**Design**

Participants were randomly assigned to one of three groups. A 2 (Intersection relation: T1 and O1 + Positive source vs. T2 and O2 + Negative source) x 3 (Training condition: Extinction vs. Counterconditioning vs. Acquisition-Only) mixed design will be used, with the first factor tested within participants and the second between participants. Three additional method factors were also counterbalanced: task order (self-report or IAT first), order of critical blocks in the IAT (compatible first vs. incompatible first), stimulus-valence assignment (Target1+Positive vs. Target2+Positive).

**Participants and Procedure.**

We ran a power analysis with G-Power. With an average effect size (Cohen’s *d*) = 0.50, α = .05, we need a total of 50 participants per cell to get a power (1 – β) = .80. Participants took part to an online experiment via Prolific Academic. Following an experimental scenario used by Hughes et al. (2016), we exposed participants to a number of fictitious brand products that had purportedly been released into the European marketplace. This acquisition phase (IR training) was followed by an IR memory task. After that, half of participants completed a counter-conditioning task followed by another IR memory task, while the other went directly to the (implicit and explicit) evaluative measures. Participants also answered a series of questions that aimed at measuring influence awareness. The entire session took approximately 30 minutes.

**Materials.**

**Stimuli.** Two fictitious brand names and two Chinese ideographs served as neutral stimuli during the acquisition and the counter-conditioning phase. These stimuli were selected based on a pre-test conducted on a different sample of fifty-one participants (17 females, *M age* = 26.22, *SD* = 5.15). Participants were asked to evaluate two separate sets of 10 Chinese symbols and 10 fictitious brands by rating them based on their gut feelings on a scale from -5 to 5. The two selected Chinese ideographs were both neutral in valence: one sample t-tests revealed that their average score did not differ from 0 (*t*(47) = .80, p = .428 and *t*(47) = 1.23, p = .225). Moreover, a paired sample t-test revealed no significant difference between the two, *t*(47) = -.25, p = .805. The two selected brand stimuli were the most neutral in valence, even though one of them did differ from 0, *t*(47) = 2.76, p = .009 and *t*(47) = 1.59, p = .118). More importantly, a paired sample t-test revealed no significant difference between the two (*t*(47) = 1.13, p = .263). A further set of sixteen positive and sixteen negative food images were used as valenced stimuli. In the IAT, two fictitious brand names served as target labels and the words ‘*Good*’ and ‘*Bad*’ as attribute labels. Eight positively valenced and eight negatively valenced adjectives served as attribute stimuli (*delicious*, *tasty*, *nice*, *good*, *gorgeous*, *wonderful*, *yummy* and *pleasant* versus *rotten*, *disgusting*, *nasty*, *horrid*, *sick*, *vomit*, *horrible*, *unpleasant*) while images of the two Chinese symbols served as the target stimuli.

**Acquisition phase**.Participants were told that they would be presented with images of food and two brand names and that they would be followed by the appearance of a Chinese symbol. Their task was to identify the specific response (either ‘D’, ‘C’, ‘J’ or ‘N’) that a given food image and brand name was related. They were asked to take their time and try to be as accurate as possible. The whole phase consisted in a series of 4 blocks of 20 trials each. Each trial began with the presentation of a positively (S1) or negatively valenced source (S2) or one of two Chinese symbols (T1 or T2). Selecting the ‘D’ option with the mouse (R1) in the presence of a positively valenced source (S1) or the ‘C’ option with the mouse (R2) when presented with a Chinese symbol (T1) resulted in the removal of that stimulus from the screen, followed by a 250ms inter-stimulus interval, and the subsequent presentation of a Neutral outcome (O1). After an inter-trial interval of 1500ms the next trial began. Likewise, selecting the ‘J’ option with the mouse (R3) in the presence of a negatively valenced source (S2) or the ‘N’ option with the mouse (R4) when presented with a second Chinese symbol (T2) resulted in the removal of that stimulus from the screen, an inter-stimulus interval, and the subsequent presentation of another neutral outcome (O2). Stimuli-keys assignment was counterbalanced between participants, to exclude any effect driven by stimuli location. If participants emitted an incorrect response - such as pressing ‘N’, ‘J’ or ‘C’ in the presence of a positive food image – then error feedback was displayed for 2000ms. During this time participants could not emit another response and had to wait until the next trial commenced in order to try again. Following each block, participants were exposed to a feedback screen that displayed their percentage accuracy during the previous section of the task. These instructions also emphasized the need for accurate responding especially if past performance was below 90%. Note: response selection occurred via the mouse instead of the computer keys and the location of the response option onscreen varied from trial to trial.

