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Effects of processing style on responsiveness to affective stimuli and processing fluency

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In the present study, we provide direct evidence for effects of global versus local processing on responsiveness to and reliance on affective information in judgement and decision-making. Results of Experiments 1 and 2 showed an increased responsiveness to affective stimuli among participants in a global processing mode. Experiment 3 showed similar effects for processing fluency; participants adopting a global processing style showed an increased reliance on fluency. Experiment 4 replicated our findings in a more mundane judgement task in which participants judged apartments. We discuss our findings in relation to the distinction between intuitive versus deliberative modes of thinking.

Keywords: Global versus local processing style; Processing fluency; Affective reaction; Intuition; Judgement and decision-making.

People can attend to the same stimulus in different ways: They can zoom out and pay attention to the entire stimulus, or they can zoom in on the same stimulus and focus on its details. Processing style refers to the way people attend to information. People can either attend to the gestalt of a stimulus or pay more attention to its details. A collection of trees, for example, can be seen as a forest, but people can also direct their attention to the individual trees (Gasper & Clore, 2002; Navon, 1977; Schooler, 2002). A local processing style is related to a focus on details and on concrete as opposed to abstract information. In contrast, when in a global processing style, people make sense of a stimulus by integrating it into superordinate, inclusive knowledge structures. Generally, a global processing style supports creativity and metaphor understanding, while a local processing style supports analytical thinking and concrete construals (Förster & Dannenberg, 2010). Global processing is also characterised by the activation of broad categories and a tendency to focus on a variety of stimulus characteristics in order to integrate them into superordinate knowledge structures. Intuition has also been related to processing the "gestalt" rather than details (Epstein, 1990; Nisbett, Peng, Choi, & Norenzayan, 2001; Shapiro & Spence, 1997).

Dijkstra, Van der Pligt, Van Kleef, and Kerstholt (2012) investigated the effects of processing style

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on judgement and choice. They found that a global processing style improved the accuracy of judgements. Similar findings were obtained for intuitive judgements of the same stimuli. Accuracy was lower for both deliberate judgements and a local processing style. Finally, they also showed that the effects of an intuitive versus a more deliberative decision mode on judgement were mediated by processing style. Their findings thus suggest that similar mechanisms play a role in intuition and global information processing. Global versus local information processing can also be related to Kahneman's (2003) distinction between System 1 and System 2. System 2 is deliberate, slow and effortful. System 1 is faster and more automatic. Global information processing is likely to play a more dominant role in System 1. System 1 is more intuitive than System 2 and affect is also assumed to play a more dominant role in this system. In the first two studies, we investigate the link between global processing and responsiveness to stimuli that have an *affective* component. A global processing style tends to focus on coherence and a search for similarity (Förster, 2009) and, as argued by Topolinski and Strack (2009a, 2009b, 2009c), perceptions of coherence have a positive affective quality. On the basis of the above findings, we also expect global processors to rely more on *fluency* than local processors. Fluency refers to the content-independent speed and accuracy of ongoing processing (Reber, Wurtz, & Zimmermann, 2004), and increased processing fluency is also assumed to elicit mild levels of positive affect (Winkielman & Cacioppo, 2001; Winkielman, Schwarz, Fazendeiro, & Reber, 2003).

In the present paper, we thus distinguish between *global* and *local* processing styles and relate these to affective information processing and fluency. Because of the characteristics of global and local processing (processing the gestalt versus searching for details and applying analytical thinking; see above), we hypothesised that participants in a global processing mode would be more responsive to affective information and experiences of processing fluency than participants in a local processing mode. In Experiment 1, we test effects of the affective valence of stimuli on affective judgements in a global versus local processing mode. In Experiment 2, we examine the differential effect on affective judgements of evaluatively conditioned stimuli (CSs). In Experiment 3, we examine responsiveness to fluency and test performance on an artificial grammar task (Reber, 1967, 1993; for a discussion, see Pothos, 2007). Finally, in Experiment 4, we replicate our findings in a more mundane judgement task, in which participants were asked to judge apartments.

