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## Behavioural and Emotional Economics GSEFM 2nd year PhD programme Seminar announcement - Winterterm 2010/11

### 1 Introduction

Why do you read this announcement? Why will you meet a friend later today or why did you decline to meet him or her? Why do you want to obtain a PhD? The answers to these questions will require an understanding of a decision making process. But do you know why you made this or that decision? The longer you think about this, the less certain you probably are. It is the objective of this seminar to understand theories of decision making and to start to understand which role emotions can play in this setup.

The seminar is organised such that there will be a first meeting in October 2010 where topics/ papers are briefly presented by the course organizer Prof. Klaus Wälde. Students can then choose a topic. November and December can be used to work on the essay and the presentation. Discussions with the organizer is of course possible and actually strongly encouraged. In January/February 2011 there will be two to three meetings (depending on the number of participants) where students present the topic they chose.

A typical essay and presentation would present one paper from the literature in depth, i.e. it is essential to understand each step in the paper and to include the intermediate steps in the essay to be written. Suggesting potential extensions or adding own thoughts, maybe even presenting related own work is also more than welcome. Successful participation in a PhD seminar will earn a student 6 CP.

If you want to be kept up to date about the organizational details of the seminar, please send an email to [klaus.waelde@uni-mainz.de](mailto:klaus.waelde@uni-mainz.de).

## 2 A brief overview

Defining and classifying emotions is not an obvious task. In fact, this is one of the challenges when working on emotions. The following list is therefore incomplete and in no particular order. Nevertheless, it gives an idea of where emotions have been treated in the economics literature. It also shows that the topic does receive some attention but it needs much more attention if we want to truly understand human behaviour.

emotion	paper
desire	A cue-theory of consumption, Laibson 2001
desire/ compulsion	Bernheim and Rangel (2004) Ameriks, Caplin, Leahy and Tyler (2007) Brocas and Carrillo (2008)
compulsion	Loewenstein et al. (2003)
fear/ joy	Caplin and Leahy (2001, 2004), Köszegi (2006)
regret	Loomes and Sugden (1982)
disappointment/ elation	Bell (1985)

**Table 1** *Some emotions treated formally in the economics literature*

## 3 Topics of interest for the seminar

Each of the following subsections is a topic which is worth being presented in the seminar. Of course, there is no clear-cut border between any two of these topics. But they are sufficiently distinct to deserve independent presentation. In case you are interested in the seminar, please make up your mind which topic you would like to present - but don't get distracted by thinking why you choose this topic ... :-)

### 3.1 The axiomatic approach to decision making

The axiomatic foundation for expected utility preferences is provided in Mas-Collel, Whinston and Green (1995). The axiomatic approach is applied to dopamine release in the context of neuroeconomics by Caplin and Dean (2008). Their view on the “dopaminergic reward prediction error” hypothesis results in a utility function where the reward is a function of the difference between expectations and realizations. Bernheim and Rangel (2009) provide a foundation for welfare analysis.

## 3.2 Dual-self models

“In me there are two souls, alas, and their division tears my life in two” - “Zwei Seelen wohnen, ach! in meiner Brust, die eine will sich von der andern trennen” bewails Goethe’s Faust. It seems obvious to many that one individual often has conflicting views when it comes to one issue or decision. The economists’ view on this can be seen in Brocas and Carrillo (2008) and Fudenberg and Levine (2006), *inter alia*. Fudenberg and Levine argue that decisions “should be viewed as a game between a sequence of short-run impulsive selves and a long-run patient self”. Brocas and Carrillo model decisions as the outcome of an interaction between a short-run informed agent and a long-run uninformed principal.

## 3.3 Ex-ante emotions: Psychological expected utility

Emotions can be classified into ex-ante, ex-post and “ex-nunc”, i.e. immediate emotions. Ex-ante emotions have been analysed by Caplin and Leahy (2001, 2004) and Kőszegy (2006). Emotions are forward looking and based on (equilibrium-consistent) beliefs as in psychological games (Geanakoplos, Pearce and Stacchetti, 1989). The influence of anticipated emotions on choice is analysed using experiments by Mellers et al. (1999).

## 3.4 Ex-post emotions: Regret theory and disappointment vs elation

Regret theory goes back to Loomes and Sugden (1982). Related work on disappointment was undertaken by Bell (1985). In the latter approach, disappointment/ elation is a function of the difference between expected payoff and realization. In the former, regret and rejoicing takes place relative to a reference choice.

## 3.5 Ex-nunc emotions: Visceral factors

Hunger, thirst, pain, desire can be modeled as state-dependent preferences (Loewenstein, 2000, Laibson, 2001) - or maybe not when people do not remember well emotions in past visceral states, leading to projection bias (Loewenstein, O’Donoghue and Rabin, 2003).

## 3.6 Self-control

In models of self-control, individuals should follow some ideal action but are victims of temptations. A recent empirical paper referring to many theoretical studies is by Ameriks, Caplin, Leahy and Tyler (2007). Theoretical papers include Bernheim and Rangel (2004) and Laibson (2001). The classic “rational addiction” view is by Becker and Murphy (1988).

### **3.7 Emotions in labs**

It has long been recognized that emotions do influence the behaviour in experiments. Various approaches exist to defining and measuring these emotions and to understanding how they affect behaviour. Relevant work includes Reuben et al. (2008), Ben-Shakhar et al. (2007), Smith and Dickhaut (2005) and Bosman and van Winden (2002). See also Mellers et al. (1999) for anticipated emotions. The introduction in the latter paper also offers a long list of experiments in psychology where the impact of emotions on decisions is analysed.

### **3.8 Emotions and neuroscience**

A survey on neuroscience and economics is provided by Camerer et al. (2005) and a comprehensive overview is provided in the book by Glimcher et al. (2009). There are various papers in neuroscience on the “somatic marker hypothesis”. Simply speaking, decisions can not be made without emotions. This work goes back to Damasio (1994) and lead to papers both in economic journals (Bechara and Damasio, 2005) as well in medical journals (Bechara et al., 2000, Verdejo-Garcia and Bechara, 2009) both on decisions in general but also on addiction. There is very little math (if at all) but one could write beautiful papers (and a beautiful dissertation) if these ideas were put in a formal language.

### **3.9 Emotions from a psychological perspective**

The main area which studies emotions is of course psychology. There are various surveys on this issue and a good starting point is Loewenstein and Lerner (2003). Loewenstein et al. (2001) draw a useful distinction between emotions which affect outcomes (a consequentialist view) and emotions which matter per se. They use the terms anticipatory vs. anticipated emotions to make this distinction.

The treatment of emotions in psychology is undertaken either from a physiological perspective or from a cognitive perspective. A recent widely read paper supporting the physiological view is by Zajonc (1980). For an overview, see Zajonc (1998) and Lazarus (1999). The cognitive approach to understanding emotions can be divided into attribution theory and appraisal theory. On the latter, see Lazarus (1982, 1991). A very recent survey in psychology is provided by Izard (2007).

### **3.10 General background**

There are various survey papers on emotions. They include Elster (1998) and DellaVigna (2009, ch. 4.5)

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