

Video Article

# Experimental Research Examining How People Can Cope with Uncertainty Through Soft Haptic Sensations

Femke van Horen<sup>1</sup>, Thomas Mussweiler<sup>2</sup>

<sup>1</sup>Marketing Department, VU University

<sup>2</sup>Social Psychology Department, University of Cologne

Correspondence to: Femke van Horen at [femke.van.horen@vu.nl](mailto:femke.van.horen@vu.nl)

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## Abstract

Human beings are constantly surrounded by uncertainty and change. The question arises how people cope with such uncertainty. To date, most research has focused on the cognitive strategies people adopt to deal with uncertainty. However, especially when uncertainty is due to unpredictable societal events (e.g., economical crises, political revolutions, terrorism threats) of which one is unable to judge the impact on one's future life, cognitive strategies (like seeking additional information) is likely to fail to combat uncertainty. Instead, the current paper discusses a method demonstrating that people might deal with uncertainty experientially through soft haptic sensations. More specifically, because touching something soft creates a feeling of comfort and security, people prefer objects with softer as compared to harder properties when feeling uncertain. Seeking for softness is a highly efficient and effective tool to deal with uncertainty as our hands are available at all times. This protocol describes a set of methods demonstrating 1) how environmental (un)certainty can be situationally activated with an experiential priming procedure, 2) that the quality of the softness experience (what type of softness and how it is experienced) matters and 3) how uncertainty can be reduced using different methods.

## Video Link

The video component of this article can be found at <https://www.jove.com/video/53155/>

## Introduction

Uncertainty, its antecedents and consequences, is a highly investigated topic in economics, psychology, and marketing. Understandably so, as in modern society people are constantly confronted with uncertainty: In their daily shopping decisions, their careers, and their family dynamics. Learning to negotiate and cope with uncertainty has thus become a requirement of modern life.

Uncertainty is generally defined as a lack of knowledge. To date, most research in marketing and decision-making has focused on uncertainty due to choice alternatives. Because of incomplete information, people feel uncertain about the alternatives available and the utility of these alternatives<sup>1,2</sup>. In order to reduce such uncertainty, people often try to increase their knowledge base and seek additional information<sup>2,4</sup>.

However, besides feeling uncertain because of missing information, people are also subjected to uncertainty due to unpredictable and uncontrollable external events of which the impact is difficult to judge on one's future life<sup>5,6</sup>. Such environmental uncertainty arises when one does not know how the environment might be changing and thus cannot assign probabilities to the likelihood of future events. Examples of this type of uncertainty are for instance economic fluctuations, threats of terrorist attacks, and political changes. Under such uncertainty evoking circumstances, simply searching for information will fail to combat uncertainty. Especially because environmental uncertainty is ever more prevalent in modern society and there is very little known about how such uncertainty affects decision-making and choice, it is of paramount importance to develop a new experimental method to situationally activate environmental uncertainty. The present protocol caters to these needs.

Furthermore, traditionally the focus has been on the cognitive strategies people use when facing uncertainty. Research has for instance demonstrated that – besides seeking additional information – people become more close-minded about their attitudes<sup>7</sup>, emphasize fairness and fair procedures<sup>8</sup>, and perceive illusionary patterns in random stimuli when facing uncertainty<sup>9</sup>. However, people are not always able to cognitively cope with uncertainty, for instance when they lack time or when they have limited cognitive capacity to do so. In which case they may use an alternate, experiential route and seek soft haptic sensations to efficiently cope with and reduce uncertainty.

Human judgment can be influenced by bodily experiences that are transmitted by the sensory systems making contact with the external world (i.e., visual, acoustic or haptic). These feelings can influence our judgments without a semantic, cognitive interpretation of the sensory input<sup>10</sup>. Touching something soft may be such a bodily experience people search for when having to deal with uncertainty. In childhood, feelings of discomfort are often alleviated through physical touch such as holding or patting by caregivers or by feeling soft cuddly toys. Through such early experiences with touch, softness becomes strongly associated with comfort and security and can therefore be an effective tool to battle

uncertainty. But what type of soft haptic sensation will help in dealing with uncertainty? Any type? And should softness be experienced or is it enough when the soft properties of an object are merely seen on a computer screen? This protocol addresses these issues.

Besides the strategies people use to cope with uncertainty, it is of importance to know whether a particular strategy is functional. The functionality of softness seeking can for instance be measured subjectively by establishing one's level of uncertainty before and after holding something soft (level of uncertainty over time). Another way to assess uncertainty reduction more indirectly is by using an ambiguous task, such as the Snowy Picture Task (SPT)<sup>11</sup>. This task consists of a set of pictures in which objects are embedded in visual snow. Participants have to indicate which object they think is hidden behind the snow and their uncertainty with regard to their answer. Last, a personality questionnaire (Uncertainty Intolerance Scale<sup>12</sup>) can be used to measure whether softness can also increase a person's general tolerance towards uncertainty in daily life.