EXPERIMENT 1

In this study, we test whether global processors focus more on affective information than local information processors; global processors are expected to be more sensitive and more responsive to affective stimuli.

Method

Participants

One-hundred-and-nineteen students from the University of Amsterdam participated in exchange for course credits or a monetary reward (42 males and 77 females). Age ranged from 18 to 50 years (M = 21.92, SD = 4.57).

Materials and procedure

Participants were randomly assigned to either the global or the local processing style condition. Processing style was induced by a variation of the global–local reaction time measure (Förster & Higgins, 2005). Participants were presented with a series of "global" letters made up of smaller "local" letters (an H made of L's, an H made of H's, an L made of L's and an L made of H's). On each trial, participants were first presented with a fixation cross in the centre of the screen for 500 ms. Then, one of four global composite letters was randomly presented. We presented a total of 48 global composite letters. In the global condition, participants were instructed to indicate as quickly and accurately as possible whether the global letter was an H or an L. In the local condition, participants were instructed to respond to the local letter.

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After the processing style induction, participants judged 28 pictures selected from the International Affective Picture System (IAPS; Lang, Bradley, & Cuthbert, 2005). We selected (non-erotic) pictures that depicted scenes that differed on the pleasure dimension. Extremely negative pictures (e.g., pictures of mutilations) were discarded. We selected a total of 28 pictures evenly distributed over the pleasure continuum. Next we selected pictures with the lowest standard deviation in their category. Four pictures with a normative pleasure rating of at least 7 were selected, four pictures with a normative pleasure rating between 6 and 7, four with a rating between 5 and 6, four with a rating between 4 and 5, four with a rating between 3 and 4, four with a rating between 2 and 3 and four with a rating below 2.

Because we were interested in the effects of global versus local information processing on responsiveness to affective reactions, we deviated as little as possible from the original procedure of assessing affective reactions to pictures (Lang et al., 2005). We asked participants to indicate the emotions evoked by each picture and instructed them not to dwell on their responses. Participants indicated their emotional experiences on three dimensions (pleasure, arousal, and dominance) on a 9-point scale. These three dimensions were the same as those presented by Lang, Bradley, and Cuthbert (2005) and provided the opportunity to test the effect of processing style on affective judgements. The pleasure scale was anchored *very unhappy* versus *very happy*, the arousal scale *very calm* versus *very excited* and the dominance scale was anchored *very submissive* versus *very dominant*. To make sure that participants interpreted each dimension in the intended way, we explained the dimensions and anchors, using the instruction by Lang et al. (2005).

Results and discussion

Results revealed a significant effect of processing style on the standard deviation of the ratings across the three dimensions of emotion evoked by each picture (valence, arousal and dominance). Response ratings in the global condition showed a larger standard deviation (M = 1.99, SD = .57) than ratings in the local condition (M = 1.79, SD = .49, F[1, 117] = 3.91, p = .50, η_p^2 = .032).

Follow-up analysis revealed that this effect was limited to the valence dimension. Participants in the global condition showed a larger standard deviation of the pleasure ratings (M = 2.24, SD = .65) than participants in the local condition (M = 1.97, SD = .60, F[1, 117] = 5.64, p = .019, η_p^2 = .046.). This finding indicates that participants in the global condition were more responsive to the affective valence of stimuli. As noted, the judged pictures were both negative and positive. Incorporating the affective valence into judgements of stimuli should be associated with more extreme pleasure ratings of the negative and positive pictures, and consequently a larger standard deviation in the global versus local processing style condition, which is indeed what we found. As expected, we did not find any effects on the dominance (F[1, 117] = 1.56, p = .21, *ns*) and arousal scales (F[1, 117] = 2.29, p = .13, *ns*).

