

Supplementary Information

Reaction time differences in the Stage Games

We tested whether participants were faster in responding in the Scarcity or Abundance mindset during the visual perception tasks of the Stage Games. We first examined if participants were faster on one of the games on average. Participants were slower on the Dot Counting task ($M = 1.08$ sec) than the Dot Comparison ($M = 0.56$ sec) and Shape Matching task ($M = 0.61$ sec). To account for this difference, we centered reaction times within each game. Next, we tested a GLM with centered RT as DV, and mindset (Scarcity/Abundance) and block (1,2,3) as within subject variables. Results demonstrated that neither mindset nor any of its higher order interactions affect reaction times in the visual perception tasks.

We choose not include this analysis in the main text of the manuscript, because we reasoned that the current design might not be optimal to test reaction time differences in scarcity and abundance. During the visual perception task, participants were asked to make a two-step decision: 1. inspect the visual stimulus (1 second) and 2. give their response in a separate restricted time windows (2 seconds). We choose for these restrictions instead of a free response time window, to ensure the task was difficult enough so that the participants could not find out the feedback was manipulated, and make the task equally long for all participants.

Exclusion criteria and excluded participants

Exclusion criteria for this study were non-removable metal in the body, medication, claustrophobia, or epilepsy. We excluded participants with dietary restrictions and individuals living in The Netherlands for less than a year in order to ensure familiarity with the food products used in the task. One participant was excluded due to technical problems during scanning, three participants were excluded from imaging analyses due to excessive movement, and two participants were excluded from behavioral analyses as they did not show up to the follow-up session. Two participants indicated suspicion about the validity of the feedback during the scarcity manipulation when debriefed at the conclusion of the experiment. Exclusion of these participants did not affect the reported results.

Experimental procedures

Bidding task

On each trial, participants began with a €3 endowment. After viewing a picture of the product on that round, participants placed their bids (b) for the presented product using a slider which incremented in steps of €0.05. Then, the computer drew a random number (n) from a uniform distribution between 0 and 3. If $n \leq b$, participants would receive the product for the drawn price n , and keep the remaining money (i.e. €3- n). If $n > b$, their bid ‘failed’ and so participants would keep their initial endowment but not receive the product. If participants failed to enter a bid on a trial, they would lose both the €3 and the right to the product.

The products used in this task were pretested by a separate group of 20 participants. In this pretest, 200 pictures of food products from a local supermarket were rated on how hedonic and utilitarian they were perceived to be. The same definitions of ‘hedonic’ and ‘utilitarian’ were given as during the actual experiment. For the Hedonic list, we used the 72 products that received the highest average hedonic ratings while having low utilitarian ratings, and vice versa for 72 utilitarian products. Retail price did not differ between the hedonic and utilitarian products ($M(\text{Hedonic}) = €1.76$, $M(\text{Utilitarian}) = €1.69$, $t(142) = .424$, $p = .672$). All products were presented in a color photograph in their original packages against a white background.

Participants played the Bidding task 6 times in total; three times in the Abundance condition and three times in the Scarcity condition (once in each of the different perceptual tasks). Products were separated into two sets of 72 products; each set contained 36 hedonic and 36 utilitarian products. These stimulus sets were counterbalanced, with both sets presented equally often in the Scarcity and Abundance mindset. Within each set products were randomly presented with one restriction, namely that participants saw 12 hedonic and 12 utilitarian products each of the six times they completed the Bidding Task.

Questionnaires after the scanning session

Immediately after scanning, participants filled out extra questionnaires. In eight separate questions, participants were asked: ‘When you received 1(or 10) token(s) to play the Stage games, to what extent were you confident about your performance during the three Stage games?’, ‘When you received 1 (or 10) token(s) to play the Stage games, to what extent did you feel stressed?’, ‘When you received 1 (or 10) token(s) to play the Stage games, to what extent did you feel motivated?’, ‘When you received 1(or 10) token(s) to play the Stage games, to what extent did you feel excited?’.