## Protocol

The following methods were all tested in the laboratory of the University of Cologne, in which humans (students) voluntarily participate. In line with the ethical guidelines published by the American Psychological Association and the general rules of institutional review boards for ethical issues, all participants were informed in advance about the nature of the study (*i.e.*, informed consent). This informed consent explained the nature of the research project and all potential risks and benefits to the participating persons. Also, it was clearly communicated that the data obtained from the study is anonymous and confidential and that participation is voluntary and can be stopped at any time. After the experiment, participants were always fully and extensively debriefed. As participants carried out a sequence of non-invasive, harmless tasks at separate workspaces to elicit anonymous choices, no potentially critical ethical implications of the research results were expected.

## 1. (Un)Certainty Induction

Note: This is an experiential priming method, in which participants are asked to read a paragraph describing several (un)certain events and are then asked to write how (un)certainly shapes their own lives.

1. Invite participants into the laboratory. Ask them to sit down in a cubicle behind a desk and then introduce them to the paper and pencil questionnaire.
2. Tell the participants that they will take part in two (or more) unrelated tasks (which are in fact related to each other). This is important, so participants are ignorant about the fact that the first (priming) task actually influences the performance on the second task (choice, evaluation, *etc.*). Specifically state which task they have completed and which task will start next.
3. Tell participants that in the first task they will read a paragraph about general life events and they will then be asked to write about a personal experience.
4. Give half of the participants the "Uncertainty" questionnaire and half of the participants the "Certainty" questionnaire.
5. Print either the paragraph containing uncertain events or the paragraph containing certain events on the first page of the questionnaire.
6. Let participants read the following paragraph in the "Uncertainty" condition: "Our lives are characterized by high levels of uncertainty. This seems to hold true on all levels, the societal, economical, as well as the personal. On the societal level, there is an ongoing relocation of industries and we currently experience great shifts in the political climate. Our mobility has increased to such an extent that we do not know whether where we live today will in two years time still be our home. We are also facing extremely high levels of uncertainty at the economical level: The financial markets are highly volatile, the most reliable economy – the U.S. economy – has lost its creditworthiness after the debt crisis, and the collapse of Lehman Brothers made us unsure whether our own money and pensions are safe in our banks. On the personal level, our positions are more uncertain than was ever true before: long-term planning is becoming more and more difficult as permanent job positions are scarce, marriage is not certain, as people go through many different relationships, and we are nowadays confronted with so many good choice options (of what to do, where to go, what to buy) that we are constantly uncertain whether we made the best decision."
7. Let participants read the following paragraph in the "Certainty" condition: "Our lives are characterized by high levels of certainty. This seems to hold true on all levels, the societal, economical, as well as the personal. On the societal level we experience great levels of certainty: We can always trust on reliable healthcare when we are sick, we know for sure that the standard of education will be high from a very young age, and we are certain that the insurance will cover the repair of our car after an accident. This is also true at the economical level: Germany has, even during the current tough economical times, proven to be stable. It shows a constant increase in productivity and a minimal inflation, the banks have a very high creditworthiness, and Germany is the most stable economy of Europe. On the personal level, there are more certainties compared to other countries: For instance, if we want to study, we always have the possibility to do so. Furthermore, we are certain that the government will support us financially when we encounter problems or suffer financial hardship. Thanks to the current communication systems in place, we know for sure that we can always stay in contact with our friends and family, even when we are separated."
8. Let participants then read the introduction of the writing task: "Now think about how uncertainty shapes your own life. Please think of an example and write on the lines provided underneath the situation, how you felt, *etc.* Please provide as many details as possible."
9. Make participants write a maximum of one page. After a maximum of 10 min ask them to stop and to continue to the next task. Make sure participants write enough. No minimum amount of writing was required, but it is likely that more writing intensifies the manipulation. Use a software program, *e.g.*, Medialab or a market research survey software, *e.g.*, Qualtrics, when a paper-and-pencil task is not appropriate (for instance because pens are used as the dependent measure and no unintended additional contact with pens should occur).
  1. Follow immediately with the manipulation check: "How do you feel right now?" from 1 (*very uncertain*) to 9 (*very certain*).
10. Measure participants' mood either with one item "How do you feel at this moment", from 1 (*very negative*) to 9 (*very positive*) or with the Positive and Negative Affect Schedule (PANAS)<sup>13</sup>.
  1. Give the manipulation checks (level of uncertainty and mood) either directly after the manipulation or after the dependent variable. If measured after the dependent variable, ask participants to recall the personal experience they wrote down in the first task.
11. To test whether the manipulation was successful, analyze the manipulation checks "level of uncertainty" and "mood" with a t-test. When mood is measured with the PANAS, analyze with a MANOVA. Read the experiences that participants wrote down to get further insight into the particular situations participants described.

12. Use equal numbers of male and female participants. Exclude non-native speakers, as the priming method is less effective when participants are not fluent in the language in which the priming paragraph is written. Exclude also participants that have a significant background in social psychology, as priming tends to be ineffective when participants are highly knowledgeable of priming methods.