The effect of processing style on the extremity of the pleasure ratings was also tested by subtracting the scale midpoint from the ratings and analysing the absolute difference scores. Results revealed that participants in the global condition rated the IAPS pictures more extremely in terms of their valence (M = 1.92, SD = .70) than participants in the local condition (M = 1.65, SD = .62, F[1, 117] = 5.08, p = .026, η_p^2 = .04).

To sum up, participants in the global processing condition showed larger differences in their pleasure ratings of the IAPS pictures, and their ratings were more extreme than those of participants in the local processing condition. This indicates that participants in the global processing condition were more responsive to the affective valence of stimuli than were participants in the local processing condition.

EXPERIMENT 2

In this study, we test whether individuals in a global processing style are more responsive to the valence of evaluatively CSs than individuals in a

local processing style. We used an evaluative conditioning (EC) paradigm (for a review, see De Houwer, Thomas, & Baeyens, 2001). In this paradigm, the judged CS remains the same across conditions, and the unconditioned stimuli (USs) transfer their affective reaction to the CS. The fact that the same CS is judged across conditions allows us to test whether individuals using a global or local processing style are more or less responsive to these non-deliberated affective reactions.

Method

Participants

Forty-one students from the University of Amsterdam participated in exchange for course credits or a monetary reward (12 males and 29 females). Age ranged from 17 to 25 years (M = 20.12, SD = 1.90).

Materials and procedure

Again, participants were randomly assigned to a global or local processing style condition. We manipulated the valence of Chinese ideograms in a standard EC paradigm. Four Chinese ideograms (CS) were paired with affect-laden pictures selected from the IAPS database (US). Two ideograms were paired twice with four positive US and two ideograms were paired twice with four negative US in accordance with Lang and colleagues (2005). To avoid main effects of specific ideograms, we counterbalanced the CS–US pairings between subjects. In total, each CS was paired eight times, which resulted in 32 trials. Because a forward-conditioning paradigm tends to yield larger effects (Hammerl & Grabitz, 1993; Stuart, Shimp, & Engle, 1987), we first presented the CS for 1000 ms, followed by the US for 1000 ms after an interval of 100 ms. After an inter-trial interval of 3000 ms, the next trial commenced.

Next, processing style was induced as in Experiment 1. After the processing style induction, evaluation of the ideograms was assessed on an 11-point scale anchored with *very ugly* and *very beautiful*.

Results and discussion

Mean evaluations of positively and negatively conditioned ideograms were subjected to a 2 (pairing: positive US versus negative US) by 2 (processing style: global versus local) mixed model analysis of variance (ANOVA). The analysis revealed the expected main effect of pairing (F [1, 39] = 10.67, p = .002, η_p^2 = .22). Chinese ideograms paired with negative IAPS pictures were rated as less beautiful (M = 5.60, SD = 2.08) than ideograms paired with positive IAPS pictures (M = 6.78, SD = 2.38). The main effect of processing style was not significant (F[1, 39] = 1.83, p = .18, *ns*). As hypothesised, we found a processing style by pairing interaction effect that approached significance (F[1, 39] = 4.03, p = .052, η_p^2 = .09). Participants in the global focus condition differed more in their judgement of the valence of ideograms paired with negative (M = 5.61, SD = 2.09) and positive USs (M = 7.61, SD = 2.02) than participants in the local condition (negative US: M = 5.60, SD = 2.12; positive US: M = 6.07, SD = 2.48). Simple effects tests revealed that the interaction was driven by ratings of positively conditioned ideograms (negative US: F < 1, *ns*; positive US: F[1, 39] = 4.64, p = .037, η_p^2 = .11) (See Figure 1). This indicates that participants in a global processing mode were more susceptible to the (positive) affective valence of stimuli than participants in a local processing mode.

EXPERIMENT 3

Experiments 1 and 2 showed that individuals in a global processing mode are more responsive, and thus react more extremely to the affective valence of stimuli. It could be that these affective reactions also receive more weight in judgements and decisions when people are in a global as opposed to a local processing mode, although the present findings do not provide direct evidence for this.

