions came in sight, too. In sociology the general assumption that risks and uncertainties in late modernity would necessarily lead to growing anxieties appears to be unsatisfying when trying to explain the far more diverse empirical reality. [2]

Additionally, two main developments can be observed among the general public: a general shift in the interpretation of emotions from something disturbing the superior rationality to something positive by itself. Furthermore, the high mistrust in the government and public aversion to risk is closely linked to feelings of anxiety and therefore an important political issue. [3]

2. Economics

In conventional economics on the micro, as well as the macro level, emotions are regularly treated as a factor which can either be neglected in the context of ideal markets or rational decision making or which disturbs these ideals and therefore should be reduced. Rationality and emotion are mainly understood as a duality of two factors which exclude themselves mutually. Beyond the conventional approach several developments have taken place to manage its flaws (for example the assumptions of stable and unequivocal preferences). Probability modelling was introduced as means to manage the limitations of knowledge and uncertainty about the future. However, less conventional economics nevertheless argues that since the future is often much more uncertain than assumed, expectations are merely imagination and hope rather than rational calculation. No matter how much data, expertise, and information are used, the future is regularly far from predictable. Instead, other non-rational strategies or factors such as confidence, identity, solidarity or trust (here as an emotional issue) are necessary to cope with the unpreventable uncertainty in economic decision making. Although Post-Keynesians correctly emphasise the necessity of emotions for coping with uncertainty they still regard emotions as "biased", irrational "tides". Their proposals are concerned with reducing the role of emotions in financial decision making by providing greater stability and "certainty" (PIXLEY 2002, p.83). [4]

The deviations of the orthodox/standard model supports many efforts for further theoretical considerations while relaxing some of the assumptions of the hard core of rationality in economic theorising. Central are the well-known concept of bounded rationality (SIMON 1957; GIGERENZER & SELTEN 2002) and the growing research on behavioural economics (for example recent research on behavioural finance¹). They attempt to find out how individuals "really" decide in uncertain circumstances in order to develop general regularities/laws on how people judge. By developing more complex notions of the subject, applicable to economic theorising, economics come closer to psychology. The long abstinence of a positive concept of emotions in decision making research might be explained by the early engagement of economics with cognitive psychology. Researchers

1 Compare the issues of the journal "Behavioral Finance".

as TVERSKY and KAHNEMAN (1982) stick to the ideal model of instrumental rationality and interpret all deviations like "emotional decision making" as inferior. [5]

Since there are still problems in subordinating emotions as an external aspect, just influencing the core activity of rational weighing up gains and losses, some researchers suggest accepting the limits of rational actor models (RENN et al. 2000; TAYLOR 1996). Instead of subordinating all activities in the realm of rationality it should be acknowledged, that other logics of acting under uncertainty take place and need to be analysed as such (JAEGER et al. 2001; GIGERENZER & SELTEN 2002). Also, the possibility was suggested, that emotion appears as an action-logic on its own (ELSTER 1998), rather than something that is influencing rational decision making. However, this idea has been hardly adopted to mainstream economical theory or empirical research. It is still unclear whether emotions should be mainly treated as threats to rational decision making or whether several emotional conditions could be seen as independent decision-logics under uncertainty prior to rational strategies. [6]

Neurological research has shown that rational decision making and emotions are situated in different areas of the brain. But, as DAMASIO (1996) has already argued, there is no decision possible without emotions (compare also SLOVIC 2002; LOEWENSTEIN et al. 2001). With the help of brain-imaging technology behavioural economics have shown, that there is a systematic link between emotions and rational decision making which could help to understand well-known deviations from the rationality assumption of economics (PRINCETON CENTRE FOR THE STUDY OF BRAIN, MIND AND BEHAVIOR). When all expectations are linked to emotions, the question for future research is how and for which reasons emotions are linked to decision making in general, rather than to assume the deficit model of emotions in advance. [7]

3. Psychology

The research of psychologists and economists on decision making converges in many respects. Therefore, it is often not possible to show clear boundaries between them. In the following I am emphasising the psychological perspective which offers in some respect additional insights to the classical rational-choice oriented approach in decision making. [8]

