



**4th International and Interdisciplinary Conference on Emotional Geographies  
1-3 July 2013 at the University of Groningen, The Netherlands**

Session Summary	
<b>Session Title:</b>	<b>Sound experiment: Measuring the subjective qualities of sound</b>
<b>Session Abstract:</b>	<p>Sound and Emotion are intimately related. At the Institute of Artificial Intelligence and Cognitive Engineering (ALICE) of the University of Groningen we work on models of human sound appraisal that are able to predict the typical moods that people associate with sonic environments. Moods reflect our overall attitude towards the world and are as such highly relevant to geography. Compared to emotions, moods are less specific and miss the intentionality (directedness to a particular state of affairs) that characterizes emotions.</p> <p>During the conference we ask you to participate in a unique experiment in which we “train”, in the course of the conference, a system that can predict the average response of the conference participants to city sounds. During the experiment, which takes about 10 minutes per participant, we ask you to indicate, with a joystick, the degree to which you deem particular city sounds pleasurable and eventful. During the last session of the conference we will demonstrate how well (or bad) our system is able to predict the average “conference appraisal” of these city sounds. Please note that when you participate, you give consent to the use of the acquired (anonymous) data.</p>

Session Convenors	
Session Convener Name	Affiliation
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## Background

The reasons why indicating the combination of pleasurable and eventfulness is indicative for the elicited moods are rooted deeply in our brainstem: it is the subconscious part that determines what we attend consciously and what we ignore. This part of the brain also connects the appraisal of the environment to our moods and emotions. As a result, moods (a state of the perceiver) and appraisal (a perceived state of the world insofar relevant for the perceiver) are intimately connected. See Figure 1.

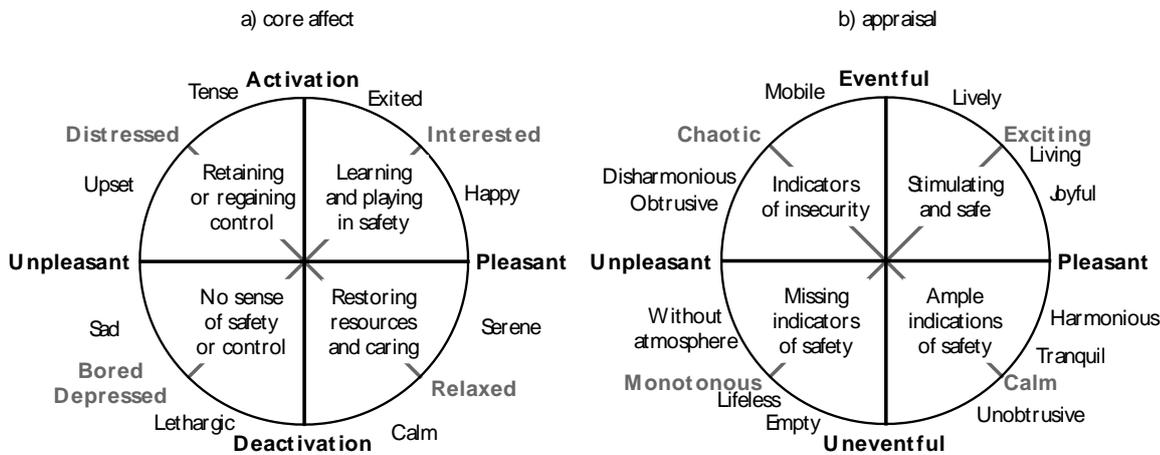


Figure 1. Basic dimensions of core affect (a) and appraisal (b).

We tend to use a broad variety of words (of which 16 are indicated in Figure 1b) to describe appraisals to the sonic or visual environment. These words are predictive of the moods they elicit (Figure 1a). The combination of activation-deactivation and pleasant-unpleasant is known as core affect in emotion theory and is something that is always present to self-report. The main axis of both appraisal and core affect divide the circles into four quadrants that can be coupled to particular attitudes towards the world (in the case of moods and core affect) and to the degree the environment is deemed safe and need satisfying (appraisal). This leads to four different kinds of environments:

- Chaotic, high complexity environments in which all attention needs to be aimed at the environment
- Boring environments that afford nothing interesting, useful, or safe
- Relaxing environments that allow you to engage in unforced behavior and to think your own thoughts
- Lively environments that afford much that is stimulating and appreciated.

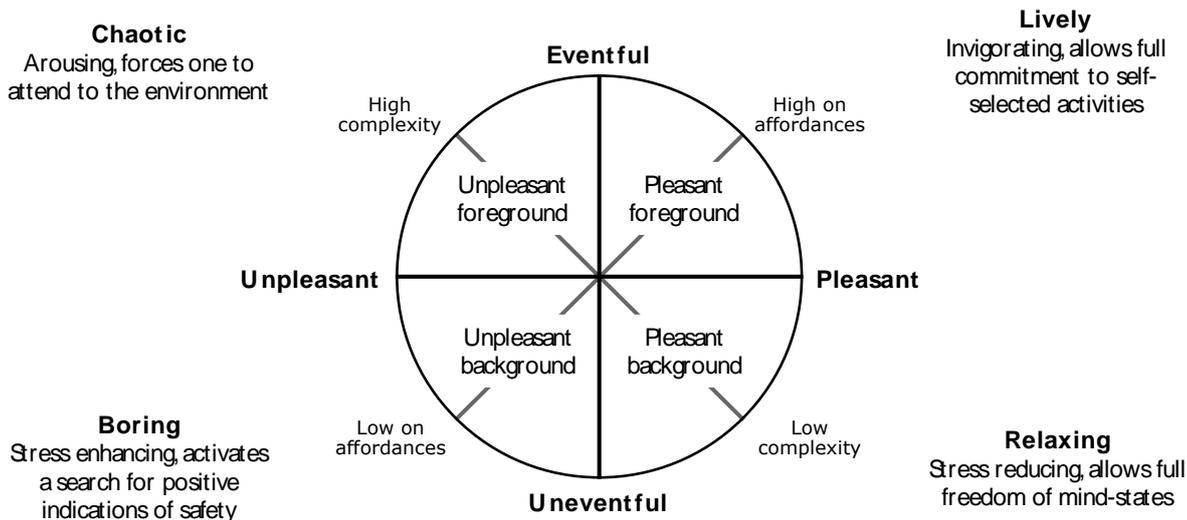


Figure 2. Appraisal as foreground-background separation and effects on mind-states.

As Figure 2 shows, this is strongly associated with whether the foreground and background sounds are deemed pleasant or unpleasant. In current noise legislation, sound quality is only measured in terms of decibels (which are often dominated by the strongest foreground sounds). This ignores recent insights into the how we assign subjective evaluations to our (sonic) environments. While current noise legislation addresses excesses in loudness, it is no guarantee for improved sound quality.

The experiment you can participate in will help us to design improved noise legislation and policies that *can* guarantee

improved urban and rural sound quality.

For more information see: <http://www.mdpi.com/1660-4601/10/4/1439>

