Creation of Stimulus Sets for Studying Lateral Attitude Change

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Abstract

The Lateral Attitude Change Model (LAC) model (Glaser et al., 2015) features two phenomena of attitude change: *generalization* and *displacement*. Generalization occurs when attitude change toward a focal attitude object X (on both implicit and explicit levels) generalizes toward a lateral attitude object Y. Displacement occurs when there is no explicit attitude change toward X, but explicit and implicit attitudes toward Y do change nonetheless. The LAC model specifies conditions leading to each phenomenon and the cognitive processes involved. In a research proposal, Glaser and Bohner (2015) described several experiments designed to test the LAC model. In three studies reported here (total $N = 281$), 145 attitude objects were pilot-tested for use in those experiments. The focus lay on the similarity between objects, which is the main proposed moderator of LAC. Study 1 featured four sets of dinosaur drawings, which were tested for neutrality and similarity. Study 2 featured eight sets of attitude objects depicted in photographs (e.g., household articles and sports equipment), which were tested for valence and similarity. Studies 3(a) and 3(b) featured socio-political issues, which were tested for valence, importance, similarity, and participants' awareness of similarity. All stimuli and the results of pilot testing are presented.

Keywords: attitude, attitude change, displacement, generalization, lateral attitude change, persuasion, socio-political issues, stimulus sets

Creation of Stimulus Sets for Studying Lateral Attitude Change

Postulates 1 and 2 of the lateral attitude change (LAC) model describe the automatic activation of newly acquired information about a focal attitude object X and its automatic spreading toward a lateral object Y (Glaser et al., 2015). The aim of the present three studies was to create several sets of stimuli to be used in the study of LAC in future experiments. In order to study LAC experimentally, we needed stimuli (e.g., images of animals or products) with a relatively neutral valence to facilitate the observation of both positive and negative experimental effects. Furthermore, we needed stimuli that have a known, pre-existing association and may thus serve as focal and lateral attitude objects. This association may be expressed in terms of similarity. To find several lateral stimuli with different degrees of similarity to one focal stimulus, we decided to identify the focal object beforehand. Then potential lateral objects could be rank-ordered by participants according to their similarity to the focal object. The stimuli were designed to feature different degrees of similarity among one another.

In our research proposal (Glaser & Bohner, 2015) we had planned to test not only the similarity of stimuli, but also participants' awareness concerning such similarity, adapting procedures from Alvaro and Crano (1997, p. 952), who had asked their participants how likely it is that they would change their attitude concerning attitude object Y after having changed their attitude toward attitude object X before. On second thought, however, we realized that this question was only appropriate when used with socio-political issues as attitude objects in a persuasion paradigm, as did Alvaro and Crano. Other attitude objects, such as consumer products or other simple stimuli, as would be used in evaluative conditioning paradigms, however, would not lend themselves to this approach.

Therefore, we decided to use the approach described by Alvaro and Crano (1997) only in Study 3 in order to generate socio-political issues for use in persuasive messages.

Study 1

Originally, it was planned to use *Pokémon* as a first set of stimuli, see Study 1 in our research proposal (Glaser & Bohner, 2015). However, because of the increasing popularity of the game *Pokémon GO* at the time our project started (first half of 2016), we decided to use simple drawings of dinosaurs instead of Pokémon. Like Pokémon, dinosaurs may be assigned to different categories (e.g., pterosaurs or theropods; see Figures 1-4) and may vary gradually in similarity within categories.

Method

Participants and Design

Forty participants were recruited on Bielefeld University campus or via social networks (16 male, 23 female, 1 did not indicate their gender; M_{age} = 26.15, SD_{age} = 5.36; 97.5 % students). All participants answered the same online questionnaire run by Qualtrics software (https://www.qualtrics.com). Participants received EUR 2.50 for their participation.

Procedure

Participants read the welcoming page in which the procedure of the survey was explained, and gave their informed consent. The 15-minute survey was divided into three parts. First, participants rated the valence of 42 different dinosaurs that were pre-sorted into four sets (see Figures 1-4), answering the question “How do you like the dinosaur?” on a response scale from 1, *not at all*, to 9, *very much* (in German: “Wie gefällt Ihnen der Dinosaurier?”, 1, *gar nicht*, to 9, *sehr gut*). Then, participants sorted the dinosaurs of each of the four sets according to their similarity to one specific dinosaur within the same set that we had previously selected as a focal object. More precisely, participants viewed one *focal* dinosaur and nine to ten *lateral* dinosaurs of the same family (e.g., pterosaurs) beneath. Thereupon, participants dragged and dropped each lateral dinosaur into one of nine to ten empty numbered boxes to indicate how similar it is to the focal one. The closest box was reserved for the most similar dinosaur, the furthest box for the least similar one etc. Third,

participants answered demographic questions (age, gender, study subject or occupation). Finally, participants were thanked and remunerated.

Results and Discussion

In order to test the attitude objects for neutrality, one-sample *t*-tests were conducted against the mean of each set for each of the valence ratings. Because of a general positivity trend in ratings, the sample's mean rather than the scale's midpoint was used as a neutral anchor (see Tables 1-4). The similarity rankings were analyzed for each set using Friedman tests to identify the mean rank of each object and analyze the ranking for significant differences between objects, $\chi^2_{Set\text{-}A}(8) = 96.609$, $p < .001$, $\chi^2_{Set\text{-}B}(9) = 237.232$, $p < .001$, $\chi^2_{Set\text{-}C}(9) = 89.864$, $p < .001$, $X^2_{Set\text{-}D}(8) = 151.029$, $p < .001$ (see Tables 5-8). Also, Wilcoxon Signed Ranks-tests, which compare the mean ranks of two objects, were conducted in order to identify which ranks differ significantly (see Tables 5-8).

Selection of Attitude Objects for Following Experiments

In order to choose the most suitable of the predetermined focal attitude objects as well as matching lateral objects, we specified two criteria: (a) neutrality, meaning that the dinosaur's mean evaluation must not deviate significantly from the sample's mean of the particular set; (b) sample homogeneity, meaning that the variance must not be above 4.0. Tables 5-8 present the mean rank for each object by set; superscripts indicate which criteria are fulfilled.

Suitable stimuli for future experiments could be found. For Experiment 4 of the LAC proposal (Glaser & Bohner, 2015), for instance, we used stimuli from Set A. The focal attitude object in Set A ($M = 4.00$, $SE = 1.95$, $s^2 = 3.80$) fulfilled our criteria, $t(39) = -.984$, $p = .331$. Two lateral objects that are of moderate similarity and fulfilled our two criteria were chosen for use in Experiment 4 (reported in Bohner et al., 2020, Study 1): A9, Friedman's mean rank = 5.49, and A7, Friedman's mean rank = 5.64 (see Table 5). Wilcoxon's signed ranks tests showed that both objects are significantly different from the first ranked object,

$p < .001$. There was no significant difference between the ranks of A7 and A9, $p = .431$. In Tables 9 – 13, descriptive data and correlations can be viewed. As a result of this pretest, several stimuli could be found with different degrees of similarity and valence. Future studies can use these sets of stimuli to find the ones that best meet the needs of their specific designs.

Study 2

Stimuli created in Study 2 (see Glaser & Bohner, 2015, Experiment 2) were from different families of products. Again, valence and similarity were tested as explained above for Study 1.

Method

Participants, Design, and Procedure

Forty-one participants were recruited on the Bielefeld University campus or via social networks (14 male, 25 female, 2 did not indicate gender; $M_{age} = 24.74$, $SD_{age} = 5.11$). Thirty-eight participants were students of different subjects, one participant was working and two did not indicate their occupation status. All participants answered the same online questionnaire run by Qualtrics software (https://www.qualtrics.com). Participants received EUR 4 for their participation. The procedure was the same as described for Study 1. Participants gave their informed consent on a welcoming page that also explained the procedure. The 30-minute survey was divided into the same three parts as in Experiment 1: valence, similarity, and demographics. The stimuli were 78 different products, divided into eight sets, each containing one predetermined focal object (see Figures 5-12).

Results and Discussion

In order to test objects for valence neutrality, one-sample *t*-tests were conducted against the mean of each set. Again, to counteract a positivity trend in rating, the sample's mean rather than the scale's midpoint was used as a neutral anchor (see Tables 14-21). The similarity rankings were analyzed for each set using Friedman tests to identify the mean rank of each object and analyze the ranking for significant difference between objects, χ^2_{Set-}

$_{household}(9) = 224.269$, $p < .001$, $\chi^2_{Set\text{-}hygiene}(7) = 139.050$, $p < .001$, $\chi^2_{Set\text{-}kitchen}(7) = 178.683$, $p < .001$, $\chi^2_{Set\text{-}vegetable}(8) = 136.173$, $p < .001$, $\chi^2_{Set\text{-}cooking}(7) = 70.376$, $p < .001$, $\chi^2_{Set\text{-}sport}(9) = 244.415$, $p < .001$, $\chi^2_{Set\text{-}dairy}(8) = 136.814$, $p < .001$ (see Tables 22-29). Also, Wilcoxon signed ranks tests were conducted in order to identify which ranks differed significantly from each other (see Tables 22-29). Descriptive data are shown in Table 30, correlations in Tables 31-38.

Determination of Suitable Attitude Objects for Future Experiments

The same criteria as in Experiment 1 were used to find suitable lateral objects for the predetermined focal objects: (a) neutrality, meaning the product's mean evaluation must not deviate significantly from the sample's mean of the particular set; (b) sample homogeneity, meaning the variance has to be below 4.0.