In decision making research the perspective on emotions is focused mainly on *expected emotions*. One reason for this view might be that expected emotions can easily be added to the rational-choice model usually used in this research context. Assumed that people make decisions on the basis of an assessment of the consequences of possible alternatives, expected emotions are one additional factor which has to be taken into account. Risky choices then can be predicted by assuming that people assess the severity and likelihood of the possible outcomes of choice alternatives, albeit subjectively and possibly with bias or error, and integrate this information through some type of expectation-based calculus to arrive at a decision. [9]

This perspective differs from the view of researchers engaged in other psychological research domains, as neuroscience and social psychology. They focus much more on how *immediate emotions* influence decision making (LOEWENSTEIN et al. 2001). In contrast to earlier approaches emotions and affects are no longer solely interpreted as destructive for decision making, but as a prerequisite. For example, DAMASIO (1996) has argued, referring to research on people with specific brain injuries, that emotions are necessary to value alternatives in the decision making process ("somatic marker" hypothesis). Emotions and rationality necessarily play together in order to direct processes of decision making. In his view, rapid and basic emotional evaluation combined with a rational weighing up would produce good decisions in a limited time. Therefore feelings have a direct effect on decision making. CLORE et al. (1994) argue that feelings affect people's judgements or choices within a decision-process in those cases where the feelings are experienced as reactions to the imminent judgement or decision. [10]

The research of ALHAKAMI and SLOVIC (1994) and FINUNCANE et al. (2000) supports a concept of affect² as an *orienting mechanism* (SLOVIC 1999, pp.694f.). Affect would be prior to rational evaluation of alternatives. "It thus appears that the affective response is primary, and the risk and benefit judgments are derived (at least partly) from it" (SLOVIC 1999, p.694). [11]

Emotional intensity seems to influence significantly risk-perception and risk-taking. On a comparatively low level of emotional intensity emotions can be understood as an *advisor* for decision making. The evaluation of one's feelings is then used to find out how to judge (LOEWENSTEIN et al. 2001). In situations of a high level of emotions, in contrast, cognitive consideration might be *ruled out* by emotions/affect. This fits in the observation that under specific circumstances, when an outcome is seen as too horrible or catastrophic, one rejects risk calculation as a whole no matter how small the probability of possible negative side-effects may be (LOEWENSTEIN et al. 2001; JAPP 1997). For example the belief that vaccination could cause autism or the possibility of a serious accident in a nuclear power station. The problem that emotions and rationality sometimes do not coincide (LOEWENSTEIN et al. 2001) is rarely considered in the context of risk-research but is a common topic in research on intrapersonal conflict (SCHELLING 1984). People are often overwhelmed by their emotions and cannot act rationally, even if they want to (ROLLS 1999). [12]

Where economical and psychological research already provide us with some fundamental conceptual knowledge of how emotions are linked to decision making, sociology has developed foremost quite general assumptions how emotions are socially framed. [13]

2 Affect is "defined as a positive (like) or negative (dislike) evaluative feeling toward an external stimulus (e.g. some hazard such as cigarette smoking)" (SLOVIC 1999, p.694).

4. Sociology

Although the sociology of emotions has been developed during the last years it is still rather on the edge than in the centre of sociological theorising on risk (BARBALET 2002; WILLIAMS 2001). Instead, quite general assumptions are made about the link between social structures and subjectivity or identity. [14]

In the historical analysis of Norbert ELIAS (1994) the growing individual control as well as public regulation of emotions is interpreted as central part of the process of civilisation or modernisation. The idea of controlling the unstable and irrational emotions in order to enable the superior rationality to take place gains ground in a context where science and scientific reasoning was proving its power to control nature. [15]

Another sociological view assumes that emotions are in concord with social structures. For example, Arnold GEHLEN (1980, 1988) interprets institutions as guaranteeing the fulfilment of fundamental needs. Thereby the integration of the subject in society is mainly understood as positively valued by individuals. Finding their place in society as a developmental task (ERIKSON 1968, 1980) or the problem of social integration in structural functionalism (PARSONS) express this perspective. Stable social structures are seen as prerequisites to develop a solid and healthy (feeling of) identity. Therefore rapid social changes and uncertainties are interpreted as threats for identity, causing anxieties or even pathologies. In newer approaches this view is deeply rooted, for example in the work of GIDDENS (1990, 1991) and BECK (1992) as well as in the considerations of BAUMAN (1999) on risk and uncertainty and SENNETT (1999) on the "The Corrosion of Character" in new capitalism. In main-stream risk-sociology the notion of emotion is more or less influenced by this classical understanding of emotion. [16]