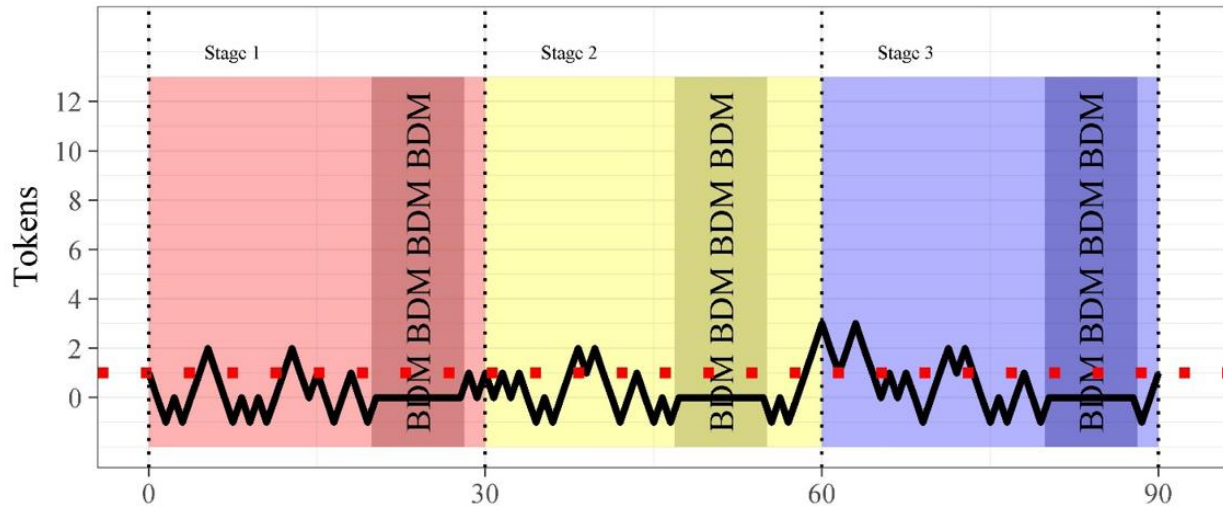
Post test 1-2 weeks later

Participants returned to the lab one to two weeks after the scanning session. They answered the following questions for each product: ‘How hedonic is this product’, ‘How utilitarian is this product’ and ‘How

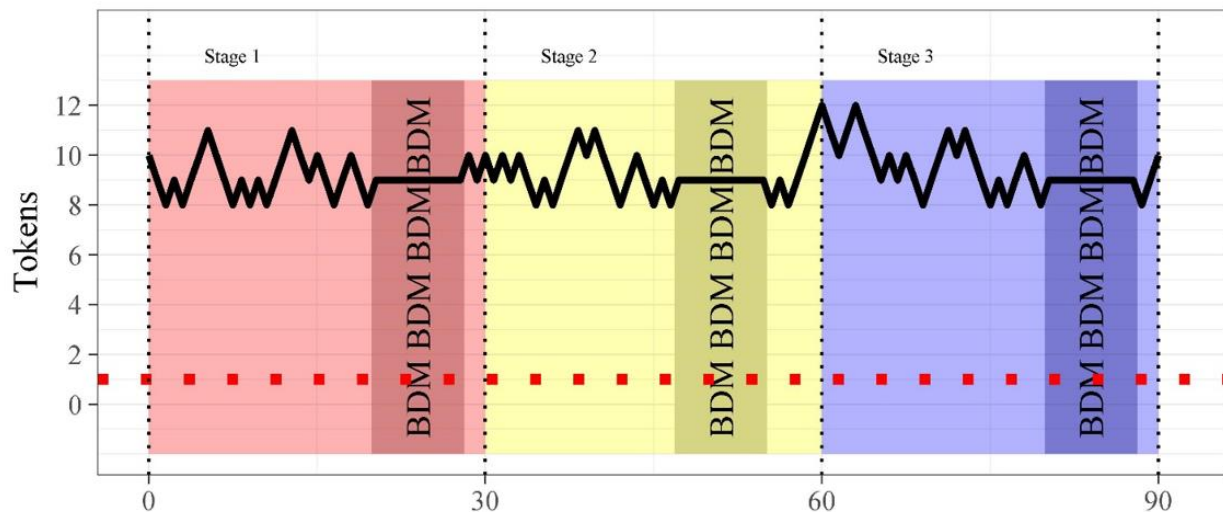
much do you like this product' on a continuous scale from 1-7, where 1 denoted 'not at all' and 7 represented 'very much'. Hedonic products were defined as 'Pleasurable food, Makes me feel good, Looks tasty, Improves my mood, Is appealing, Is comforting' and Utilitarian products defined as 'Functional food, Is nutritious, Is Important for a balanced diet, Gives me energy, Is saturating, Builds my immune system'. These definitions of hedonic and utilitarian were also used during the pretest. We also asked 'How often do you buy this product' on a 1-7 scale where 1 represented 'never' and 7 denoted 'always', and 'How much are you willing to pay for this product' on a continuous scale from €0 to €5.