Several suitable stimuli for future studies could be found: Three focal objects fulfilled our criteria: cake tin (Set *Cooking/Baking supplies*), $t(39) = 1.38$, $p = .176$, $s^2 = 3.27$, cucumber (Set *Vegetables*), $t(39) = 1.79$, $p = .082$, $s^2 = 3.65$, and shower gel (Set *Hygiene items*), $t(39) = 0.05$, $p = .963$, $s^2 = 3.59$ (see Tables 23, 25, & 27). For the Set *Cooking/Baking supplies*, four potential lateral objects that fulfilled our criteria of neutrality and homogeneity could be found in different degrees of similarity: baking dish, Friedman's mean rank = 2.54, pot, Friedman's mean rank = 4.49, wok, Friedman's mean rank = 4.69, and sieve, Friedman's mean rank = 6.36. All ranks are significantly different from the first rank: $p < .001$, see Table 23). To test the difference between the potential lateral objects, again a Wilcoxon signed ranks test was conducted and showed a significant difference between baking dish and pot, $p < .001$, no significant difference between pot and wok, $p = .771$, and a significant difference between wok and sieve, $p = .001$. In the Set *Vegetables,* two suitable lateral objects could be found: carrots, Friedman's mean rank = 3.63, and salad, Friedman's mean rank = 6.10. Wilcoxon rank tests showed that both are significantly different from the first rank as well as from each other's ranks, $p < .001$ (see Table 25). In the last Set *Hygiene items*, one suitable

lateral object with low similarity could be found: tooth paste, Friedman's mean rank = 5.8, significant difference to the first rank: $p < .001$ (see Table 27).

Several suitable focal and lateral objects could be found in different degrees of similarity. In Studies 1 and 2, we thus provided visual stimuli that could be used in future studies examining LAC (and other attitude change phenomena). Although simple drawings and products can be viewed as suitable stimuli in basic research, they lend themselves mainly to specific attitude change methods such as evaluative conditioning or mere exposure. In addition, we also wanted to create a stimulus set more suitable to persuasion paradigms and more amenable to applied research in Studies 3(a) and 3(b).

Study 3

Study 3 was designed to find different socio-political issues that could be used in later experiments addressing displacement effects, see Experiment 3 in our research proposal (Glaser & Bohner, 2015). Alvaro and Crano (1997) investigated indirect attitude change caused by minorities. These authors pretested the similarity between focal and lateral attitude objects by applying multidimensional scaling (MDS) methods to semantic differential ratings. Based on these aggregated semantic differential ratings, they arranged their stimuli (socio-political issues such as attitudes toward gun control or gay men in the military) in *N*-dimensional space while maximizing the goodness of fit. Finally, they defined the similarity between attitude objects as their Euclidean distance in multidimensional space. To investigate whether participants were aware of the stimuli's similarity, they asked them to indicate the likelihood that personal attitude change in one issue would lead to attitude change in the other. Interestingly, they found a dissociation between the MDS-based similarity measure and the participants' subjective similarity judgments: Only the former predicted displacement between objects as a consequence of persuasion by a minority, whereas the latter did not. Hence, MDS may uncover a level of similarity that participants may not be aware of.

Following this research, our Studies 3(a) and 3(b) were designed to find a set of socio-political issues representing different grades of similarity as well as different grades of participants' similarity awareness. Also, the socio-political issues were intended to be rather neutral in their valence, so that creating persuasion effects in both directions would be possible.

Study 3(a)

In Study 3(a), a set of different socio-political issues in the form of statements was pretested for neutrality and similarity.

Method

Participants and Design. Participants were recruited on Bielefeld University campus or via social networks. One hundred and forty participants completed the online questionnaire (92 female, 47 male, 1 diverse; M_{age} = 24.28, SD_{age} = 8.05; 96.4 % students), which was run by Qualtrics software (https://www.qualtrics.com). Participants received a 5-EUR-BestChoice coupon for their participation.

Procedure. Participants read the welcoming page in which the procedure of the survey was explained, and gave their informed consent. The 20-minute survey was divided into two parts. First, participants read and evaluated 25 statements (and one example statement) that indicated a certain position (e.g., "Every nation should strive for a multicultural society", in German: "Jede Nation sollte eine multikulturelle Gesellschaft anstreben"). Participants answered the questions "How much do you agree to this statement?" and "How important is this topic to you?", each on a response scale from 1, *not at all* to 9, *absolutely* (in German: "Wie sehr stimmen Sie dieser Aussage zu?" and "Wie wichtig ist Ihnen dieses Thema?", 1, *Gar nicht*, to 9, *Absolut*). Also, participants rated the socio-political issues on four semantic differentials: "bad-good", "weak-strong", "quiet-loud", "liberal-conservative" (in German: "schlecht - gut", "schwach - stark", "leise - laut", "liberal -konservativ"), again on a nine-point response scale. All statements used are shown in Table 39; correlations and descriptives

are shown in Tables 40 to 42. Then, participants answered demographic questions (age, gender, study subject or occupation), were thanked and dismissed.

Results and Discussion

Neutrality. In order to test the socio-political issues' neutrality, again, one-sample *t*-tests were conducted against the scale's mean (M_{scale} = 5). This way, eleven issues of neutral valence and seven of moderate importance could be extracted (see Tables 43 and 44).

Similarity. Euclidean distances among the issues were calculated based on the four semantic differential ratings. The Goodness of fit value for the two-dimensional solution was between excellent and perfect, Normalized Raw Stress = .013; Stress-I = .113; Stress-II = .245 (Kruskal, 1964); therefore, a two-dimensional graphical depiction (see Figure 13) was used to extract similarities among the attitude objects from the two-dimensional space.

In Study 3(a), we successfully extracted neutral attitude objects in terms of socio-political issues in different degrees of similarity toward each other. However, the question remained whether participants would be aware of the similarity between these issues. This was tested in Study 3(b).

Study 3(b)

The current study is based on Alvaro and Crano (1997). These authors had asked their participants: "If you changed your mind regarding your position on […], what is the probability that you would also change your position on […]?" We adapted this wording for our purposes by changing it into the third person, as we had suspected that a question in the first person might induce a bias toward attitudinal consistency (Cialdini et al., 1995). The question asked thus was about the likelihood that another person would change their attitude toward a given topic after having changed their attitude toward a related topic.

Method

Participants and Design. Participants were recruited on Bielefeld University campus or via social networks. Forty-nine participants completed the online questionnaire (33 female,

16 male; M_{age} = 24.90, SD_{age} = 3.71; 95.06 % students), which was run by Qualtrics software (https://www.qualtrics.com).

Procedure. Participants read the welcoming page in which the procedure of the survey was explained and gave their informed consent. The 5-minute survey encompassed 90 paired comparisons between 10 different socio-political issues (45 in one direction of wording, 45 in the other wording direction, e.g., *fasting* compared to *homoeopathy* and *homoeopathy* compared to *fasting*). The 10 statements were chosen from the results of Study 3(a) according to their neutrality. Participants were randomly allocated to one of two groups, meaning that each participant only worked on five issues to be compared to all others. Group 1 consisted of 22 participants that answered paired comparison items of five issues (fasting, homoeopathy, team-work, online supermarkets, and prolonged primary school) that were compared with all other issues. Group 2 consisted of 27 participants that worked on paired comparison items of five other issues (inclusion, basic income, speed limit, women quota, and religious symbols in public buildings) that were again compared with all other issues. In each task, participants read the question: "Imagine a person changes their attitude concerning […]. How high is the probability in percent that this person will change their attitude concerning the following statements?" (in German: Stellen Sie sich vor, eine Person ändert Ihre Meinung zu […]. Wie hoch ist die Wahrscheinlichkeit in Prozent, dass diese Person auch ihre Meinung zu folgenden Aussagen ändert?). Responses were made on a scale from 0 to 100 % in intervals of tens for the nine other statements (for an example, see Figure 14). Finally, they reported their age, gender, and study subject or occupation.

Results and Discussion

The distribution of the variables was checked visually via histograms and proved to be mostly positively skewed. Therefore, we used the median to aggregate the two different wording directions of the comparisons. To aggregate the wording directions, medians of all variables were calculated and then the median of the two medians was calculated (e.g.,

$Mdn_{fasthomp}$ = 54.00 %, $Mdn_{hompfast}$ = 50.50 %, $M_{Mfasthomp}$ = 52.25 %,). Figure 15 shows all aggregated medians.

Our analyses yielded nine rather neutral stimuli with different degrees of similarity toward each other and different degrees of participants' similarity awareness. Those socio-political issues can be used in future studies to investigate LAC. Within the LAC project (Glaser & Bohner, 2015), we used stimuli created in the present set of studies in different experiments, see Experiment 4 (Dinosaurs), Experiment 7 (products), Experiment 9, 10, and 14 (socio-political issues). We are also making these stimuli available to other researchers.

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Table 1

Exp. 1. One-Sample t-Test: Stimulus-Set A (Pterosaurs) against Sample Mean

			Sig.	Mean	95 % Confidence Interval of the Difference	
Stimulus	*t*	df	(2-tailed)	Difference	Lower	Upper
A1[a] (Focal)	-.984	39	.331	-.303	-.93	.32
A2	2.716	39	.010	1.022	.26	1.78
A3	4.054	39	<.001	1.297	.65	1.94
A4	2.868	39	.007	.997	.29	1.70
A5	-5.410	38	<.001	-1.303	-1.79	-.82
A6	-2.585	38	.014	-.816	-1.46	-.18
A7[a]	-.806	38	.425	-.226	-.79	.34
A8[a]	-.928	39	.359	-.328	-1.04	.39
A9[a]	.824	39	.415	.247	-.36	.85
A10	-2.761	39	.009	-.803	-1.39	-.21

Note. Test Value = 4.303214. [a] = fulfillment of criterion 1: neutrality (no significant deviation from sample mean), acceptance of null hypothesis with Bayes factor (http://pcl.missouri.edu/bf-one-sample), (Rouder et al., 2009).

Table 2

Exp. 1. One-Sample t-Test: Stimulus-Set B (Stegosaurs and Ceratops) against Sample Mean

			Sig.	Mean	95 % Confidence Interval of the Difference	
Stimulus	*t*	df	(2-tailed)	Difference	Lower	Upper
B1[a] (Focal)	-.594	39	.556	-.186	-.82	.45
B2[a]	1.682	39	.101	.514	-.10	1.13
B3[a]	-.410	38	.684	-.121	-.72	.48
B4	-2.793	38	.008	-.788	-1.36	-.22
B5[a]	1.017	39	.315	.339	-.33	1.01
B6[a]	1.341	39	.188	.464	-.24	1.16
B7[a]	-.035	39	.972	-.011	-.68	.65
B8[a]	-.191	39	.849	-.061	-.71	.59
B9[a]	-1.181	39	.245	-.386	-1.05	.28
B10[a]	.694	39	.492	.214	-.41	.84
B11[a]	-.038	39	.970	-.011	-.62	.59

Note. Test Value = 5.736458. [a] = fulfillment of criterion 1: neutrality (no significant deviation from sample mean), acceptance of null hypothesis with Bayes factor (http://pcl.missouri.edu/bf-one-sample), (Rouder et al., 2009).