## 2. Dependent Variables

1. Softness seeking: Preference and choice of products with softer properties

Note: These tasks are used to demonstrate that when people feel more uncertain, they prefer products with softer properties as compared to products with harder properties. When feeling certain, participants do not show such a preference.

1. Select two products that are equal in attractiveness but differ in softness (e.g., one pen with a hard grip vs. one pen with a soft grip or a soft candy (marshmallow) vs. hard candy (bonbon). Pretest this by asking a separate (between-subjects) sample how attractive and how soft the soft-grip pen (soft candy) or the hard-grip pen (hard candy) is on a 9-point scale ranging from 1 (*not attractive at all/very soft*) to 9 (*very attractive/very hard*). All other features of the objects should be as equal as possible (quality, color, price, taste).
2. Let an experimenter blind to the hypotheses run the whole experiment, because the crucial dependent measure is a choice measure, which the experimenter has to register manually. At the start of the experiment make sure that the products (e.g., pens) are not visible.
3. Make participants experience the softness of the objects unobtrusively with an unrelated filler task. For instance, let participants use both pens (and thus feel the soft versus hard properties of the pens) in a separate task by asking them to draw any two objects, one with each pen. Make sure both pens work equally well, to avoid frustration or a low quality experience with the pen.  
Note: When using food with soft versus hard, properties or anticipation of the experience seems to be sufficient, such that the soft versus hard candy does not need to be touched (and felt) before the choice is made. Counterbalance the order of pen usage to cancel out order effects on subsequent choice.
4. Tell participants that the experiment is finished and that they can come out of the cubicle. Tell them that they can choose one of the products (e.g., pen/sweet) as a token of appreciation for their participation in the study. To present the products orderly, put the soft product (e.g., soft-grip pen) on one serving tray and the hard product on another tray. Present both trays on the desk of the experimenter.
  1. Change the position of the trays (left or right) per day (or half day), to control for right-handed preferences. Fill trays up so they never look empty.
5. Ask them to choose one of the products. Let the experimenter register which of the two products was chosen (soft or hard). Ask participants which product they would take if they indicate that they do not want to have anything.
6. Probe for the hypothesis and exclude participants who guessed the hypothesis.
7. Analyze the data using a Chi-square test (for choice) and a t-test (for the manipulation checks) with any statistical program (e.g., SPSS, SAS, R).

2. Uncertainty reduction: Certainty ratings on an ambiguous task and over time

Note: This task is used to test whether the level of uncertainty induced through the priming task is reduced more after holding something soft, than after holding something hard. When certainty is primed, pen usage should not influence the level of uncertainty on a later task.

1. Search for an ambiguous task to test participants' level of uncertainty after holding something soft. Use for instance the Snowy Pictures Task (SPT)<sup>11</sup>, which is a task that consists of a set of pictures in which objects are embedded in visual snow.
2. Select seven relatively easy items of the original SPT. Select easy items (criterion: at least 65% of the participants have to indicate the correct answer in a pretest in which people are asked to write down the image they believe to see behind the visual snow). This is done because the task should not evoke too much arousal. Use for example the boot, tent, chair, horses, fish, hand/glove, and rugby ball of the original SPT task and exclude the more difficult items (torch/flashlight, duck, fly, knife, flying saucer).
3. Introduce the task as a pretest for new material for a visual perception task.
4. Print each picture (size 8.5 cm (w) X 6 cm (h)) on one page. On the line underneath the picture, ask participants to write down which object they think is hidden behind the snow. Let participants indicate on a Likert scale from 1 (*very uncertain*) to 9 (*very certain*) how certain they feel about their answer.
5. Ask half of the participants to hold something soft while doing the task and the other half to hold something hard (e.g., ask participants to do the SPT task either with a soft-grip or a hard-grip pen). Make sure that the participants do not use their own pen when using a pen as manipulation of softness and check whether the pen works well before giving them to the participant, in order to avoid frustration or a low quality experience with the pen.
6. Ask participants to indicate their general level of uncertainty after the SPT task, using the same question as the manipulation check (How do you feel right now?). This measure is used to test the level of uncertainty over time (Time 1 = Manipulation check immediately after prime (see 1.12) and Time 2 = After participants held something soft (e.g. after the SPT task)).
7. Analyze the level of uncertainty on the ambiguous SPT task with a 2-way ANOVA with prime and pen as between-subjects variables. Analyze level of uncertainty over time with a 3-way repeated measures ANOVA with time as repeated measures (within-subject) variable and prime and pen as between-subjects variables (using SPSS, SAS, or R).
8. Assess demographics, probe for the hypothesis and debrief.

## 3. Reversed Link: Softness Affects Tolerance of Uncertainty in Daily Life

Note: This task is used to demonstrate that the uncertainty-softness link is bidirectional: It is examined whether higher levels of uncertainty not only make participants seek experiences of haptic softness but whether experiences of haptic softness (e.g., holding a soft vs a hard cloth) also make participants to tolerate higher levels of uncertainty in daily life.

