



Short Communication

Affect intensity and softness tactile preferences: An experimental approach to arousal regulation

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ABSTRACT

Previous findings have shown that people experiencing emotions more intensely present favorable attitudes toward tactile softness. Based on Larsen's (2009) hypothesis that a higher level of affect intensity is a way to compensate for a low level of baseline arousal, we suggest that such a positive attitude toward soft textiles serves a need for stimulation in a poor arousal context (e.g., Central Location Test; CLT). An experimental study was run using the IAPS (Lang, Bradley, & Cuthbert, 2005) in order to manipulate the arousal context prior to a sensory evaluation of textiles. Significant results were observed on one component of the Affect Intensity Measure (Larsen & Diener, 1987). As expected, in the low arousal condition, participants characterized by higher levels of intensity in positive emotions showed a preference for softer textiles, whereas this effect was not observed in the high arousal condition. Theoretical and practical implications of these results are discussed.

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1. Introduction

The role of affect in evaluation and judgment processes has been recognized for a long time. Beyond the valence and nature of emotions, one must consider the intensity with which emotion is experienced by people engaged in an evaluative process. The Affect Intensity (AI) construct, as an individual temperament trait, describes the intensity with which individuals experience emotions in everyday life (for a review, see Larsen, 2009). Individual differences in emotional intensity have proven to be a reliable factor in understanding attitudes toward affectively charged stimuli (Moore, Harris, & Chen, 1995; Moore & Homer, 2000). Recently, individuals' affect intensity predisposition, measured through the Affect Intensity Measure (AIM; Larsen & Diener, 1987), has been shown to be a reliable predictor of the preference for tactile softness (Kergoat et al., 2010, 2012). Participants who expressed a

preference for softer textiles (typically velvet fabrics) were characterized by higher affect intensity levels.

The present research tests the hypothesis that the arousal regulation function of emotions (Larsen, 2009) is the underlying process involved in soft textile preferences among participants with higher levels of affect intensity. Through the manipulation of the arousal context prior to a sensory evaluation, we explore how high versus low levels of arousal moderates the link between AI and preference for tactile softness. We hypothesize that such a link will be observed only for high affect intensity participants in a low arousal context.

1.1. Affect intensity and preference for stimulation

People tend to reach a common Optimal Stimulation Level (OSL) for completing tasks in everyday life, but they differ with respect to their baseline arousal levels (Geen, 1984). People with a low baseline arousal level are in search of stimulation (e.g., socialization, activities) in order to reach their optimal level. Inversely, people with a high baseline arousal level tend to avoid too much stimulation (e.g., avoidance of novel or complex stimuli). According to Larsen and Diener (1987), emotion is a source of stimulation that plays a role in arousal regulation. The reason high AI individuals

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experience emotions with more intensity than low AI individuals is that the former have low baseline arousal levels (Blascovich et al., 1992), for which they compensate through the experience of intense emotions. This does not mean that AIM is a measure for OSL but rather that the arousal regulation function is the underlying motivational process of high AI individuals searching for stimulation in everyday life.

Like typical under-aroused people seeking greater stimulation in daily life (Steenkamp & Baumgartner, 1992), high AI individuals display a preference for stimulation and are particularly in search of positive stimulation (Gallagher, Diener, & Larsen, 1989). Thus, they show a greater tendency to seek out stimulation through emotional, social, and sensory activities, and they report stronger levels of enjoyment of emotional stimuli like exciting movies or TV comedies and of activities that elicit social interaction. Moreover, they appreciate more sensory stimuli, such as pleasurable fragrances like that of freshly baked bread (Moore & Homer, 2000), and are highly responsive to food advertisements, which trigger impulsive consumption-related outcomes (Moore & Konrath, 2015).

1.2. Affect intensity and preference for softness

Desire for stimulation not only is an individual disposition, but also can be context-dependent. When the environment fails to provide an appropriate level of stimulation, individuals experience unpleasant feelings and either seek out or avoid (depending on their baseline arousal predisposition) additional arousing stimuli. Pliner and Melo (1997) manipulated the context of arousal before a food choice task and found that, in a low arousal condition, high sensory sensation seekers (i.e., under-aroused individuals) chose twice the number of new foods compared to low sensory sensation seekers. This difference was not observed in the high and neutral conditions of arousal. Similarly, high AI individuals placed in a quiet and minimally arousing context will be physiologically under-aroused, and, as a consequence, will be looking for greater stimulation. Conversely, low AI individuals in a similar context will not be specifically affected, as they are not characterized by a low baseline arousal level.