Table 3

Exp. 1. One-Sample t-Test: Stimulus-Set C (Long-Necks) against Sample Mean

			Sig.	Mean	95 % Confidence Interval of the Difference	
Stimulus	*t*	df	(2-tailed)	Difference	Lower	Upper
C1 (Focal)	2.965	39	.005	.826	.26	1.39
C2+	-.606	39	.548	-.174	-.76	.41
C3+	1.489	38	.145	.466	-.17	1.1
C4+	.682	39	.499	.201	-.39	.8
C5+	.016	38	.988	.005	-.59	.6
C6+	-.211	39	.834	-.074	-.79	.64
C7+	.002	39	.998	.001	-.69	.69
C8	-3.589	39	.001	-1.174	-1.84	-.51
C9+	.321	39	.75	.101	-.53	.74
C10+	1.392	39	.172	.451	-.2	1.11
C11	-1.991	39	.054	-.574	-1.16	.01

Note. Test Value = 6.149242. [a] = fulfillment of criterion 1: neutrality (no significant deviation from sample mean), acceptance of null hypothesis with Bayes factor (http://pcl.missouri.edu/bf-one-sample), (Rouder et al., 2009).

Table 4

Exp. 1. One-Sample t-Test: Stimulus-Set D (Theropods) against Sample Mean

			Sig.	Mean	95 % Confidence Interval of the Difference	
Stimulus	*t*	df	(2-tailed)	Difference	Lower	Upper
D1[a] (Focal)	.685	39	.497	.219	-.43	.86
D2	-3.764	39	.001	-.881	-1.35	-.41
D3[a]	-1.744	39	.089	-.506	-1.09	.08
D4[a]	.567	39	.574	.169	-.43	.77
D5[a]	.062	38	.951	.023	-.71	.76
D6	2.730	39	.009	.844	.22	1.47
D7[a]	-1.138	39	.262	-.481	-1.34	.37
D8[a]	-.644	38	.524	-.234	-.97	.50
D9[a]	.060	39	.952	.019	-.61	.65
D10	3.108	39	.004	.844	.29	1.39

Note. Test Value = 5.131250. [a] = fulfillment of criterion 1: neutrality (no significant deviation from sample mean), acceptance of null hypothesis with Bayes factor (http://pcl.missouri.edu/bf-one-sample), (Rouder et al., 2009).

Table 5

Exp.1. Mean Ranks Set A

	Friedman's mean rank	*Wilcoxon's Signed Ranks Test* to the next rank *p*-value	*Wilcoxon's Signed Ranks Test* to the first rank *p*-value
A8[a]	2.74	.756	
A3	2.92	.159	.765
A6[b]	3.46	<.001	.141
A9[ab]	5.49	.431	<.001
A7[ab]	5.64	.900	<.001
A2	5.77	.501	<.001
A5[b]	6.05	.916	<.001
A4	6.15	.396	<.001
A10[b]	6.77		<.001

Note. [a] = criterion 1 fulfilled: valence is *not* significantly different from sample's mean ($p < .05$); [b] = criterion 2 fulfilled: variance < 4, Focal object: A1[ab].

Table 6

Exp.1. Mean Ranks Set B

	Friedman's mean rank	*Wilcoxon's Signed Ranks Test* to the next rank *p*-value	*Wilcoxon's Signed Ranks Test* to the first rank *p*-value
B5[a]	2.49	.324	
B6[a]	2.72	.195	.324
B3[ab]	3.33	.446	.122
B4[b]	3.38	.030	.031
B2[ab]	4.23	<.001	<.001
B11[ab]	6.97	.883	<.001
B10[ab]	7.03	.224	<.001
B9[a]	7.77	.041	<.001
B7[a]	8.38	.618	<.001
B8[a]	8.69		<.001

Note. [a] = criterion 1 fulfilled: valence is *not* significantly different from sample's mean ($p < .05$); [b] = criterion 2 fulfilled: variance < 4, Focal object: B1[ab].

Table 7

Exp.1. Mean Ranks Set C

	Friedman's mean rank	*Wilcoxon's Signed Ranks Test* to the next rank *p*-value	*Wilcoxon's Signed Ranks Test* to the first rank *p*-value
C4[ab]	3.90	.867	
C3[ab]	3.97	.899	.867
C10[a]	4.05	.692	.955
C9[a(b)]	4.10	.081	.883
C7[a]	5.15	.319	.100
C5[ab]	5.77	.510	.010
C6[a]	6.18	.552	.015
C11[b]	6.51	.537	<.001
C2[ab]	6.97	.001	.001
C8	8.38		<.001

Note. [a] = criterion 1 fulfilled: valence is *not* significantly different from sample's mean ($p < .05$); [b] = criterion 2 fulfilled: variance < 4, Focal object: C1.

Table 8

Exp.1. Mean Ranks Set D

	Friedman's mean rank	*Wilcoxon's Signed Ranks Test* to the next rank *p*-value	*Wilcoxon's Signed Ranks Test* to the first rank *p*-value
D9[ab]	2.82	.370	
D10[b]	3.21	.772	.370
D4[ab]	3.36	.622	.223
D2[b]	3.56	.043	.138
D3[ab]	4.90	.077	.001
D7[a]	5.74	.415	<.001
D5[a]	6.15	.078	<.001
D6[b]	7.08	.001	<.001
D8[a]	8.18		<.001

Note. [a] = criterion 1 fulfilled: valence is *not* significantly different from sample's mean ($p < .05$); [b] = criterion 2 fulfilled: variance < 4, Focal object: D1[a].

Table 9

Exp.1. Descriptive Data

stimulus	*N*	*M*	s^2	M_{min}	M_{max}
A1[ab]	40	4.00	3.795	1	9
A2	40	5.33	5.661	1	9
A3	40	5.60	4.092	1	9
A4	40	5.30	4.831	1	9
A5[b]	39	3.00	2.263	1	7
A6[b]	39	3.49	3.888	1	8
A7[ab]	39	4.08	3.073	1	9
A8[a]	40	4.55	4.999	1	9
A9[ab]	40	3.98	3.587	1	9
A10[b]	40	3.50	3.385	1	8
B1[a(b)]	40	5.55	3.946	1	9
B2[ab]	40	6.25	3.731	2	9
B3[ab]	39	5.62	3.401	2	9
B4[b]	39	4.95	3.103	1	8
B5[a]	40	6.08	4.430	2	9
B6[a]	40	6.20	4.779	1	9
B7[a]	40	5.73	4.307	2	9
B8[a]	40	5.68	4.122	1	9
B9[a]	40	5.35	4.285	2	8
B10[ab]	40	5.95	3.792	2	9
B11[ab]	40	5.73	3.589	2	9
C1[b]	40	6.98	3.102	1	9
C2[ab]	40	5.98	3.307	1	9
C3[ab]	39	6.62	3.822	1	9
C4[ab]	40	6.35	3.464	2	9
C5[ab]	39	6.15	3.397	1	9
C6[a]	40	6.08	4.943	1	9
C7[a]	40	6.15	4.644	1	9
C8	40	4.98	4.281	1	9
C9[a(b)]	40	6.25	3.936	1	9
C10[a]	40	6.60	4.195	1	9
C11[b]	40	5.58	3.328	1	9
D1[a]	40	5.35	4.079	2	9
D2[b]	40	4.25	2.192	1	8
D3[ab]	40	4.63	3.369	1	9
D4[ab]	40	5.30	3.549	2	9
D5[a]	39	5.15	5.134	1	9
D6[b]	40	5.98	3.820	2	9
D7[a]	40	4.65	7.156	1	9
D8[a]	39	4.90	5.147	1	9
D9[ab]	40	5.15	3.874	2	9
D10[b]	40	5.98	2.948	2	9

Note. [a] = criterion 1 fulfilled: valence is *not* significantly different from sample's mean ($p < .05$); [b] = criterion 2 fulfilled: variance < 4, Focal objects are: A1, B1, C1, and D1.

Table 10

Exp.1. Correlation Table of Set A

	A1	A2	A3	A4	A5	A6	A7	A8	A9
A1	1								
A2	.050	1							
A3	.540**	.081	1						
A4	.102	.471**	-.168	1					
A5	.187	.232	.200	.433**	1				
A6	.241	.387*	.290	.340*	.772**	1			
A7	-.007	-.056	.339*	-.080	.279	.339*	1		
A8	-.049	.506**	.220	.181	.261	.496**	.380*	1	
A9	.536**	-.071	.287	.153	.539**	.474**	.302	-.015	1
A10	.451**	.296	.255	.380*	.539**	.545**	.250	.199	.284

Note. * $p < .05$, two-tailed; ** $p < .01$, two-tailed.

Table 11

Exp.1. Correlation Table of Set B

	B1	B2	B3	B4	B5	B6	B7	B8	B9	B10
B1	1									
B2	.665**	1								
B3	.502**	.384*	1							
B4	.657**	.652**	.545**	1						
B5	.689**	.752**	.364*	.690**	1					
B6	.340*	.437**	.411**	.633**	.493**	1				
B7	.429**	.478**	.382*	.652**	.533**	.600**	1			
B8	.630**	.531**	.283	.448**	.564**	.362*	.441**	1		
B9	.282	.183	-.022	.271	.306	.398*	.399*	.467**	1	
B10	.518**	.412**	.135	.436**	.551**	.364*	.250	.294	.386*	1
B11	.573**	.573**	.121	.570**	.623**	.509**	.469**	.669**	.293	.497**

Note. * $p < .05$, two-tailed; ** $p < .01$, two-tailed.