1. Select two different cloths that differ in texture and are as much as possible equal in quality, color and size. In the current experiment use a soft cloth (suede) and a rough cloth (fabric for furniture or curtains). Because a between-subjects design is used, minor differences between the two cloths are acceptable.

2. Pretest the cloths on degree of softness. Ask a separate sample of participants (between subjects) to hold the piece of fabric in their hands and to answer the question: "How does this fabric feel from 1 (*very soft*) to 9 (*very rough*).
3. Program the experiment software (step 1.9) and write in the instructions that participants will first do a product testing task (as a cover story) and will then fill out a personality questionnaire. Ask them to read all the instructions on the computer screen carefully.
4. Randomly assign half of the participants to hold the soft fabric for 1 min and the other half to hold the hard fabric. Tell them that they have to move the cloth in between their fingers in order to feel the fabric well, as they will be asked to evaluate the fabric afterwards.
5. Let participants rate the quality of the fabric with three questions "How attractive do you think the fabric is?" from (*not attractive at all*) to (*very attractive*), "How soft do you think the fabric is?" from (*very rough*) to 9 (*very soft*), and "How do you evaluate the fabric from 1 (*very negative*) to 9 (*very positive*) to back up the cover story.
6. Let participants fill out two subsets of the Uncertainty Intolerance Scale using a 9-point scale ranging from "Strongly disagree" to "Strongly agree"<sup>12</sup>.  
Note: The scale is a German translation of the original scale developed by Dugas, Gosselin, & Ladouceur (2001)<sup>14</sup>. Use the two subscales ("Burden due to uncertainty intolerance" and "Vigilance due to uncertainty intolerance") of the Uncertainty Intolerance Scale. These subscales focus on the inability to predict the future (e.g., "I always want to know what the future has in store for me" and "A small, unforeseen event can spoil everything, even with the best of planning") and are therefore of interest to test the current hypothesis.
7. Analyze the data, after averaging the two Uncertainty Intolerance subscales into one measure, with a t-test.
8. Use equal numbers of male and female participants. Probe for the hypothesis and debrief.

## Representative Results

These studies were used to investigate 1) whether people prefer objects with soft properties when facing uncertainty and 2) whether searching for softness when facing uncertainty is functional, *i.e.*, whether it reduces uncertainty. A priming procedure (described above) was used to experimentally manipulate environmental (un)certainty. The manipulation checks across the three studies confirmed the effectiveness of the newly developed experiential priming of (un)certainty ( $p = .06$ ;  $p = .04$ ;  $p = .01$ ).

**Figures 1 and 2** show data that when facing uncertainty, people's choice switches towards products with softer (soft-grip pen, soft candy) as compared to harder (hard-grip pen, hard candy) properties. The right two bars in the right panel of **Figure 1** ( $N = 73$ ) show that pen choice is not influenced by a certainty prime, and that, conform the pretest, both pens are chosen equally often when feeling certain. The left two bars show that after uncertainty is primed the soft-grip pen is chosen significantly more often than the hard-grip pen,  $\chi^2(1, 72) = 5.64$ ,  $p = .02$ , Cramer's  $V = .28$ .

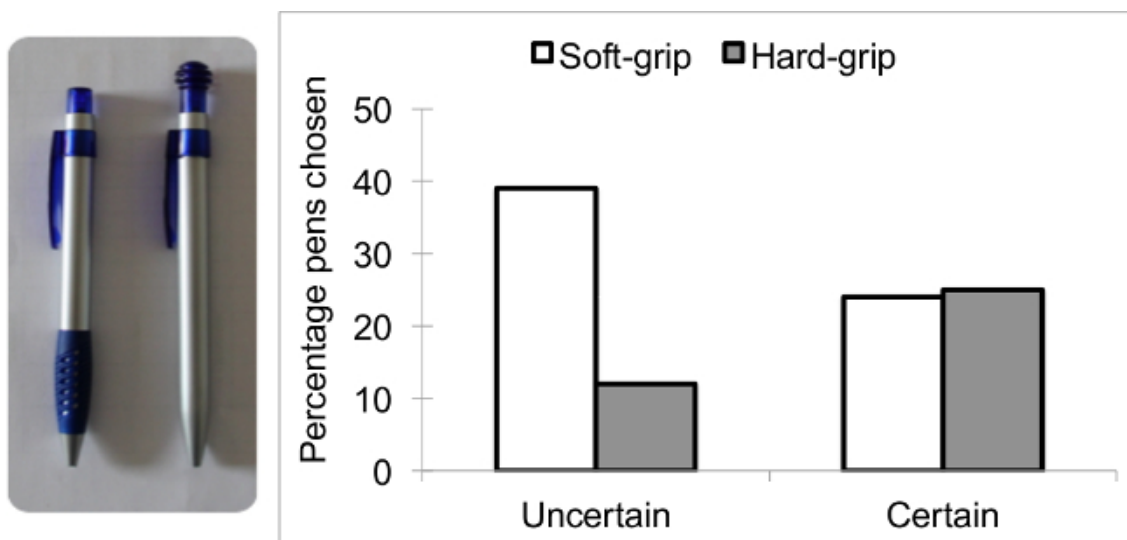
The right two bars of the right panel of **Figure 2** ( $N = 45$ ) show that, conform to the pretest showing that the hard candy was rated as more attractive, the hard candy is chosen significantly more often than the soft candy when primed with certainty. The left two bars show that the preference for the hard candy is attenuated when people feel uncertain and observes a shift towards the softer candy,  $\chi^2(2, 45) = 9.14$ ,  $p = .01$ , Cramer's  $V = .45$ .