In Experiment 3, we focus on another element of information processing that is not easily verbalised: Fluency. As noted in the introduction, fluency can be defined as the experienced ease of

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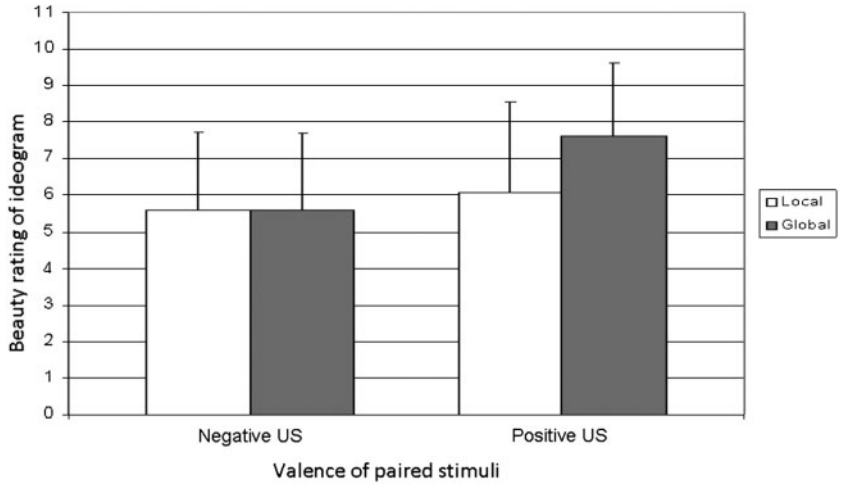

Figure 1. *Beauty judgements of ideograms paired with negative and positive stimuli for participants in the global and local condition. Error bars represent standard deviations.*

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processing a stimulus. In Experiment 3, we operationalised fluency by means of an artificial grammar task (e.g., Reber, 1967, 1993; for an overview see Pothos, 2007). In this task, participants implicitly learn an artificial grammar. In a subsequent test stage, participants are able to distinguish above chance whether presented letter strings followed the learned grammar or not, without being able to explain their judgements (see e.g., Reber, 1967; Vokey & Brooks, 1992). Kinder, Shanks, Cock, and Tunney (2003) showed that processing fluency is the underlying experience that is the basis for participants' judgements in the test stage.

As was the case in the previous studies, we induced a global or local processing style before subjecting our participants to the test stage. We expected that participants in the global condition would be more responsive to processing fluency and, consequently, perform better on the artificial grammar task than participants in the local condition.

Method

Participants

Seventy-nine students from the University of Amsterdam participated in exchange for course credits or a monetary reward (20 males and 59 females). Age ranged from 18 to 50 years old (M = 22.30, SD = 4.80).

Materials and procedure

Participants were randomly divided between the global and local processing style conditions. In our artificial grammar task, we used the same letter strings as Vokey and Brooks (1992) and others (Kinder, Shanks, Cock, & Tunney, 2003; Topolinksi & Strack, 2009a). Vokey and Brooks (1992) constructed the letter strings by selecting three to seven letters that followed each other in a grammatical structure. We used the same procedure for learning the *training items* as Topolinksi and Strack (2009a). The 16 strings were presented for 3000 ms, and participants were asked to reproduce the letter string using the keyboard. Each letter string was presented again until the letter string was reproduced correctly, and this was followed by another letter string. Next, processing style was induced as in Experiment 1.

After the processing style induction, participants were informed that the items they had reproduced and learned, previously, followed a hidden grammatical rule. They were instructed to judge whether the following letter strings conformed to the same hidden rule or not. Participants were presented with 64 new letter strings in

a random order. Half of the strings followed the same grammatical structure as the trained strings; the remaining strings did not follow the grammatical structure. These *non-grammatical* strings were created by substituting a single letter of *grammatical* strings in such a way that the string could not be generated by the grammar.