Typical laboratory sessions for sensory tests are designed to be quiet and calm, avoiding any disturbance by external factors in order to facilitate a focus on sensory stimuli (ISO norms). Thus, we assume such sessions to be a poorly arousing setting once participants have acclimated to them. Therefore, we hypothesize that high AI consumers' positive attitude toward tactile softness, as observed in previous studies (Kergoat et al., 2012), was driven by a higher need for stimulation when they were placed in a poorly arousing context (i.e., CLT). As a consequence, their preferences were directed toward positively valenced stimuli – that is, the softer fabrics. This does not mean that softness is a more arousing stimulation than roughness; rather, it means that when looking for greater stimulation, participants' preferences were oriented toward the most pleasurable tactile sensory stimulation (i.e., softness; Picard, Dacremont, Valentin, & Giboreau, 2003).

If the arousal regulation function is the underlying process involved in soft textile preferences, the previous linkage between affect intensity and preference for softness should be observed only when participants are placed in a low arousal condition. Thus, the context of arousal, manipulated in the present study by the exposure to highly versus poorly arousing pictures (Lang, Bradley, & Cuthbert, 2005) before the sensory evaluation, should influence AI individuals' subsequent preferences. Exposure to highly arousing pictures (i.e., high arousal condition) should allow high AI participants to maintain a satisfactory level of stimulation. As a consequence, their preferences for soft textiles should be dampened or even eliminated as they will not be looking for more

stimulation. In contrast, poorly arousing pictures inducing a low arousal context will motivate high AI individuals to search for stimulation and, as a consequence, to express a preference for softer fabrics (i.e., positive stimulation). As previously observed, two AIM components (the Intrapersonal Positive Affect I (IPA I) factor and the Negative Reactivity (NR) factor) were the best predictive AI factors for soft textile preferences, so we expected to observe these results mainly on these two dimensions.

2. Method

2.1. Participants

Undergraduate students (psychology department; University Paris Ouest, France) received course credits for their participation. The sample ($N = 220$) was composed of 38 men and 182 women (ages 17–45; mean age, $M = 20$). All participants filled out a consent form in accordance with the ethical committee.

2.2. General procedure

The current study is in two parts. In a previous session, AIM scores were measured among participants during a mass testing session few weeks before the main test. Using upper and lower quartiles, we classified participants as high vs. low in affect intensity.

In the main experimental session (one month later), students came to the University laboratory room and individually sat in booths. Neon white lights were continually on. The study was presented as two independent studies. In the first part, students were randomly assigned to evaluate either the ten high arousal pictures or the ten low arousal pictures (manipulation of the level of stimulation). The purpose of this test was presented as a way to collect their emotions for different pictures.

In the second part of test, run immediately after the first part, the sensory evaluation task (hedonic ratings) was presented as independent from the picture-rating task. Students were asked to give their sensory appreciation of car seat textiles. It was a blind evaluation with no specific instructions about touching the products. The judgments were about car seat fabrics. Based on the fabrics perceived softness pre-test data (see subchapter 2.3.1), we gathered the six fabrics into two groups (soft vs. rough) according to their perceived softness for statistical analyses.

2.3. Materials

2.3.1. Stimuli

The stimuli were a set of six black and grey car seat fabrics (see Kergoat et al., 2010). In a pre-test, these fabrics were evaluated in terms of softness (scale ranging from 1 = “not soft at all” to 9 = “extremely soft”) by a sample of students ($N = 120$). Results indicated significant differences between the softer textiles group of three fabrics (two velvets ($M_s = 6.6, 6.7$) and one woven and knitted fabric ($M = 6.4$; $M_{average} = 6.6$)) and the rougher textiles group (two W&K fabrics ($M_s = 4, 3$) and one 3D-stitch fabric ($M = 3.2$); $M_{average} = 3.4$), $p < 0.01$.

2.3.2. International affective pictures system (IAPS)

The IAPS (Lang et al., 2005) was used to manipulate the arousal level prior to the sensory fabric evaluation. IAPS pictures are standardized pictures scored as a function of their affective valence (positive vs. negative), their arousal intensity (high vs. low), and dominance (high vs. low) across a large sample. Exposure to such pictures is sufficient to prime congruent emotional responses (Oosterwijk, Topper, Rotteveel, & Fischer, 2010). We selected ten

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