Table 12

Exp.1. Correlation Table of Set C

	C1	C2	C3	C4	C5	C6	C7	C8	C9	C10
C1	1									
C2	.408**	1								
C3	.755**	.535**	1							
C4	.660**	.283	.631**	1						
C5	.202	.249	.075	.348*	1					
C6	.459**	.432**	.558**	.464**	.204	1				
C7	.521**	.315*	.463**	.447**	.171	.763**	1			
C8	.352*	.409**	.503**	.275	.192	.491**	.570**	1		
C9	.802**	.634**	.830**	.663**	.259	.693**	.621**	.470**	1	
C10	.623**	.589**	.787**	.609**	.188	.671**	.630**	.657**	.808**	1
C11	.252	.368*	.397*	.302	-.095	.451**	.362*	.153	.399*	.475**

Note. * $p < .05$, two-tailed; ** $p < .01$, two-tailed.

Table 13

Exp.1. Correlation Table of Set D

	D1	D2	D3	D4	D5	D6	D7	D8	D9
D1	1								
D2	.304	1							
D3	.105	.460**	1						
D4	.437**	.138	.471**	1					
D5	.092	.174	.440**	.403*	1				
D6	.243	.109	.226	.218	.592**	1			
D7	.431**	.508**	.354*	.261	.086	.038	1		
D8	.427**	.433**	.539**	.252	.213	.179	.513**	1	
D9	.464**	.488**	.421**	.181	.100	.174	.755**	.650**	1
D10	.727**	.204	.306	.510**	.289	.474**	.456**	.372*	.509**

Note. * $p < .05$, two-tailed; ** $p < .01$, two-tailed.

Table 14

Exp. 2. One-Sample t-Test: Electronics/Household Items against Sample Mean

					95 % Confidence Interval of the Difference	
Stimulus	*t*	df	Sig. (2-tailed)	Mean Difference	Lower	Upper
Refridgerator[a]	-0.151	39	.881	-.052	-.75	.65
Oven	2.786	39	.008	.848	.23	1.46
Iron	-3.415	39	.002	-1.127	-1.79	-.46
Hair dryer[a]	-.471	39	.640	-.127	-.67	.42
Dish washer	3.429	39	.001	1.098	.45	1.75
Hand vacuum cleaner	-2.598	39	.013	-.952	-1.69	-.21
Freezer	-2.136	39	.039	-.752	-1.46	-.04
Microwave[a]	.757	39	.454	.273	-.46	1.00
Vacuum cleaner[a]	1.181	39	.245	.298	-.21	.81
Ventilator[a]	-1.284	39	.207	-.452	-1.16	.26
Washing machine	3.383	39	.002	.948	.38	1.51

Note. Test Value = 5,8523. [a] = fulfillment of criterion 1: neutrality (no significant deviation from sample mean), acceptance of null hypothesis with Bayes factor (http://pcl.missouri.edu/bf-one-sample), (Rouder et al., 2009)).

Table 15

Exp. 2. One-Sample t-Test: Cooking/baking Items against Sample Mean

					95 % Confidence Interval of the Difference	
Stimulus	*t*	df	Sig. (2-tailed)	Mean Difference	Lower	Upper
Baking dish[a]	0.611	39	.545	0.169	-0.39	0.73
Baking tray[a]	-0.871	39	.389	-0.281	-0.93	0.37
Cake tin[a]	1.379	39	.176	0.394	-0.18	0.97
Grate	-3.982	39	<.001	-1.231	-1.86	-0.61
Measuring cup[a]	-1.571	39	.124	-0.531	-1.21	0.15
Pan	2.716	39	.01	0.669	0.17	1.17
Pot[a]	1.706	39	.096	0.444	-0.08	0.97
Sieve[a]	-0.204	39	.839	-0.056	-0.61	0.50
Wok[a]	1.514	39	.138	0.419	-0.14	0.98

Note. Test Value = 6.0056. [a] = fulfillment of criterion 1: neutrality (no significant deviation from sample mean), acceptance of null hypothesis with Bayes factor (http://pcl.missouri.edu/bf-one-sample), (Rouder et al., 2009).

Table 16

Exp. 2. One-Sample t-Test: Kitchen Ware against Sample Mean

					95 % Confidence Interval of the Difference	
Stimulus	*t*	df	Sig. (2-tailed)	Mean Difference	Lower	Upper
Blender	2.137	39	0.039	0.656	0.04	1.28
Coffee maker[a]	-1.618	39	.114	-0.644	-1.45	0.16
Electric kettle	2.001	39	.052	0.531	-0.01	1.07
Hand blender	3.702	39	.001	0.881	0.40	1.36
Hand mixer[a]	0.817	39	.419	0.231	-0.34	0.80
Milk frother	-3.684	39	.001	-1.294	-2.00	-0.58
Mini oven[a]	-0.597	39	.554	-0.194	-0.85	0.46
Toaster[a]	-0.527	39	.601	-0.169	-0.82	0.48

Note. Test Value = 5.9938. [a] = fulfillment of criterion 1: neutrality (no significant deviation from sample mean), acceptance of null hypothesis with Bayes factor (http://pcl.missouri.edu/bf-one-sample), (Rouder et al., 2009).

Table 17

Exp. 2. One-Sample t-Test: Vegetables against Sample Mean

					95 % Confidence Interval of the Difference	
Stimulus	*t*	df	Sig. (2-tailed)	Mean Difference	Lower	Upper
Aubergine[a]	-0.809	39	.423	-0.285	-1	0.43
Bell pepper[a]	1.811	39	.078	0.615	-0.07	1.3
Carrots[a]	0.717	39	.478	0.215	-0.39	0.82
Cauliflower[a]	-0.995	39	.326	-0.36	-1.09	0.37
Cucumber[a]	1.787	39	.082	0.54	-0.07	1.15
Leek[a]	-1.435	39	.159	-0.46	-1.11	0.19
Potatoes	0.419	39	.678	0.14	-0.54	0.82
Radishes	-2.171	39	.036	-0.735	-1.42	-0.05
Salad[a]	1.804	39	.079	0.49	-0.06	1.04
Zucchini[a]	-.432	39	.668	-.160	-.91	.59

Note. Test Value = 6.6600. [a] = fulfillment of criterion 1: neutrality (no significant deviation from sample mean), acceptance of null hypothesis with Bayes factor (http://pcl.missouri.edu/bf-one-sample), (Rouder et al., 2009).

Table 18

Exp. 2. One-Sample t-Test: Dairy Products against Sample Mean

					95 % Confidence Interval of the Difference	
Stimulus	*t*	df	Sig. (2-tailed)	Mean Difference	Lower	Upper
Butter[a]	-0.183	39	.856	-0.07	-0.84	0.7
Condensed milk	-2.49	39	.017	-0.895	-1.62	-0.17
Cream[a]	-1.058	39	.297	-0.32	-0.93	0.29
Cream cheese	2.118	39	.041	0.73	0.03	1.43
Crème fraîche[a]	-0.876	39	.387	-0.295	-0.98	0.39
Milk[a]	1.691	39	.099	0.705	-0.14	1.55
Mozzarella	2.307	39	.026	0.83	0.1	1.56
Quark[a]	-0.915	39	.366	-0.32	-1.03	0.39
Ricotta	-2.821	39	.007	-0.82	-1.41	-0.23
Yoghurt[a]	1.285	39	.206	0.455	-0.26	1.17

Note. Test Value = 4.6450. [a] = fulfillment of criterion 1: neutrality (no significant deviation from sample mean), acceptance of null hypothesis with Bayes factor (http://pcl.missouri.edu/bf-one-sample), (Rouder et al., 2009).

Table 19

Exp. 2. One-Sample t-Test: Hygiene Items against Sample Mean

					95 % Confidence Interval of the Difference	
Stimulus	*t*	df	Sig. (2-tailed)	Mean Difference	Lower	Upper
Bathing foam[a]	-0.466	39	.644	-0.186	-0.99	0.62
Deodorant[a]	-0.233	39	.817	-0.086	-0.83	0.66
Facial lotion[a]	-0.711	39	.481	-0.236	-0.91	0.44
Facial tonic[a]	0.221	39	.826	0.089	-0.72	0.9
Lip balm[a]	0.173	39	.863	0.064	-0.68	0.81
Liquid Soap[a]	0.372	39	.712	0.139	-0.62	0.89
Shower gel[a]	0.046	39	.963	0.014	-0.59	0.62
Toilet paper[a]	-0.1	39	.921	-0.036	-0.76	0.69
Tooth paste[a]	0.799	39	.429	0.239	-0.37	0.84

Note. Test Value = 4.5111. [a] = fulfillment of criterion 1: neutrality (no significant deviation from sample mean), acceptance of null hypothesis with Bayes factor (http://pcl.missouri.edu/bf-one-sample), (Rouder et al., 2009).

Table 20

Exp. 2. One-Sample t-Test: Outdoor Equipment against Sample Mean

					95 % Confidence Interval of the Difference	
Stimulus	*t*	df	Sig. (2-tailed)	Mean Difference	Lower	Upper
Binoculars[a]	-0.408	39	.686	-0.136	-0.81	0.54
Compass[a]	-0.637	39	.528	-0.237	-0.99	0.51
GPS-device[a]	-0.327	39	.746	-0.112	-0.8	0.58
Jacket[a]	1.543	39	.131	0.489	-0.15	1.13
Penknife[a]	0.664	39	.511	0.263	-0.54	1.07
Rucksack	3.132	39	.003	1.088	0.39	1.79
Shoes[a]	0.942	39	.352	0.388	-0.45	1.22
Torch[a]	-0.039	39	.969	-0.011	-0.61	0.58
Waist pack	-3.87	39	<.001	-1.362	-2.07	-0.65
Walking sticks	-3.616	39	.001	-1.261	-1.97	-0.56

Note. Test Value = 5.2115. [a] = fulfillment of criterion 1: neutrality (no significant deviation from sample mean), acceptance of null hypothesis with Bayes factor (http://pcl.missouri.edu/bf-one-sample), (Rouder et al., 2009).