Results and discussion

Following Topolinksi and Strack (2009a), we excluded slow responses (made after 3000 ms) from the analysis because these responses could be driven by more deliberate processes.

Proportions of strings qualified as grammar for grammatical and non-grammatical strings were subjected to a 2 (type of string: grammatical versus non-grammatical) by 2 (processing style: global versus local) mixed-model ANOVA. Grammatical strings were qualified more often as grammar (M = .50, SD = .24) than non-grammatical strings (M = .41, SD = .20, F[1, 77] = 30.97, p < .001, η_p^2 = .29), replicating the standard effect on the artificial grammar task (Pothos, 2007; Reber, 1967, 1993). The ANOVA also revealed the hypothesised interaction. Participants in the global focus condition were better at differentiating between grammatical (M = .51, SD = .24) and non-grammatical (M = .38, SD = .19) strings than participants in the local focus condition (grammatical: M = .50, SD = .25, non-grammatical: M = .44, SD = .21, F[1, 77] = 4.76, p = .032, η_p^2 = .06).

We also tested the effect using signal detection logic, calculating d-prime scores to indicate participants' ability to distinguish between grammatical and non-grammatical stimuli (see e.g., Stanislaw & Todorov, 1999). An ANOVA showed no difference between the global and the local processing condition (F < 1). However, after excluding one participant who deviated more than 3 SDs from the mean d-prime score, a significant effect of processing style emerged. Participants in the global processing condition were more accurate in signalling grammaticality (M = .35, SD = .40) than were participants in the local processing condition (grammatical: M = .17, SD = .40, F[1, 76] = 4.20, p = .044, η_p^2 = .05).

EXPERIMENT 4

The preceding experiments showed that individuals in a global processing mode are more responsive to less readily verbalised characteristics—such as their own affective reactions to affect-laden stimuli, and processing fluency—than individuals in a local processing mode. The third study showed that increased responsiveness to processing fluency can also enhance people's performance on an implicit learning task. In Experiment 4, we test our hypothesis in a more mundane task. We again induced a global or a local processing style and asked participants to judge apartments on the basis of information provided in pictures and written information in a brief text. Since apartments in the Netherlands are generally advertised by providing information in text and pictures (see e.g., www.funda.nl), we expected participants to be familiar with judging apartments in this way.

We manipulated contrast and brightness of the pictures of the apartments; both are known to increase processing fluency (contrast: Checkosky & Whitlock, 1973; Reber, Winkielman, & Schwarz, 1998; brightness: Whittlesea, Jacoby, & Girard, 1990). These two characteristics are also related to liking (Reber et al., 1998) and are even thought to be a dimension of beauty (Gombrich, 1995; Solso, 1997). Information provided in the text was systematically manipulated in terms of factual elements such as size of the living area and type of insulation.

We expected that information provided in pictures would affect judgements of participants in the global condition more profoundly than judgements of participants in the local condition. In light of Dijkstra et al.'s (2012) finding that judgement mode is related to processing style, combined with Wilson, Hodges, and LaFleur's (1995) finding that deliberation increases reliance on accessible information that is also easy to verbalise, we expected that information provided

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in the text would have a more pronounced effect in the local than in the global condition.

Method

Participants

One-hundred-and-sixty-six first-year psychology students from the University of Amsterdam participated in a series of studies, including the present experiment. They participated for partial fulfilment of a course requirement. No information was available about sex and age of the participants.

Materials and procedure

Participants were randomly assigned to conditions in a 2 (processing style: global versus. local) by 2 (desirability: high versus low) by 2 (information: text versus pictures) mixed design. All participants rated the two apartments; for one of the apartments, desirability was manipulated via pictures, and for the other apartment, desirability was manipulated by changing the text describing the apartment. Again, processing style was induced by the same variation of the global–local reaction time measure as used in Experiment 1. After completing the global–local reaction time measure, participants were asked to judge the two apartments in a random order. Three pictures of each apartment were presented on the left side of the screen, providing "a feel for the atmosphere"; five pieces of textual information were presented on the right side of the screen (viz., type of apartment, size of living area, number of rooms, type of insulation, and some miscellaneous information, such as the absence or presence of a fireplace or information about the kitchen).