**Figures 3, 4, and 5** demonstrate that seeking softness under uncertainty is functional.

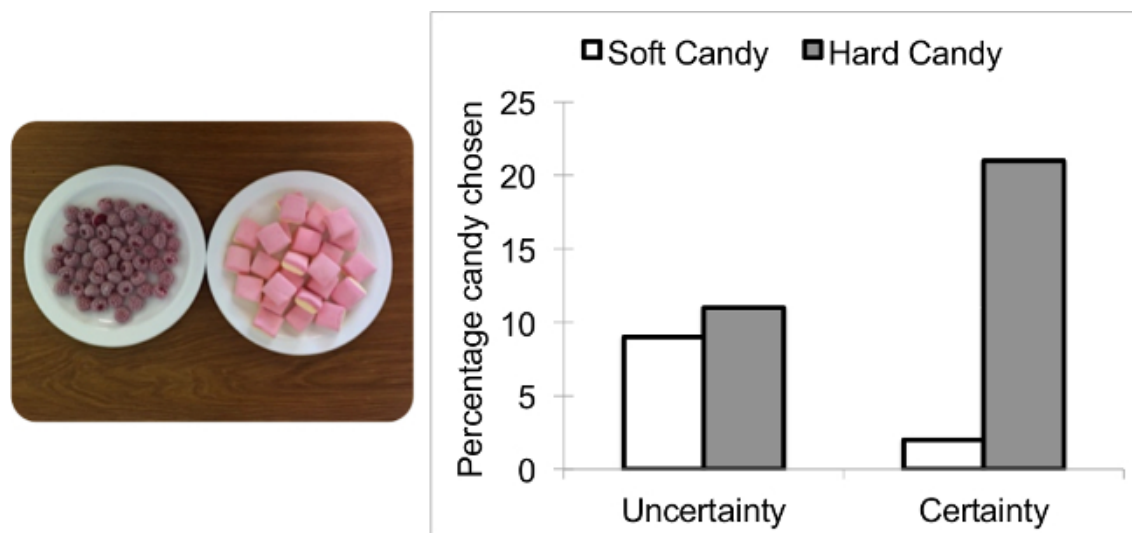
**Figure 3** ( $N = 83$ ) shows that holding a soft pen reduces uncertainty on a subsequent ambiguous task. The left two bars show that uncertainty-primed participants were more certain about their answers on the Snowy Picture Task (averaged across seven items) after using a soft-grip pen than after using a hard-grip pen. The level of certainty with which certainty-primed participants answered the SPT items did not change depending on pen-type,  $F(1, 78) = 6.70$ ,  $p = .01$ ,  $\eta^2 = .08$ .

**Figure 4** shows that softness does not only reduce uncertainty on a subsequent ambiguous task, but also over time. The data displayed in the left hand panel shows when uncertainty is activated, that the level of certainty increases over time when a soft-grip pen is used, whereas the level of certainty is not influenced when a hard-grip pen is used. Unexpectedly, the right hand panel shows that when certainty is activated, using a soft-grip pen decreases level of certainty over time, whereas using a hard-grip pen does not influence the level of certainty, 3-way interaction:  $F(1, 77) = 16.45$ ,  $p < .001$ ,  $\eta^2 = .18$ . These results were only obtained using the question "How uncertain do you feel right now?" and not for the manipulation checks tapping into personal uncertainty inducing events (see Discussion).

**Figure 5** ( $N = 66$ ) shows the functionality of softness during uncertainty using a different measure. The right hand panel demonstrates that after holding and feeling a soft cloth for 1 min, people show a significant lower intolerance for uncertainty in daily life, than after holding a rough cloth,  $t(64) = -2.13$ ,  $p = .037$ ,  $d = -.53$ .