Table 21

Exp. 2. One-Sample t-Test: Sports Products against Sample Mean

					95 % Confidence Interval of the Difference	
Stimulus	*t*	df	Sig. (2-tailed)	Mean Difference	Lower	Upper
Aerobic-stepper[a]	-1.832	39	.075	-0.646	-1.36	0.07
Bike[a]	-0.054	39	.957	-0.021	-0.79	0.75
Dumbbells[a]	1.498	39	.142	0.479	-0.17	1.13
Gymnastic ball	2.649	39	.012	0.88	0.21	1.55
Skipping rope[a]	0.094	39	.926	0.029	-0.61	0.66
Stair stepper big[a]	0.275	39	.785	0.104	-0.66	0.87
Stepper small[a]	-1.838	39	.074	-0.67	-1.41	0.07
Swinging rod	-3.983	39	<.001	-1.321	-1.99	-0.65
Treadmill[a]	1.218	39	.231	0.43	-0.28	1.14
Weight bench[a]	-0.058	39	.954	-0.021	-0.74	0.7
Yoga mat	2.274	39	.029	0.755	0.08	1.43

Note. Test Value = 5.0705. [a] = fulfillment of criterion 1: neutrality (no significant deviation from sample mean), acceptance of null hypothesis with Bayes factor (http://pcl.missouri.edu/bf-one-sample), (Rouder et al., 2009).

Table 22

Exp. 2. Electronics/Household Items (Focal Object: Refrigerator)

	Friedman's mean rank	*Wilcoxon's Signed Ranks Test* to the next rank *p*-value	*Wilcoxon's Signed Ranks Test* to the first rank *p*-value
Freezer	1.38	<.001	
Dishwasher	3.18	.537	<.001
Oven[b]	3.35	.041	<.001
Washing machine[b]	4.08	.050	<.001
Microwave[a]	5.10	<.001	<.001
Vacuum cleaner[ab]	7.05	.314	<.001
Ventilator[a]	7.50	.978	<.001
Iron	7.75	.724	<.001
Hair dryer[ab]	7.80	.870	<.001
Hand vacuum cleaner	7.83		

Note. Bonferroni corrected level of significance: .006 (.05/8); [a] = valence rating neutral (p > .05; one-sample t-test to sample's mean).

Table 23

Exp. 2. Cooking/Baking (Focal Object: Cake Tin)

	Friedman's mean rank	*Wilcoxon's Signed Ranks Test* to the next rank *p*-value	*Wilcoxon's Signed Ranks Test* to the first rank *p*-value
Baking dish[ab]	2.54	.170	
Baking tray[a]	3.08	.077	.170
Pan[b]	4.23	.385	.003
Pot[ab]	4.49	.771	<.001
Wok[ab]	4.69	.396	<.001
Grate[b]	5.10	.486	<.001
Measuring cup[a]	5.51	.042	<.001
Sieve[ab]	6.36		<.001

Note. Bonferroni corrected level of significance: .007 (.05/7); [a] = valence rating neutral (p > .05; one-sample t-test to sample's mean).

Table 24

Exp. 2. Kitchen Ware (Focal Object: Blender)

	Friedman's mean rank	*Wilcoxon's Signed Ranks Test* to the next rank *p*-value	*Wilcoxon's Signed Ranks Test* to the first rank *p*-value
Hand blender[b]	1.85	.347	
Hand mixer[ab]	2.03	<.001	.347
Milk frother	3.23	.001	<.001
Electric kettle[b]	4.58	.415	<.001
Coffee maker[a]	4.90	.002	<.001
Sandwich toaster	6.28	.983	<.001
Toaster[a]	6.35	.107	<.001
Mini oven[a]	6.80		<.001

Note. Bonferroni corrected level of significance: .007 (.05/7); [a] = valence rating neutral (p > .05; one-sample t-test to sample's mean).

Table 25

Exp. 2. Vegetables (Focal Object: Cucumber)

	Friedman's mean rank	Wilcoxon's Signed Ranks Test to the next rank p-value	Wilcoxon's Signed Ranks Test to the first rank p-value
Zucchini[a]	1.60	<.001	
Carrots[ab]	3.63	.308	<.001
Leek[a]	4.08	.887	<.001
Aubergine[a]	4.20	.013	<.001
Bell pepper[a]	5.60	.957	<.001
Radishes	5.68	.353	<.001
Salad[ab]	6.10	.102	<.001
Cauliflower[a]	6.90	.426	<.001
Potatoes[a]	7.23		<.001

Note. Bonferroni corrected level of significance: .006 (.05/8);
[a] = valence rating neutral (p > .05; one-sample t-test to sample's mean).

Table 26

Exp. 2. Dairy Products (Focal Object: Milk[a])

	Friedman's mean rank	Wilcoxon's Signed Ranks Test to the next rank p-value	Wilcoxon's Signed Ranks Test to the first rank p-value
Condensed milk	2.03	.004	
Yoghurt[a]	3.03	.460	.004
Cream[ab]	3.54	.012	<.001
Quark[a]	4.82	.761	<.001
Crème fraiche	5.10	.076	<.001
Cream cheese	5.95	.197	<.001
Ricotta[b]	6.51	.828	<.001
Butter[a]	6.79	.410	<.001
Mozzarella	7.23		<.001

Note. Bonferroni corrected level of significance: .006 (.05/8); [a] = valence rating neutral (p > .05; one-sample t-test to sample's mean).

Table 27

Exp. 2. Hygiene Items (Focal Object: Shower Gel[ab])

	Friedman's mean rank	Wilcoxon's Signed Ranks Test to the next rank p-value	Wilcoxon's Signed Ranks Test to the first rank p-value
Liquid soap[a]	2.45	.675	
Bathing foam[a]	2.48	.025	.675
Facial tonic[a]	3.45	.013	.007
Deodorant[a]	4.53	.984	<.001
Facial lotion[a]	4.60	.233	<.001
Tooth paste[ab]	5.08	.043	<.001
Lip balm[a]	5.90	<.001	<.001
Toilet paper[a]	7.53		<.001

Note. Bonferroni corrected level of significance: .007 (.05/7); [a] = valence rating neutral (p > .05; one-sample t-test to sample's mean).

Table 28

Exp. 2. Outdoor Items (Focal Object: Rucksack)

	Friedman's mean rank	Wilcoxon's Signed Ranks Test to the next rank p-value	Wilcoxon's Signed Ranks Test to the first rank p-value
Jacket[a]	2.20	.509	
Shoes[a]	2.43	.582	.509
Waist pack	2.48	<.001	.940
Walking sticks	6.20	.892	<.001
Flashlight[a]	6.23	.914	<.001
Penknife[a]	6.25	.930	<.001
Binoculars[a]	6.28	.673	<.001
Compass[a]	6.45	.973	<.001
GPS-device[a]	6.50		<.001

Note. Bonferroni corrected level of significance: .006 (.05/8); [a] = valence rating neutral (p > .05; one-sample t-test to sample's mean).

Table 29

Exp. 2. Sports Equipment (Focal Object: Stair-Stepper big[a])

	Friedman's mean rank	Wilcoxon's Signed Ranks Test to the next rank p-value	Wilcoxon's Signed Ranks Test to the first rank p-value
Bike[a]	1.59	<.001	
Treadmill[a]	2.46	.454	<.001
Stepper small[a]	2.69	<.001	.001
Aerobic-stepper[a]	4.64	.104	<.001
Weight bench[a]	5.41	.009	<.001
Skipping rope[ab]	6.92	.736	<.001
Dumbbells[a]	7.10	.065	<.001
Gymnastic ball	7.95	.910	<.001
Swinging rod	8.00	.642	<.001
Yoga mat	8.23		<.001

Note. Bonferroni corrected level of significance: .055 (.05/9); [a] = valence rating neutral (p > .05; one-sample t-test to sample's mean).

Table 30

Exp. 2. Descriptives: Mean, Minimum, Maximum, and Variance for each Object in Alphabetic Order

stimulus	*M*	*Min*	*Max*	s^2	stimulus	*M*	*Min*	*Max*	s^2
Aerobic-stepper[a]	4.43	1	9	4.968	Measuring cup[a]	5.48	1	9	4.562
Aubergine[a]	6.38	1	9	4.960	Microwave[a]	6.13	1	9	5.189
Baking dish[ab]	6.18	2	9	3.070	Milk[a*]	5.35	1	9	6.954
Baking tray[a]	5.73	2	9	4.153	Milk frother	4.7	1	9	4.933
Bathing foam[a]	4.33	1	9	6.381	Mini oven[a]	5.8	1	9	4.215
Bell pepper[a]	7.28	1	9	4.614	Mozzarella	5.48	1	9	5.180
Bike[a]	5.05	1	9	5.794	Oven[b]	6.7	1	9	3.702
Binoculars[a]	5.08	1	9	4.482	Pan[b]	6.68	3	9	2.430
Blender[b*]	6.65	2	9	3.771	Penknife[a]	5.48	1	9	6.305
Butter[a]	4.58	1	9	5.842	Pot[ab]	6.45	3	9	2.716
Cake tin[ab*]	6.4	2	9	3.272	Potatoes[a]	6.8	3	9	4.473
Carrots[ab]	6.88	3	9	3.599	Quark[a]	4.33	1	9	4.893
Cauliflower[a]	6.3	1	9	5.240	Radishes	5.93	2	9	4.584
Coffee maker[a]	5.35	1	9	6.335	Refrigerator[a*]	5.8	1	9	4.779
Compass[a]	4.98	1	9	5.513	Ricotta[b]	3.83	1	7	3.378
Condensed milk	3.75	1	9	5.167	Rucksack[*]	6.3	2	9	4.831
Cream[ab]	4.33	1	8	3.661	Salad[ab]	7.15	2	9	2.952
Cream cheese	5.38	1	9	4.752	Shoes[a]	5.6	1	9	6.812
Crème Fraîche[a]	4.35	1	9	4.541	Shower gel[ab*]	4.53	1	8	3.587
Cucumber[ab*]	7.2	2	9	3.652	Sieve[ab]	5.95	1	9	2.972
Deodorant[a]	4.43	1	9	5.480	Skipping rope[ab]	5.1	1	9	3.940
Dish washer	6.95	1	9	4.101	Stair stepper big[a*]	5.18	1	9	5.789
Dumbbells[a]	5.55	1	9	4.101	Stepper small[a]	4.4	1	9	5.322
Electric kettle[b]	6.53	3	9	2.819	Swinging rod	3.75	1	8	4.397
Facial lotion[a]	4.28	1	9	4.410	Toaster[a]	5.83	1	9	4.097
Facial tonic[a]	4.6	1	9	6.452	Toilet paper[a]	4.48	1	9	5.180
Freezer	5.1	1	9	4.964	Tooth paste[ab]	4.75	1	9	3.576
GPS-device[a]	5.1	1	9	4.657	Torch[ab]	5.2	2	9	3.445
Grate[b]	4.78	1	9	3.818	Treadmill[a]	5.5	1	9	4.973
Gymnastic ball	5.95	2	9	4.406	Vacuum cleaner[ab]	6.15	1	9	2.541
Hair dryer[ab]	5.73	1	8	2.924	Ventilator[a]	5.4	1	9	4.964
Hand blender 1[b]	6.23	3	9	3.204	Waist pack	3.85	1	9	4.951
Hand mixer[ab]	6.88	2	9	2.265	Walking sticks	3.95	1	9	4.871
Hand vacuum cleaner	4.9	1	9	5.373	Washing machine[b]	6.8	2	9	3.140
Iron	4.73	1	9	4.360	Weight bench[a]	5.05	1	9	5.022
Jacket[a]	5.7	1	9	4.012	Wok[ab]	6.43	2	9	3.070
Leek[a]	6.2	2	9	4.113	Yoga mat	5.83	1	9	4.406
Lip balm[a]	4.58	1	9	5.429	Yoghurt[a]	5.1	1	9	5.018
Liquid soap[a]	4.65	1	9	5.565	Zucchini[a]	6.5	1	9	5.485