To test what type of information—specific attributes or the general atmosphere conveyed by the photographs—was more important for participants depending on their processing mode, we manipulated the positivity of both types of information. For Apartment 1, we manipulated attractiveness of the atmosphere by increasing contrast and brightness of the pictures, creating a desirable and less desirable version of the same apartment. We purposely manipulated the pictures instead of using different pictures in order to keep the elements presented in the pictures constant. For Apartment 2, we manipulated textual information by increasing the size of the living area (75 m^2 instead of 50 m^2), type of insulation (double instead of single glazing) and the absence or presence of certain details (viz., terrace, fireplace, central heating and 10-year-old kitchen). In this way, we again created a desirable and less desirable version of the same apartment. Each participant judged one desirable apartment and one less desirable apartment.

For each apartment, we asked participants to indicate how desirable they thought the apartment was, how beautiful and how much they would like to live in the apartment. All three judgements were assessed with a 100-point slider, anchored with *not at all* and *very much*.

Results and discussion

Four participants were excluded from the analyses because their score on the main dependent variable deviated more than 2.5 standard deviations from the mean response.[1] We combined the three attractiveness ratings to create an overall judgement of desirability for each apartment (Cronbach's α = .91 and .93 for the first and second apartment, respectively).

The desirability ratings for both apartments were subjected to a 2 (processing style: global versus. local) by 2 (desirability: high versus. low) by 2 (information: pictures versus. text) between subjects ANOVA. We did not find a main effect of processing style ($F < 1$, *ns*) or type of information ($F[1, 158] = 2.71$, $p = .10$, *ns*). More importantly, we did find an interaction effect ($F[1, 158] = 12.61$, $p < .001$, $\eta_p^2 = .07$). We analysed the effects of desirability (high versus. low) of information manipulated via pictures (Apartment 1) versus text (Apartment 2) separately.

[1] Patterns stayed virtually the same in all tests when including all participants.

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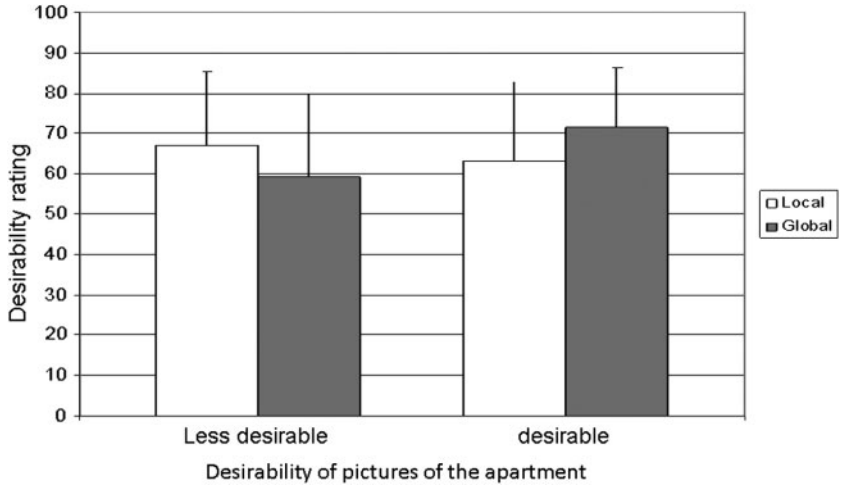

Figure 2. *Desirability ratings of apartments with less desirable pictures and more desirable pictures for participants in the global and local condition. Error bars represent standard deviations.*