**Extinction phase**. The structure of the task mirrored that administered in the acquisition phase.A statement on screen informed participants to that they would complete a similar task. The extinction phase consisted of 4 blocks of 20 trials each. Each trial began with the presentation of a positively or negatively valenced food image (S1 or S2) or one of two Chinese symbols (T1 or T2). Selecting the ‘D’ option (R1) in the presence of a positive source (S1) resulted in the removal of that stimulus from the screen, but now no outcome was displayed on the screen after the response. Selecting the ‘C’ option when presented with neutral target (T1) resulted in the removal of that stimulus from the screen and no outcome was displayed on the screen after the response. After an inter-trial interval of 1500ms the next trial began. Selecting the ‘J’ option (R3) in the presence of a negative source (S2) resulted in the removal of that stimulus from the screen and no subsequent presentation of any outcome. Selecting the ‘N’ option when presented with neutral target (T2) resulted in the removal of that stimulus from the screen and no subsequent presentation of any outcome. In case of incorrect response an error feedback was displayed for 3000ms. During this time participants could not emit another response and had to wait until the next trial commenced in order to try again. Following each block, participants were exposed to a feedback screen that displayed their percentage accuracy during the previous section of the task. These instructions also emphasized the need for accurate responding especially if past performance was below 90%. Note: response selection occurred via the mouse instead of the computer keys and the location of the response option onscreen varied from trial to trial.

**Counter-conditioning phase**. The structure of the task mirrored the acquisition phase with one important change.Participants were introduced to the task by telling them that in the following categorization task they would be exposed to food images, brand names and Chinese symbols. Participants were asked to pay attention to the task and to try to be as accurate as possible in their responses. Their task was to identify the specific response option using the mouse (either ‘D’, ‘C’, ‘J’ or ‘N’) that a given food image or brand name was related to. All the stimuli, except for the valenced ones, were identical to those used in the acquisition phase. The whole phase consisted in a series of 4 blocks of 20 trials each. Each trial began with the presentation of a new positively (S1) or negatively valenced food image (S2) or one of neutral Chinese symbols (T1 or T2). Selecting the ‘D’ response option (R1) in the presence of a positively valenced source (S1) resulted in the removal of that stimulus from the screen, followed by a 250ms inter-stimulus interval and the subsequent presentation of a neutral outcome (O1). Selecting the ‘C’ response option (R2) when presented with neutral target (T1) resulted in the removal of that stimulus from the screen, followed by a 250ms inter-stimulus interval and the subsequent presentation of neutral outcome (O2). After an inter-trial interval of 1500ms the next trial began. Selecting the ‘J’ response option (R3) in the presence of a negatively valenced source (S2) resulted in the removal of that stimulus from the screen, an inter-stimulus interval and the subsequent presentation of outcome (O2). Selecting the ‘N’ response option (R4) when presented with neutral target (T2) resulted in the removal of that stimulus from the screen, an inter-stimulus interval and the subsequent presentation of outcome (O1). In case of incorrect response an error feedback was displayed for 3000ms. During this time participants could not emit another response and had to wait until the next trial commenced in order to try again. Following each block, participants were exposed to a feedback screen that displayed their percentage accuracy during the previous section of the task. These instructions also emphasized the need for accurate responding especially if past performance was below 90%. Note: response selection occurred via the mouse instead of the computer keys and the location of the response option onscreen varied from trial to trial.