Note. [a] = criterion 1 fulfilled: valence is *not* significantly different from sample's mean ($p < .05$); [b] = criterion 2 fulfilled: variance < 4, * = focal object.

Table 31

Exp. 2. Correlation Table of Electronics

		1	2	3	4	5	6	7	8	9	10
1.	Refridgerator[a]	1									
2.	Oven	-.051	1								
3.	Iron	.504**	.068	1							
4.	Hair dryer[a]	.204	.146	.402*	1						
5.	Dish washer	.368*	.536**	.148	.344*	1					
6.	Hand vacuum cleaner	.294	.033	.445**	.362*	-.001	1				
7.	Freezer	.715**	.025	.651**	.425**	.405**	.508**	1			
8.	Microwave[a]	.129	.038	.169	.035	.207	.473**	.321*	1		
9.	Vacuum cleaner[a]	.178	.174	.329*	.561**	.114	.420**	.299	.051	1	
10.	Ventilator[a]	.264	-.043	.283	.420**	.215	.494**	.555**	.510**	.098	1
11.	Washing machine	,234	,463**	,276	,515**	,662**	,064	,486**	,019	,256	.326*

Note. * $p < .05$, two-tailed; ** $p < .01$, two-tailed.

Table 32

Exp. 2. Correlation Table of Cooking/Baking Items

		1	2	3	4	5	6	7	8
1.	Baking dish[a]	1							
2.	Baking tray[a]	.351	1						
3.	Cake tin[a]	.414	.434	1					
4.	Grate	.491	.621	.389	1				
5.	Measuring cup[a]	.614	.290	.401	.671	1			
6.	Pan	.369	.318	.529	.413	.425	1		
7.	Pot[a]	.389	.366	.282	.271	.404	.308	1	
8.	Sieve[a]	.393	.069	.319	-.034	.278	.280	.396	1
9.	Wok[a]	.226	.120	.277	.171	.205	.174	.474	.338

Note. * $p < .05$, two-tailed; ** $p < .01$, two-tailed.

Table 33

Exp. 2. Correlation Table of Kitchen Ware

		1	2	3	4	5	6	7
1.	Blender	1						
2.	Coffee maker[a]	.440**	1					
3.	Electric kettle	.058	.234	1				
4.	Hand blender	.493**	.411**	.240	1			
5.	Hand mixer[a]	.377*	.221	.292	.448**	1		
6.	Milk frother	.474**	.386*	.318*	.196	.379*	1	
7.	Mini oven[a]	.143	.386*	.336*	.199	.661**	.509**	1
8.	Toaster[a]	.206	.465**	.224	.296	.068	.250	.380*

Note. * $p < .05$, two-tailed; ** $p < .01$, two-tailed.

Table 34

Exp. 2. Correlation Table of Vegetables

		1	2	3	4	5	6	7	8	9
1.	Aubergine[a]	1								
2.	Bell pepper[a]	.342*	1							
3.	Carrots[a]	.454**	.223	1						
4.	Cauliflower[a]	.475**	.045	.658**	1					
5.	Cucumber[a]	.404**	.286	.523**	.314*	1				
6.	Leek[a]	.522**	.264	.573**	.655**	.466**	1			
7.	Potatoes	.136	-.055	.326*	.309	.289	.117	1		
8.	Radishes	.571**	.373*	.610**	.528**	.442**	.529**	.246	1	
9.	Salad[a]	.602**	.412**	.675**	.477**	.530**	.462**	.383*	.624**	1
10.	Zucchini[a]	.597**	.380*	.499**	.402*	.367*	.443**	.223	.412**	.612**

Note. * $p < .05$, two-tailed; ** $p < .01$, two-tailed.

Table 35

Exp. 2. Correlation Table of Dairy Products

		1	2	3	4	5	6	7	8	9
1.	Butter[a]	1								
2.	Condensed milk	.512	1							
3.	Cream[a]	.236	.184	1						
4.	Cream cheese	.513	.609	.173	1					
5.	Crème fraîche[a]	.418	.537	.443	.600	1				
6.	Milk[a]	.587	.593	.450	.614	.502	1			
7.	Mozzarella	.481	.271	.276	.501	.520	.437	1		
8.	Quark[a]	.401	.547	.271	.559	.525	.459	.427	1	
9.	Ricotta	.364	.407	.432	.426	.330	.346	.241	.399	1
10.	Yoghurt[a]	.439	.499	.459	.580	.551	.750	.438	.620	.316

Note. * $p < .05$, two-tailed; ** $p < .01$, two-tailed.

Table 36

Exp. 2. Correlation Table of Hygiene Items

		1	2	3	4	5	6	7	8
1.	Bathing foam[a]	1							
2.	Deodorant[a]	.692**	1						
3.	Facial lotion[a]	.592**	.664**	1					
4.	Facial tonic[a]	.460**	.598**	.771**	1				
5.	Lip balm[a]	.621**	.542**	.606**	.529**	1			
6.	Liquid Soap[a]	.484**	.677**	.522**	.417**	.509**	1		
7.	Shower gel[a]	.719**	.567**	.433**	.524**	.557**	.340*	1	
8.	Toilet paper[a]	.601**	.558**	.444**	.313*	.315*	.524**	.500**	1
9.	Tooth paste[a]	.409**	.557**	.515**	.523**	.470**	.733**	.324*	.463**

Note. * $p < .05$, two-tailed; ** $p < .01$, two-tailed.

Table 37

Exp. 2. Correlation Table of Outdoor Equipment

		1	2	3	4	5	6	7	8	9
1.	Binoculars[a]	1								
2.	Compass[a]	.351	1							
3.	GPS-device[a]	.228	.537	1						
4.	Jacket[a]	.441	.244	.066	1					
5.	Penknife[a]	.152	.224	-.113	.355	1				
6.	Rucksack	-.049	.026	-.044	.423	.461	1			
7.	Shoes[a]	.089	.090	.126	.369	.460	.442	1		
8.	Torch[a]	.381	.125	-.088	.389	.480	.305	.472	1	
9.	Waist pack	.378	.176	-.050	.473	.270	.182	.356	.448	1
10.	Walking sticks	.413	.326	.303	.223	.129	.045	.099	.084	.150

Note. * $p < .05$, two-tailed; ** $p < .01$, two-tailed.

Table 38

Exp. 2. Correlation Table of Sport Products

	1	2	3	4	5	6	7	8	9	10
1. Aerobic-stepper[a]	1									
2. Bike[a]	.297	1								
3. Dumbbells[a]	.203	.399*	1							
4. Gymnastic ball	.284	-.005	.278	1						
5. Skipping rope[a]	.489**	.246	.445**	.235	1					
6. Stair stepper big[a]	.234	.813**	.417**	-.003	.163	1				
7. Stepper small[a]	.320*	.481**	.292	.100	.153	.509**	1			
8. Swinging rod	.298	.302	.226	.102	.394*	.100	.276	1		
9. Treadmill[a]	.369*	.669**	.471**	.263	.336*	.485**	.334*	.143	1	
10. Weight bench[a]	-.148	.289	.463**	.202	.010	.360*	.170	.063	.308	1
11. Yoga mat	.115	.245	.500**	.213	.275	.235	.243	-.051	.326*	.269

Note. * $p < .05$, two-tailed; ** $p < .01$, two-tailed.

Table 39

Exp. 3 (a). Item Wordings: Socio-Political Statements.