4.1 Governmentality

The governmentality approach sees risk as an expression of a specific style of governance, typical for neo-liberal societies which use statistical risk calculation (as in epidemiology and (social) insurance) and tend to ascribe risks to individual's decision making in order to govern populations (FOUCAULT 1991). Individuals become object of governmental strategies not as a person but as a bearer of indicators or factors (e.g. DEAN 1999; LUPTON 1999). Because governmentality relies on the governmental, institutional, and medial construction of social reality, emotions are included too. But emotion and affect are conceptually subordinated under the moral technology of governmentality. Subjectivity comes in sight as far as it is addressed and constituted by governmentality. Governmental strategies use people's enthusiasm by opening opportunities and stressing towards them how much better their live would be if they took up those chances. Thus emotions tend to appear conceptually as corresponding with the norms constructed by governmentality, and deviations are seen as expressions of bad governmental practice. In some recent publications the importance of affect for governmentality has been emphasised (WATSON

1999) as well as the rising significance of the affective in the public (for example BROWN & MICHAEL 2002). Nevertheless, the one-sided approach to emotion remains. [17]

4.2 Systems theory

In system theory the concept of emotions is underdeveloped as well³. It mainly comes in sight as communication, especially in the context of anxiety/angst-communication regarding environmental issues (LUHMANN 1989). [18]

In risk-communication the special characteristics of angst-communication is understood as a kind of communication that cannot be reduced by rational argumentation or scientific analysis, and reproduces and amplifies itself easily. Even attempts to reduce angst by information strategies rather support the amplification of angst than its reduction (LUHMANN 1989). The emotional impact of angst-communication seems to be self-evident contrary to the binary coded functional systems (economics, science, law/justice) and cannot be reduced by the logics of economics, science or law itself. LUHMANN emphasises that angst communication narrows the societal perspective on negative aspects of risks and therefore fades out the positive gains. Such negative emotional communication is understood as being risky as far as it blocks necessary societal decisions and developments of knowledge. [19]

Emotion is also linked to the concept of trust. While trust is understood as a risky advanced concession, emotions can more or less support the development of trust. However, maintaining emotions is not necessary for trusting, which could be detached from the original emotions. Anyway, trust as linked to emotion is understood as rational irrationality (ESPOSITO 1997). Where learning by trial and error is not possible (for example: nuclear power, genetically modified food) progress and decisions are only possible with regard to trust (JAPP 2000). The ability to trust is understood as learned in socialisation processes and the emotional link of the child to its family is understood as a fundament to develop the ability to trust (LUHMANN 1968, p.90). [20]

Emotions are seen as the other side of routines. They are comparatively unstable and jumpy. When expectations are not institutionalised or habitualised expectations can only be based on the subject and its emotions. Therefore in the viewpoint of LUHMANN (1984, p.365) a modern society, characterised by a higher amount of dynamics and changes, is "endangered by emotions". [21]

4.3 Risk society

The "risk society" (BECK 1992) is concerned with the impact of new risks to societal institutions and individuals. In this approach emotion is conceptually considered as anxiety. BECK assumes that risks as a result of technical

3 Compare volume 10, issue 1 of the journal "Soziale Systeme" where system theorists recently try to develop core questions and concepts for a systems theory on emotions (e.g. BAECKER 2004).

developments, as well as growing uncertainties caused by individualisation processes, would feed into feelings of anxiety. They would cause on the one hand a growing need of psychological support (ibid., p.100) and on the other hand might encourage people to political solidarity and activities (ibid., p.49, p.52). [22]

GIDDENS' position is quite close to BECK, but his theorising on modernisation and risk links the problem of emotions and anxiety to developmental psychology (ERIKSON 1968, 1980) by the concept of "ontological security". GIDDENS (1990, p.98) understands the emotion of ontological security as based on the unconscious and linked to routines of everyday life:

"Ontological security and routine are intimately connected, via the pervasive influence of habit. ... The predictability of the (apparently) minor routines of day-to-day life is deeply involved with a sense of psychological security. When such routines are shattered—for whatever reason—anxieties come flooding in, and even very firmly founded aspects of the personality of the individual may become stripped away and altered." [23]