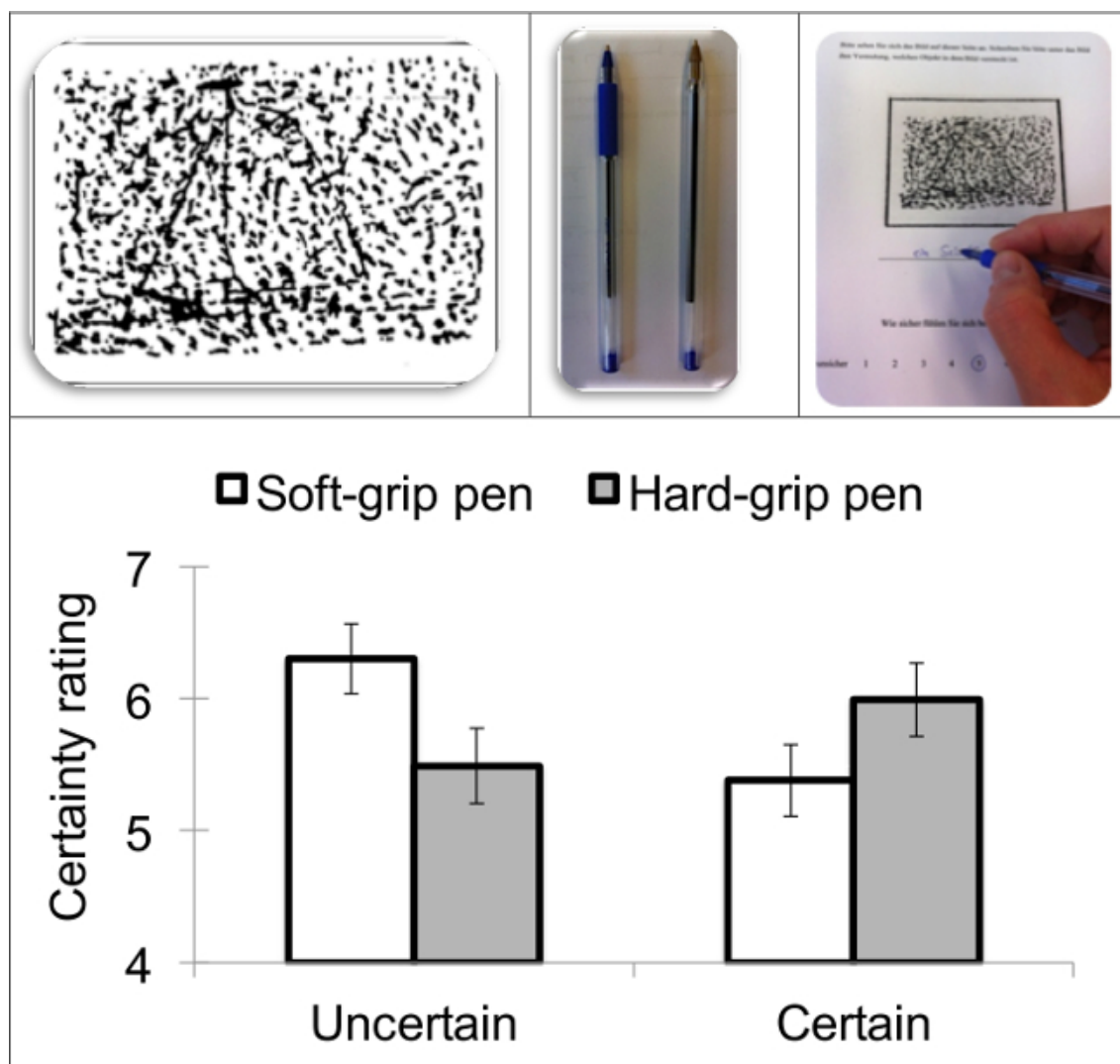


**Figure 1. Influence of Priming Manipulation (Uncertain versus Certain) on Pen Choice (Soft-grip versus a Hard-grip).** The left panel shows the two pens people could choose: the soft-grip (left) or the hard-grip (right) pen. The right panel shows the pen choice people make after being primed with uncertainty versus certainty. [Please click here to view a larger version of this figure.](#)