**IAT**. An IAT was administered to measure evaluative responding towards T1 and T2. Participants were informed that the two Chinese symbols (T1 and T2) they had encountered during the learning phase (targets) as well as the words ‘Good’ and ‘Bad’ (attributes) would appear on the upper left and right sides of the screen and that stimuli could be assigned to these categories using either the left (‘E’) or right keys (‘I’). If the participant categorized the image or word correctly the stimulus disappeared from the screen and the next trial began. In contrast, an incorrect response resulted in the presentation of a red ‘X’ which remained on-screen until the correct key was pressed. Overall, each participant completed seven blocks of trials. The first block of 20 practice trials required them to sort the symbols into their respective categories, with one symbol (T1) assigned to the left (‘E’) key and the other (T2) with the right (‘I’) key. On the second block of 20 practice trials, participants assigned positively valenced stimuli to the ‘Good’ category using the left key and negative stimuli to the ‘Bad’ category using the right key. Blocks 3 (20 trials) and 4 (40 trials) involved a combined assignment of target and attribute stimuli to their respective categories. Specifically, participants categorized the first Chinese symbol (T1) and ‘positive’ words using the left key and the second Chinese symbol (T2) and ‘negative’ words using the right key. The fifth block of 20 trials reversed the key assignments, with symbol (T1) now assigned to the right key and symbol (T2) with the left key. Finally, the sixth (20 trials) and seventh blocks (40 trials) required participants to categorize symbol (T1) with ‘negative’ words and symbol (T2) with ‘positive’ words.

**Self-report measures**. Evaluative responding towards T1 and T2 and towards O1 and O2 was assessed. Stimulus ratings of the two sets of targets (brand names: T1 and T2; Chinese symbols: O1 and O2) were obtained using different questions. On each trial, participants were presented with one of the two Chinese symbols (or brand names) and asked to indicate whether they considered it to be ‘*Good/Bad*’, ‘*Pleasant/Unpleasant*’, ‘*Positive/Negative*’ and whether ‘*I like it/I don’t like it*’ along a scale that ranged from -5 (Negative Feelings) to +5 (Positive Feelings) with 0 as a neutral point. Thereafter, and for each brand name and symbol, participants were then asked to indicate how confident they were in the evaluation provided along a scale ranged from -5 (not confident) to +5 (confident).

**IR memory tests**. We assessed whether participants could accurately recall the various elements of the intersecting regularities twice: once after the acquisition phase and a second time after the counter-conditioning phase. This task consisted of eight trials. Four trials probed for the trained S🡪R relations (e.g., “*During the first block of the experiment, when S1/S2/T1/T2 was presented which button did you have to press*”) and provided participants with six response options (i.e., the four possible responses during the task, “I don’t know” and “None of the above”). Another four trials probed for R🡪O relations (e.g., “*During the first block of the experiment*, *when you pressed R1/R2/R3/R4 what appeared onscreen*”) and provided with four options (i.e., the two possible stimuli during the task, “I don’t know” and “None of the above”). No feedback was provided for any response emitted during this task. Participants who produced a minimum of 6 out of 8 trials were defined as having passed the memory test while those who failed to do so were defined as having failed the task.

**Influence awareness.** Participants were asked to answer a series of questions that aimed at investigate the reasons why they liked or disliked the stimuli presented throughout the task and whether they thought that the experimenter tried to influence them during the study. These questions focused on (a) demand compliance, and (b) reactance.

**Matching to sample task.** A MTS task was also included at the end of the study for exploratory purposes. We were interested in whether participants would act as if stimuli S1, O1 and T1 were equivalent to one another and whether S2, O2, and T2 were equivalent to one another.