GIDDENS points out that with growing risks in modernity notions of fatefulness would return in a secularised world which he understands as managing its problems successful by rationality (ibid., p.133). New risks would strain the emotional secure basis in late modernity and thereby the personality/identity of people. Because new risks and uncertainties cannot be solved ultimately, they must be handled in several ways. GIDDENS distinguishes four coping strategies (pragmatic acceptance, sustained optimism, cynical pessimism and radical engagement, GIDDENS 1990, pp.134-37). *Pragmatic acceptance* is a response to the insight that many things in the outside world cannot be controlled individually. Therefore in this perspective there is a priority to manage everyday problems. The life threatening dangers of nuclear power or terrorism are suppressed for the price of psychological costs. *Sustaining optimism* stands for a sustaining faith in science that things can still be managed as in the past. Religious concepts of the world can come close to this kind of belief that things will become good. In contrast to pragmatic acceptance *cynical pessimism* manages the lack of control regarding the future and the involved anxieties actively for example with the help of "black humour". *Radical engagement* sticks to the necessity to do something actively towards the perceived sources of danger. [24]

4.4 Cultural approach

In the cultural approach emotions are positioned in the centre of risk theorising. DOUGLAS' (1966) early work understands emotions as interwoven with the continuation and protection of social borders, regulations and roles. Their violation cause negative emotions. A cultural functionalism interprets risk and therefore emotions in the well-known grid/group-framework (DOUGLAS & WILDAVSKY 1982) and links specific patterns of social organisation to ways to perceive and take risks and negative emotions. [25]

Recent socio-cultural approaches on risk refuse the functionalist perspective in favour of a broader perspective focussing on the differentiation of "self" and "otherness" (LUPTON 1999) and interpreting risk generally in the context of identity-formation and reproduction (TULLOCH & LUPTON 2003). They show that risk is linked in several ways to positive and negative emotions (LUPTON & TULLOCH 2002). The excitement of risk-taking as a positive evaluation of edgework (LYNG 2005) as well as border crossing is one significant result. To explain the individuals' understanding of risk, cultural aspects gain more significance than in other approaches, but the main theoretical concept is the distinction between "self" and "otherness" which is culturally constituted. Emotions are therefore interpreted in terms of identity formation. [26]

5. Similarities

Emotions are relevant in different ways to *decision making*. One aspect is to see them as an additional factor which has to be added to the objective outcomes (as costs or gains). Current emotions also influence decisions during the process of decision making. Emotions can be used as an advisor when their intensity is comparatively low as well as they can determine a decision in the specific emotionally way beyond rationality. [27]

From the viewpoint of orthodox or Keynesian economics emotions seem to be *disturbing rationality*. This is close to a sociological perspective which interprets late modern society as *endangered* by emotions because of their lack of stability (LUHMANN 1995, p.270, 1984, p.365). [28]

However, research in economics as well as in psychology have shown that under conditions of *uncertainty* or *ignorance* (limited time and/or information) *emotions* (but also other strategies to reduce complexity, such as trust) are used to *enable* people to take risks in situations when they lack the necessary information for "rational" action. [29]

Research on risk-aversion has shown that there are *emotional limits* to risk taking. Under specific circumstances some people are just risk averse. They judge potential damage or harm too big or undesired as that they would be willing to take a risk. Rationality is then replaced by the "logic of emotions" which do not allow to accept the smallest possibility of an event. [30]

The sociological theories on risk often assume more or less explicitly, that routines, norms and clear expectations are accompanied by *positive emotions*. Consequently, risks (caused by side-effects of industrialisation) and uncertainties (caused by limited knowledge as well as by processes of individualisation) are understood as threats for society as they result in negative emotions. But the general assumption of a direct link between social structure and individuals' behaviour developed in a macro perspective is far too general in order to understand the diverse responses to social change, risk, and uncertainty. Therefore the socio-cultural approach might be understood as one reasonable strategy to shed light on the underexposed aspects (such as emotion) of general

social theory (TULLOCH & LUPTON 2003). Since the concept of emotion in this approach is rather descriptive than explanatory, psychological and economical research might help to produce more concrete results on how emotions and rationality are interlinked and influencing social behaviour in specific socio-cultural context. [31]

6. Perspectives

Emotions seem to be necessary in every decision. But they might interact with rationality in different ways (for example: BONSS & ZINN 2005; ZINN 2004). The constellations which influence the ways how people manage cognitive and emotional aspects of decision making seem to be one of the most urgent tasks for future research. The examination of how emotions and risk/uncertainty develop, change and are negotiated in socio-cultural context and inter-personal communication has been started, but our knowledge is still limited. [32]

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