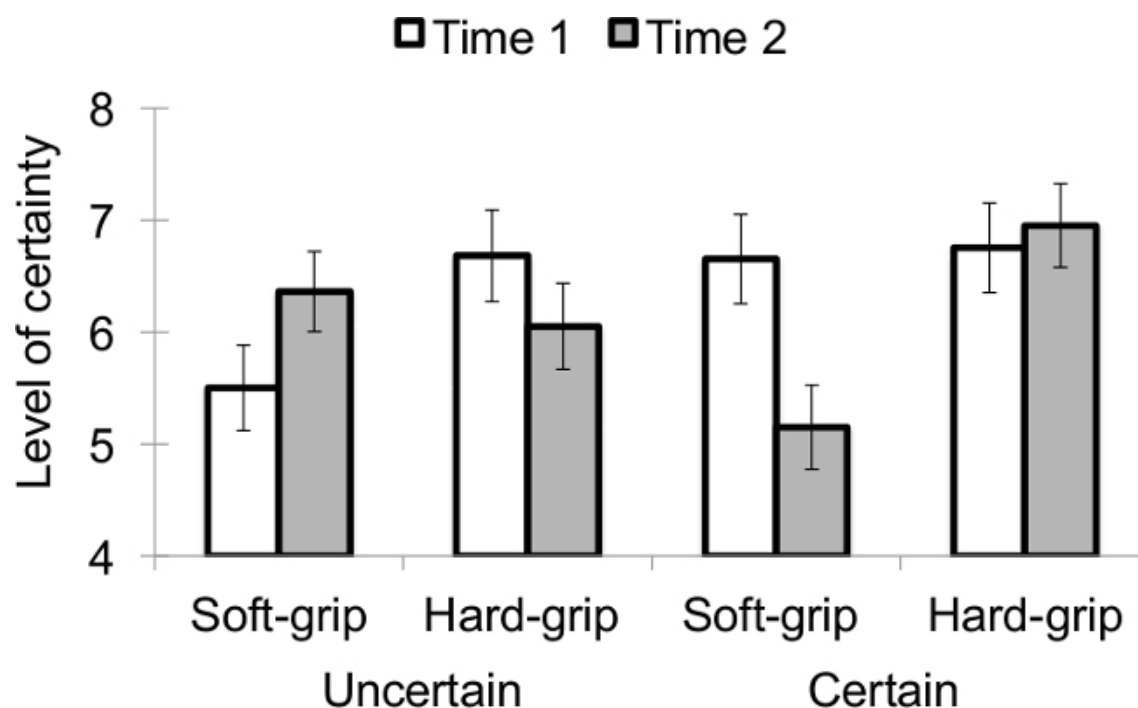


**Figure 2. Influence of Priming Manipulation (Uncertain versus Certain) on Choice of Candy (Soft (Marshmallow) vs Hard (Bonbon)).** The left panel shows the two candies participants could choose: the hard bonbon (left) or the soft marshmallow (right). The right panel shows the percentage choice of soft-candy versus hard candy after being primed with uncertainty versus certainty. [Please click here to view a larger version of this figure.](#)

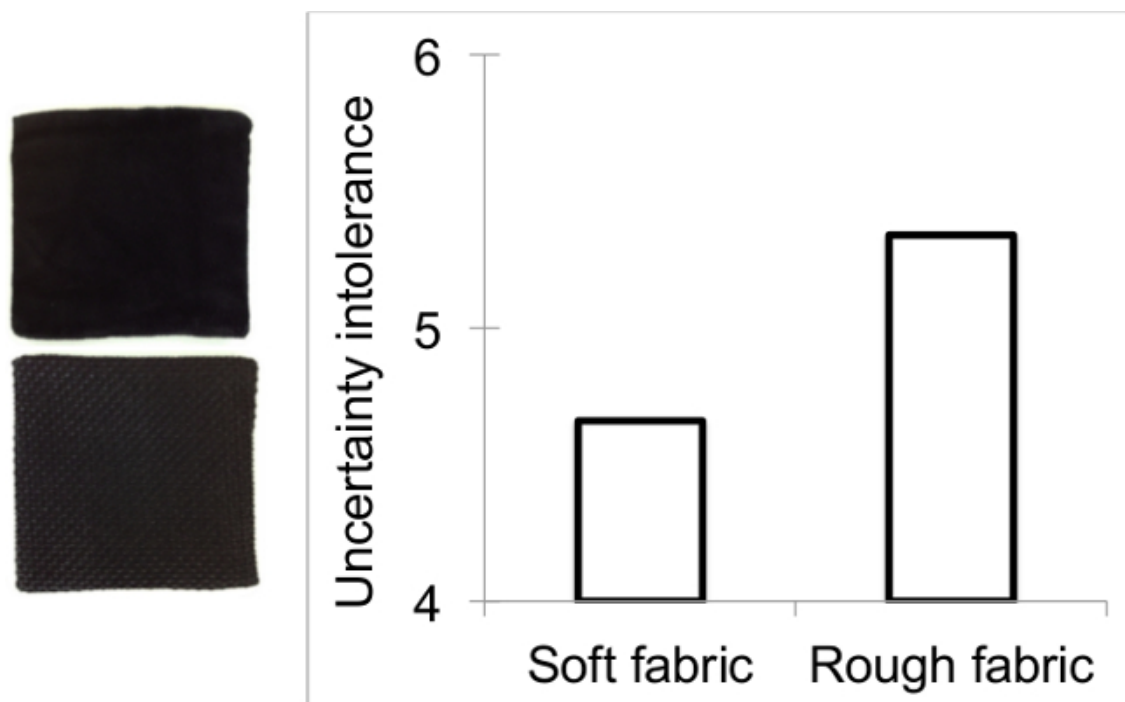




**Figure 3. Influence of Priming Manipulation (Uncertain versus Certain) and Pen Type (Soft-grip versus Hard-grip) on Certainty Ratings on the Snowy Picture Task.** The upper panel shows the materials used in the experiment. On the left side, one of the images of the Snowy Picture Task is displayed. Next to that, the soft-grip (left) and the hard-grip (right) pen are shown. On the right, a representation of the procedure of the task is displayed. The lower panel shows how certain people feel with regard to their answers on the Snowy Picture Task as a function of the (un)certain prime and pen usage. This figure has been modified from (Van Horen & Mussweiler, 2014)<sup>15</sup>. The error bars indicate  $\pm 1$  SE of the M. [Please click here to view a larger version of this figure.](#)