Item (short version)	Wording
Asyl (Restriction of asylum law)	„Das Asylrecht in Deutschland sollte beschränkt werden.“
Buil (Usage of old buildings)	„Alte Gebäude sollten lieber anderweitig genutzt werden, anstatt sie für einen Neubau abzureißen.“
Byps (Bypss)	„Überlastete Verkehrsknotenpunkte sollten immer durch eine Umgehungstraße entlastet werden.“
Carp (Car parks)	„In Innenstädten sollten mehr unterirdische Parkhäuser gebaut werden.“
Cult (Intercultural events at University)	„Universitäten sollten mehr Geld für interkulturelle Veranstaltungen ausgeben.“
Exmp (Example item: Veggie-Day)	„In Kantinen sollte an mindestens einem Tag pro Woche ausschließlich vegetarisches Essen angeboten werden.“
Fast (Fasting)	„Heilfasten ist eine effiziente Methode für die innere Reinigung des Körpers.“
Green (Green spaces)	„Das Anlegen neuer Grünflächen würde auch kleine Städte attraktiver für Touristen machen.“
Heat (Sensor controlled heating)	„Sensorgesteuerte Heizungen sollten zukünftiger Standard sein.“
Homp (Homoeopathy)	„Homöopathische Behandlungen sollten von den gesetzlichen Krankenkassen übernommen werden.“
incl (Inclusive schooling)	„Kinder mit geistigen Behinderungen sollten nicht in der Förderschule, sondern - im Sinne der Inklusion - zusammen mit nicht behinderten Kindern unterrichtet werden.“
Inm (Basic income)	„In Deutschland sollte ein bedingungsloses Grundeinkommen eingeführt werden.“
Mult (Multicultural society)	„Jede Nation sollte eine multikulturelle Gesellschaft anstreben.“
News (Fake-news control)	„Die Regierung sollte die sozialen Medien auf falsche Nachrichtenerstattung (sog. Fake-News) kontrollieren.“
Prim (Prolonged primary)	„In Deutschland sollte der Wechsel von der Grundschule auf weiterführende Schulen erst nach der 6. Klasse erfolgen.“
Quot (Women quota)	„Es sollte in der Führungsebene jedes Unternehmens eine Frauenquote geben.“
Reli (Religious symbols in state-owned buildings)	„In staatlichen Einrichtungen sollten jegliche religiösen Symbole verboten werden.“
Rivr (River exposure)	„Flussfreilegungen führen dazu, Städte und Dörfer zu verschönern.“
Smrt (Smart houses)	„Es sollten mehr Smart-Häuser gebaut werden, in denen alle elektronischen Geräte über das Smartphone gesteuert werden können.“
Sovr (National sovereignty in EU)	„Auch in Staatenbündnissen wie der EU sollte ein großes Maß an nationaler Souveränität erhalten bleiben.“
Spee (Stricter speed limits)	„Auf Autobahnen sollten strengere Tempolimits eingeführt werden.“
Sprt (Sport breaks in school)	„Während des Unterrichts sollte es kurze Pausen geben, in denen ein paar Sportübungen gemacht werden.“
Supm (Online supermarket)	„Mehr Supermärkte sollten die Möglichkeit zur Online-Bestellung und Lebensmittellieferung anbieten.“
Team (Teamwork)	„In der Berufswelt sollte es mehr Gruppenarbeit geben.“
Valu (Defense of European values)	„Europäische Werte sollten verteidigt werden, auch wenn dies zu Konflikten führt.“
Vote (Online voting)	„Zukünftig sollte man auch online wählen können.“

Note. All items in exact wording used in Experiment 3 (a) in alphabetical order.

Table 40

Exp. 3 (a). Correlations Between Participants' Agreement to all Items

	asyl	buil	byps	carp	cult	exmp	fastn	green	heat	homp	incl	incm	mult	news	quot	reli	rivr	schl	smrt	sovr	spee	sprt	supm	team	valu
Asyl	1																								
Buil	-.022	1																							
Byps	.063	-.121	1																						
Carp	.224**	-.055	.199*	1																					
Cult	-.405**	.265**	.143	.104	1																				
exmp	-.115	.048	.041	-.076	.067	1																			
Fastn	.039	-.054	.283**	-.088	-.007	.187*	1																		
green	-.038	.127	.112	.071	.349**	.065	.057	1																	
Heat	.222**	-.034	.210*	.471**	.197*	-.101	-.067	.111	1																
homp	.001	.019	.121	.100	.165	.078	.415**	.243**	-.003	1															
Incl	-.264**	.095	-.037	-.090	.343**	.123	-.115	.222**	.009	.003	1														
Incm	-.054	-.006	.256**	.048	.176*	.057	-.090	.059	.054	.071	.268**	1													
Mult	-.368**	.136	.186*	.131	.415**	.150	-.018	.176*	.160	.158	.203*	.250**	1												
news	.076	.061	.183*	.142	.264**	-.099	.105	.248**	.193*	.159	.069	.217*	.224**	1											
Quot	.087	-.003	.041	.070	.147	.063	.027	.172*	.031	.188*	.117	.253**	.167*	.199*	1										
Reli	.202*	.175*	-.015	.119	-.056	-.005	-.264**	-.050	.133	-.186*	-.048	.101	-.027	-.090	.156	1									
Rivr	-.067	.155	.117	.211*	.087	.066	.188*	.133	.057	.078	.012	.078	.279**	.003	.049	.018	1								
Schl	-.178*	-.039	.027	.027	-.004	.153	-.088	-.143	-.104	-.028	.183*	.180*	-.102	-.030	-.053	.062	.113	1							
Smrt	.194*	-.078	.178*	.173*	.085	.042	-.177*	.110	.367**	-.049	.095	.096	-.071	.122	.083	.196*	.004	.005	1						
Sovr	.362**	.105	.131	.166*	-.020	-.156	.108	-.075	.221**	.056	-.173*	-.075	-.258**	.103	.053	.037	-.001	.039	.046	1					
Spee	-.125	.176*	-.218**	-.129	.061	.126	-.138	.088	-.067	-.069	.164	.056	.127	-.145	.066	.125	-.009	.022	-.157	-.180*	1				
Sprt	-.068	-.057	.148	.112	.104	.287**	.064	.132	.156	.081	.184*	.025	.103	.141	.128	-.013	.170*	.190*	.126	-.175*	.146	1			
Supm	.128	.113	.070	.126	.074	-.173*	-.253**	-.021	.233**	.015	.028	.213*	.057	.150	.250**	.269**	-.026	.032	.397**	.018	.012	.096	1		
Team	-.087	-.057	.036	.043	.266**	-.053	.110	.307**	.215*	.261**	.174*	.047	.086	.097	.219**	-.073	.028	.043	-.007	.042	.148	.276**	.038	1	
Valu	.101	.095	-.058	.136	-.029	.070	-.097	-.015	.248**	-.172*	-.067	-.073	-.006	-.144	.044	.221**	.224**	.018	.001	.238**	.091	-.028	.097	.074	1
Vote	.059	.030	.128	-.035	.141	.146	-.101	.019	.052	.023	.073	.177*	.172*	.038	.095	.218**	-.013	.094	.161	.065	.103	-.051	.175*	.139	.145

Note. * $p < .05$, two-tailed; ** $p < .01$, two-tailed. For item list see Table 39.

Table 41

Exp. 3 (a). Descriptive Statistics of Importance and Agreement Concerning the 25 (+ one Example Item) Socio-Political Issues.

	Importance		Agreement	
	M	*sd²*	*M*	*sd²*
Asyl (Restriction of asylum law)	6.71	3.19	4.47	6.8
Buil (Usage of old buildings)	4.69	4.23	5.87	5.26
Byps (Bypss)	4.74	4.24	6.4	3.02
Carp (Car parks)	4.1	5.26	5.83	3.8
Cult (Intercultural events at University)	5.09	4.35	5.87	4.26
Exmp (Example item: Veggie-Day)	5.29	6.34	5.12	8.45
Fast (Fasting)	3.74	5.95	5.11	5.73
Green (Green spaces)	5.29	5.1	6.54	4.48
Heat (Sensor controlled heating)	4.4	5.97	5.84	4.93
Homp (Homoeopathy)	5.7	6.77	5.47	8.21
Incl (Inclusive schooling)	6.36	4.33	5.08	6.32
Inm (Basic income)	6.25	3.9	5.54	6.42
Mult (Multicultural society)	6.51	4.38	6.66	4.9
News (Fake-news control)	6.21	3.94	5.97	6.39
Prim (Prolonged primary)	5.28	4.65	4.91	5.94
Quot (Women quota)	6.06	5.4	4.99	7.44
Reli (Religious symbols in state-owned buildings)	5.38	4.8	5.16	8.34
Rivr (River exposure)	3.94	4.76	5.95	4.18
Smrt (Smart houses)	4.07	6.1	4.08	4.84
Sovr (National sovereignty in EU)	5.6	4.18	5.66	3.88
Spee (Stricter speed limits)	5.41	5.06	4.65	7.81
Sprt (Sport breaks in school)	4.83	6.88	5.71	6.8
Supm (Online supermarket)	4.29	5.17	5.52	5.52
Team (Team work)	5.45	4.05	5.11	5.58
Valu (Defense of European values)	5.86	4.94	6.11	4.3
Vote (Online voting)	5.71	6.23	4.82	9.39

Note. Means and variances of indicated importance and of agreement with the 25 (+ one example) socio-political issues in alphabetical order. $N = 140$.

Table 42

Exp. 3 (a). Descriptive Statistics of Semantic Differentials for 25 (+one Example Item) Socio-Political Issues.

	good – bad		weak – strong		quiet – loud		liberal – conservative	
	M	*sd²*	*M*	*sd²*	*M*	*sd²*	*M*	*sd²*
Asyl (Restriction of asylum law)	4.27	6.13	4.62	5.99	6.07	4.58	6.96	4.57
Buil (Usage of old buildings)	5.99	4.32	5.41	3.42	5.04	2.93	5.35	3.44
Byps (Bypss)	6.41	3.15	5.85	2.83	5.29	3.78	4.81	2.4
Carp (Car parks)	5.99	3.9	5.49	3.35	4.86	2.69	4.81	2.39
Cult (Intercultural events at University)	6.54	4.54	6.12	4.04	5.73	3.65	3.19	2.97
Exmp (Example item: Veggie-Day)	5.56	6.42	5.26	5.4	5.35	4.72	3.6	4.39
Fast (Fasting)	5.48	4.7	5.21	4.48	4.44	4.19	4.53	3.7
Green (Green spaces)	7.34	3.66	6.43	4.26	4.65	4.79	4.49	3.88
Heat (Sensor controlled heating)	6.33	3.39	5.7	3.32	4.76	3.51	4.61	2.95
Homp (Homoeopathy)	5.65	8.2	5.16	6.05	4.7	4.7	3.58	4.02
Incl (Inclusive schooling)	5.9	6.67	5.77	5.96	5.92	4.75	3.34	3.59
Inm (Basic income)	5.66	6.33	5.5	4.93	5.75	3.76	3.53	4.41
Mult (Multicultural society)	7.11	4.04	6.86	4.11	6.56	3.31	2.89	4.63
News (Fake-news control)	6.14	6.16	5.86	5.2	5.97	4.43	5.32	4.62
Prim (Prolonged primary)	5.42	5.55	5.06	4.72	4.87	2.82	4.32	2.98
Quot (Women quota)	5.31	6.72	5.37	6.11	6.09	4.77	3.86	5.4
Reli (Religious symbols in state-owned buildings)	4.52	7.26	4.8	6.02	5.76	5.33	4.8	6.71
Rivr (River exposure)	5.99	4.01	5.39	4.02	5.16	3.81	4.74	2.51
Smrt (Smart houses)	4.8	4.32	4.91	4.06	4.69	3.41	3.56	3.56
Sovr (National sovereignty in EU)	5.79	3.56	5.72	3.45	5.76	3.13	6.26	4.56
Spee (Stricter speed limits)	5.11	6.07	5.1	4.95	5.17	4.24	5.5	4.57
Sprt (Sport breaks in school)	6.12	6.58	5.85	5.09	5.86	4.45	3.92	4.53
Supm (Online supermarket)	5.52	5.52	5.05	3.99	5	3.37	3.8	3.24
Team (Team work)	5.48	4.57	5.6	3.85	5.6	3	3.94	2.49
Valu (Defense of European values)	6.46	3.99	6.18	3.92	6.1	3.75	5.32	5.34
Vote (Online voting)	4.96	8.29	5.00	6.82	4.77	5.69	3.14	4.61