The desirability ratings for Apartment 1 were subjected to a 2 (processing style: global versus local) by 2 (description of apartment: desirable pictures versus less desirable pictures) between subjects ANOVA. Again, we did not find a main effect of processing style ($F < 1$, *ns*) or desirability ($F[1, 158] = 2.11$, $p = .15$, *ns*). Results showed the expected interaction effect ($F[1, 158] = 7.91$, $p = .006$, $\eta_p^2 = .05$)(see Figure 2). Simple effects analyses showed that participants in the global focus condition rated the apartment with desirable pictures as more desirable ($M = 71.55$, SD = 14.73) than the apartment with less desirable pictures ($M = 59.21$, SD = 20.66, $F[1, 158] = 8.98$, $p = .003$, $\eta_p^2 = .11$). No significant difference was found between the two versions in the local condition (desirable pictures: $M = 63.10$, SD = 19.58; less desirable pictures: $M = 67.04$, SD = 18.13, $F < 1$, *ns*).

Next, we tested the effect of textual information. To do this, we subjected the desirability ratings for Apartment 2 to a 2 (processing style: global versus local) by 2 (description of apartment: desirable text versus less desirable text) between subject's ANOVA. The ANOVA revealed a main effect of desirability ($F[1, 158] = 15.46$, $p < .001$, $\eta_p^2 = .09$). Not surprisingly, the version with desirable attributes was indicated as more desirable ($M = 68.84$, SD = 21.32) than the version with less desirable attributes ($M = 55.91$, SD = 21.16). The analyses revealed no main effect of processing style ($F < 1$, *ns*). However, the analyses revealed a desirability by processing style interaction ($F[1, 158] = 10.20$, $p = .002$, $\eta_p^2 = .06$) (see Figure 3). Simple effects analysis revealed that participants in the local focus condition rated the description with more desirable attributes as more desirable ($M = 73.85$, SD = 18.93) than the version with less desirable attributes ($M = 50.65$, SD = 21.25, ($F[1, 158] = 25.70$, $p < .001$, $\eta_p^2 = .25$). The difference between the version with desirable attributes ($M = 63.71$, SD = 22.62) and the version with less desirable attributes was not significant in the global condition ($M = 61.31$, SD = 19.92, $F < 1$, *ns*). All in all these findings support the prediction that participants in a global processing mode assign more weight to the global impression or the "feel" of the apartment, as presented in the pictures, than participants in a local processing mode. In contrast, participants in a local processing mode assigned more weight to information about specific attributes as described in the text.

GENERAL DISCUSSION

In four experiments, we examined responsiveness to the affective valence of stimuli and to processing

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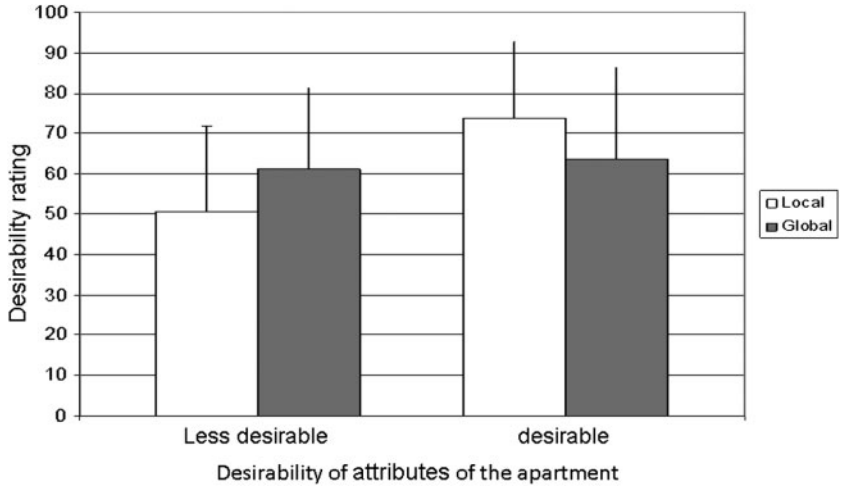

Figure 3. *Desirability ratings of apartments with less desirable attributes and more desirable attributes for participants in the global and local condition. Error bars represent standard deviations.*