Figures

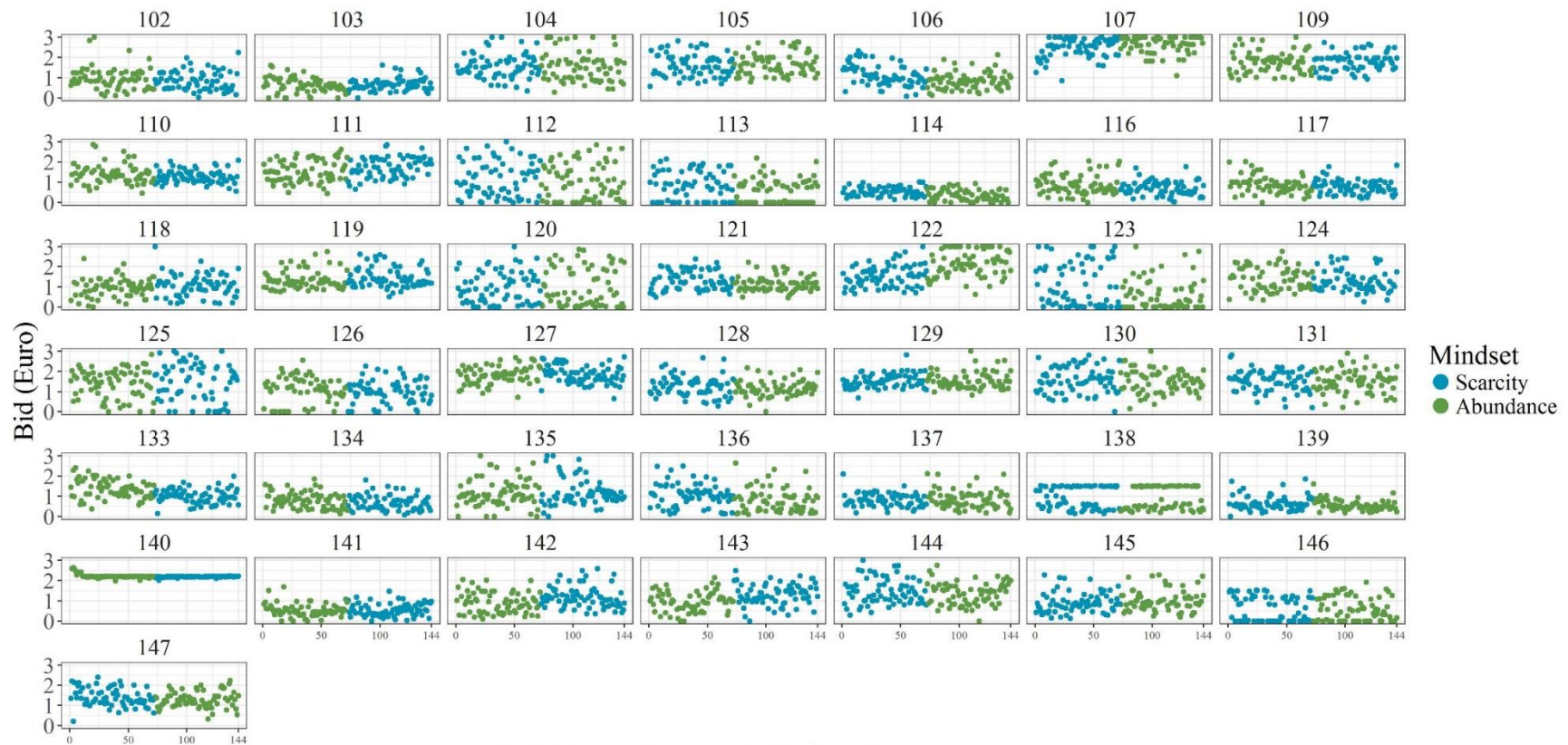
Scarcity Mindset



Abundance Mindset



SI. Variability of amount of tokens in the Stage Game in the scarcity (top) and abundance (bottom) mindset. Red dotted line represents the one token threshold needed to continue to the next stage. Each different color represents the different perceptual task played in the Stage Games. The highlighted vertical bar represents when participants played the Bidding-task. All participants received the same feedback pattern in both mindset conditions.



Individual, trial-by-trial bidding behavior

S2. Trial by trial bidding behavior per participant. Each separate plot represents a single participant. The y-axis represents the amount participants bid on a scale from €0-€3. The x-axis represents the trial number in chronological order. Each bid is indicated by a dot, mindset is indicated by color of the dot, red dots in the scarcity mindset and blue dots for the abundance mindset. Individual bidding behavior demonstrates strategies of participants. For example, participant 138 used the scale in a binary way, making either a bid around half the scale €1.50, or a very low bid.