**Figure 4. Influence of Priming Manipulation (Uncertain versus Certain) and Pen Type (Soft-grip versus Hard-grip) on Level of Certainty over Time.** This figure shows the level of certainty over time holding a soft-grip pen as compared to a hard-grip pen when primed with uncertainty (left) or with certainty (right). This figure has been modified from (Van Horen & Mussweiler, 2014)<sup>15</sup>. The error bars indicate  $\pm 1$  SE of the M. [Please click here to view a larger version of this figure.](#)



**Figure 5. Holding Something Soft Decreases Intolerance of Uncertainty.** The left panel shows the manipulation of softness (soft vs. hard cloth). The right panel shows intolerance of uncertainty in daily life after holding either a soft versus a rough cloth. [Please click here to view a larger version of this figure.](#)

## Discussion

This article describes a set of measures on how people can cope with and can reduce uncertainty via an experiential instead of a cognitive route. Furthermore, it demonstrates a method to experimentally activate environmental uncertainty enabling researchers to examine how this type of

uncertainty, besides choice uncertainty, affects decision-making and choice. Third, it discusses three different methods (both direct and indirect) measuring whether softness seeking can reduce uncertainty.

The protocol describes in detail a new experimental priming method to activate environmental uncertainty situationally. It is critical to prime uncertainty experientially, as it seems to be a more successful method to activate uncertainty compared to more unobtrusive priming methods like scrambled sentences tasks<sup>16</sup> or subliminal priming. This is possibly the case because such experiential priming technique encourages greater imagination. When it is easy to mentally simulate or generate images of an event, it increases its perceived likelihood and confidence about it and is thus likely to be experienced more strongly. In addition, this experiential priming can be completed either with paper and pencil or on the computer. The priming is in general more effective when participants write a personal experience on paper than when they type it on the computer. This aligns with recent research demonstrating that taking notes on a laptop as compared to longhand, results in shallower processing<sup>17</sup>.

The manipulation was written in 2011. It was adapted to the Germany situation at that time. The manipulation needs to be modified depending on the time and the country the manipulation is used in. In addition, the manipulation and all the dependent measures in the following subsections are translated from German. It is recommended to stay as close as possible to the original wording of the measures and scales, to avoid differences in meaning.

To test whether the manipulation was successful, the question "How do you feel right now?" seems to capture the subjective feeling of uncertainty induced by the priming task the best. One of the studies, used in addition three other manipulation checks that were related to people's individual situation (e.g., "How certain are you to find a suitable job after your study?"), but the internal consistency between the four manipulation checks was low, presumably because these questions were too specific and personal. Furthermore, research has demonstrated that an uncertainty induction is more effective when there is a time lag between the prime and the dependent measure<sup>9,18</sup>. The current research therefore used the mood questionnaire (PANAS) both as a manipulation check for mood **and** as a filler task.

The effects of the last experiment (holding a soft vs. rough cloth increases tolerance for uncertainty) tend to be stronger for male participants. Males may experience softness less frequently, due to which the manipulation has a higher impact on males than on females. This possible moderating role of gender may be addressed in further research.

The protocol demonstrates that different types of softness (e.g., the furry softness of a cloth, the velvety softness of a pen grip or the spongy softness of a marshmallow) help to reduce uncertainty: when feeling uncertain, softness is preferred over hardness, independent of the specific type of softness. This fits with the theoretical line of reasoning. The types of softness described in the protocol all relate to experiences that are associated with security and comfort (either soft furry cuddling cloths or the soft, smooth bodies of one's parents). Future research should establish whether the effects also work for different types of softness (e.g., a soft squeeze ball which is likely to be associated more with stress-relief rather than with security). The research further demonstrates that experiencing (and not merely seeing) softness is crucial for the basic effect to occur: Uncertainty does not seem to increase choice of products with soft as compared to hard properties when they are hypothetical and just displayed on a computer screen. This aligns with past research showing that vivid, real items are more likely to trigger emotions and hard-wired responses than with images<sup>19</sup>. To fully address the experiencing vs. seeing hypothesis, however, participants should be asked to evaluate the **same** product in a touch versus a non-touch condition, instead of different products in different experimental settings.

The use of soft haptic sensations in dealing with uncertainty is novel, suggesting that even incidental forms of touch can have a powerful impact on one's emotional functioning and do not need to be integral to the task at hand. This suggests a very effective and efficient way to deal with uncertainty. The technique could be used clinically, for instance to alleviate stress related to intolerance for uncertainty and worry. Recent technological advances have yielded so-called "haptic jackets" that can simulate an affectionate embrace<sup>20</sup>. While interpersonal touch has also been shown to have soothing effects, therapists might use soft cloths to help reduce uncertainty and worry of clients without touching them. A fruitful avenue for future research would thus be to test the usefulness of this technique in clinical and counseling settings.

## Disclosures

The authors have nothing to disclose.

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