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fluency as a function of processing style (global or local). We showed that participants in the global processing style were more responsive to affective reactions and gave more extreme ratings to affective pictures (Experiment 1) and more extreme judgements to evaluatively CSs (Experiment 2) than those in a local processing style. Results of Experiment 3 support our expectation that participants in the global condition would be more responsive to processing fluency and, consequently, perform better on an artificial grammar task than participants in the local condition. Finally, we showed that judgements of apartments by participants who adopted a global processing style were influenced by the attractiveness of the pictures of the apartments but not by information about the apartments presented in text, whereas the opposite was true for participants who adopted a local processing style (Experiment 4).

In an earlier research, we showed a relation between processing style and decision mode (intuition versus deliberation). More specifically, the effects of decision mode on judgement were mediated by processing style (Dijkstra, Van der Pligt, Van Kleef, and Kerstholt, 2012). The present findings can thus also be related to the distinction between intuition versus deliberation. Although we did not directly manipulate intuition versus deliberation in the current studies, our findings suggest that individuals who rely on intuition assign more weight to non-verbalised affective information and less weight to explicit factual information in text than individuals who rely on deliberation. This is in accordance with Wilson et al. (1995), who argued that deliberation makes people focus on accessible and readily verbalised information, possibly ignoring other, perhaps more diagnostic sources of information (see also Tordesillas & Chaiken, 1999). Interestingly, affective reactions and processing fluency have also been related to intuition (see Topolinski & Strack, 2009b).

Fluency and affective reactions are not independent. Previous research showed that fluency reinforces affective reactions (Reber et al., 1998; Reber & Schwarz, 2002). Not surprisingly, it is hard to determine whether it is affective valence or processing fluency or both that cause changes in preference in less-artificial judgement tasks, such as the one used in Experiment 4. More insight could be obtained by manipulating fluency and affective reactions independently and preferably with different techniques (e.g., subliminal priming and EC). Our goal in Experiment 4, however, was not to determine which of the two processes affect judgement, but to experimentally test whether

processing style affects responsiveness to easily verbalised (such as information in text) versus more difficult to verbalise information (such as pictures).

The fact that we did not find effects of processing style on other dimensions of affective pictures (dominance and arousal) in Experiment 1, suggests that the effect of processing style is limited to valence and does not affect sensitivity to other dimensions of emotions. Our studies are in accordance with findings showing that affective reaction and processing fluency are important mechanisms in intuition (e.g., Bechara, Damasio, Tranel, & Damasio, 1997; Fu, Dienes, & Fu, 2010; Slovic, Finucane, Peters, & MacGregor, 2002; Topolinski & Strack, 2009a, 2009b, 2009c; Wippich, 1994). In addition, our studies provide a new insight into the precise role of these processes and the type of information people tend to rely on when using a global processing style.

As argued before, we expect our main conclusions to also apply to the intuition versus deliberation distinction. One could ask why we did not manipulate decision mode. The first reason is that our manipulation is less obtrusive than asking people to deliberate or to follow their intuition. Manipulating processing style is, therefore, less likely to create demand effects. Second, instructing participants to rely on intuition, and especially instructing participants to deliberate, might be confusing, or even be impossible to comply with, in most of the paradigms we used. Nevertheless, future studies could investigate the role of intuition and deliberation in judgement and decision-making in classic paradigms relying on distraction, response speed manipulations or need for judgemental justification (see Horstmann, Hausmann, & Ryf, 2010).

Finally, our findings suggest that decisions can be improved by instructing decision-makers about the differential effects of global versus local processing styles. In tasks that require careful deliberation, people may be advised to adopt a local processing style, which could be self-induced by focusing on the details of an object (i.e., focusing on the trees rather than the forest). When a decision is expected to benefit from intuitive judgement, however, people may instead be advised to adopt a global processing style. Focusing on the forest rather than the trees may mobilise affective sources of information that otherwise remain less accessible.

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