Note. Means and variances for four semantic differentials (bad-good, weak-strong, quiet-loud, liberal-conservative) for the 25 (+one example) socio-political issues in alphabetical order. $N = 140$.

Table 43

Exp. 3 (a). Non-Significant Results from One-Sample t-test: Agreement to Socio-Political Issues Compared with Scale Mean

					95 % Confidence Interval of the Difference	
Topic	*t*	df	Sig. (2-tailed)	Mean Difference	Lower	Upper
Fasting	.565	139	.573	.114	-.29	.51
Homoeopathy	1.947	139	.054	.471	-.01	.95
Team work	.572	139	.568	.114	-.28	.51
Online supermarket	1.217	139	.226	.264	-.16	.69
Prolonged Primary school	-.416	139	.678	-.086	-.49	.32
Inclusion	.370	139	.712	.079	-.34	.50
Online voting	-.690	139	.492	-.179	-.69	.33
Speed limits	-1.482	139	.141	-.350	-.82	.12
Women quota	-.062	139	.951	-.014	-.47	.44
Religious symbols in state-run facilities	.673	139	.502	.164	-.32	.65

Note. Only those issues are displayed which can be viewed as mediocre in valence. One-sample t-test, test-value = 5. Acceptance of null hypothesis with Bayes factor (http://pcl.missouri.edu/bf-one-sample), (Rouder et al., 2009).

Table 44

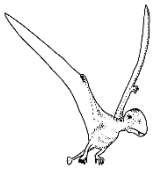
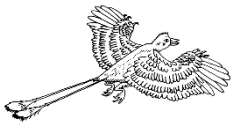
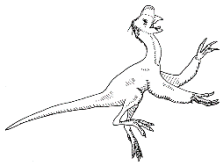
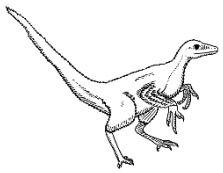
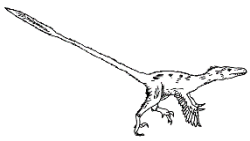
Exp. 3 (a). Non-Significant Results from One-Sample t-test: Importance of Socio-Political Issues Compared with Scale Mean

					95 % Confidence Interval of the Difference	
Topic	*t*	df	Sig. (2-tailed)	Mean Difference	Lower	Upper
Green space	1.534	139	.127	.293	-.08	.67
Bypass	-1.478	139	.142	-.257	-.60	.09
Usage of old buildings	-1.808	139	.073	-.314	-.66	.03
Prolonged primary school	1.529	139	.129	.279	-.08	.64
Sport breaks in school	-.773	139	.441	-.171	-.61	.27
Intercultural events of universities	.486	139	.628	.086	-.26	.43

Note. Only those issues are displayed which can be viewed as mediocre important to subjects. One-sample t-test, test-value = 5. Acceptance of null hypothesis with Bayes factor (http://pcl.missouri.edu/bf-one-sample), (Rouder et al., 2009).

Figure 1

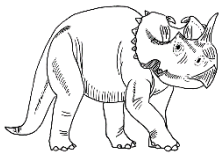
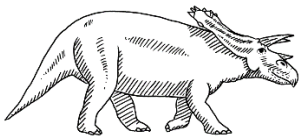
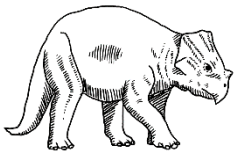
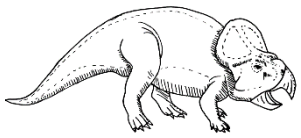
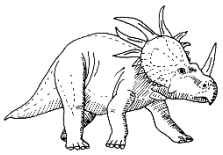
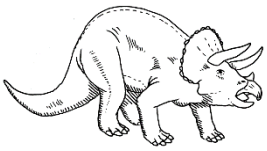
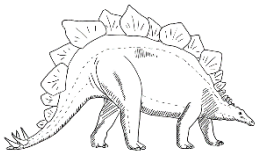
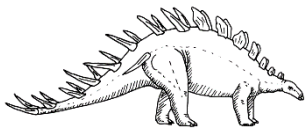
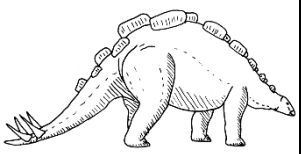
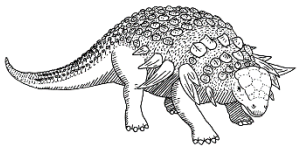
Exp. 1. Stimulus Set A, Pterosaurs

A1: Focal[ab] 	A2 	A3 	A4 
A5[b] 	A6[b] 	A7[ab] 	A8[a] 
A9[ab] 	A10[b] 		

Note. [a] = criterion 1 fulfilled: valence is *not* significantly different from sample's mean ($p < .05$);
[b] = criterion 2 fulfilled: variance < 4.

Figure 2

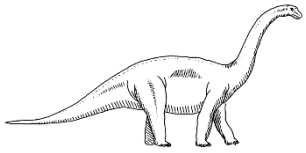
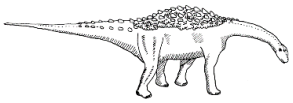
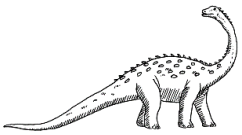
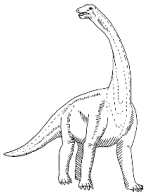
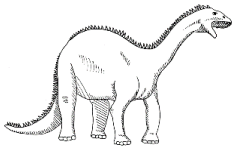
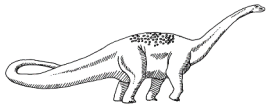
Exp. 1. Stimulus Set B: Stegosaurs and Ceratops

B1: Focal[ab] 	B2[ab] 	B3[ab] 	B4[b] 
B5[a] 	B6[a] 	B7[a] 	B8[a] 
B9[a] 	B10[ab] 	B11[ab] 	

Note. [a] = criterion 1 fulfilled: valence is *not* significantly different from sample's mean ($p < .05$);
[b] = criterion 2 fulfilled: variance < 4.

Figure 3

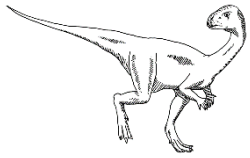
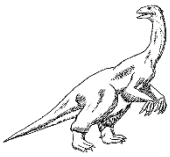
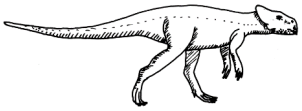
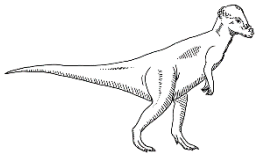
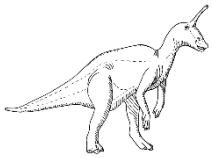
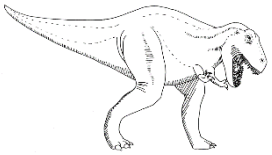
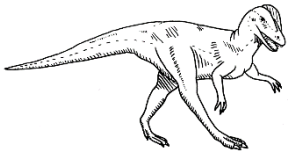
Exp. 1. Stimulus Set C: Long-Necks

C1: Focal 	C2[ab] 	C3[ab] 	C4[ab] 
C5[ab] 	C6[a] 	C7[a] 	C8 
C9[a(b)] 	C10[a] 	C11[b] 	

Note. [a] = criterion 1 fulfilled: valence is *not* significantly different from sample's mean ($p < .05$);
[b] = criterion 2 fulfilled: variance < 4.

Figure 4

Exp. 1. Stimulus Set D: Two-Legged

D1: Focal[a] 	D2[b] 	D3[ab] 	D4[ab] 
D5[a] 	D6[b] 	D7[a] 	D8[a] 
D9[ab] 	D10[b] 		

Note. [a] = criterion 1 fulfilled: valence is *not* significantly different from sample's mean ($p < .05$); [b] = criterion 2 fulfilled: variance < 4.

Figure 5

Exp. 2. Electronic Devices/Household Items

Note. From left to right: refrigerator[a], washing machine[b], oven[b], freezer, microwave[a], ventilator[a], hair dryer[ab], vacuum cleaner[ab], hand vacuum cleaner, iron. ([a]criterion 1 fulfilled: valence is *not* significantly different from sample's mean ($p < .05$); [b]criterion 2 fulfilled: variance < 4).

Figure 6

Exp. 2. Hygiene Articles

Note. From left to right: shower gel[ab], liquid soap[a], toilet paper[a], deodorant[a], lip balm[a], facial lotion[a], facial tonic[a], bathing foam[a], tooth paste[ab]. ([a]criterion 1 fulfilled: valence is *not* significantly different from sample's mean ($p < .05$); [b]criterion 2 fulfilled: variance < 4).

Figure 7

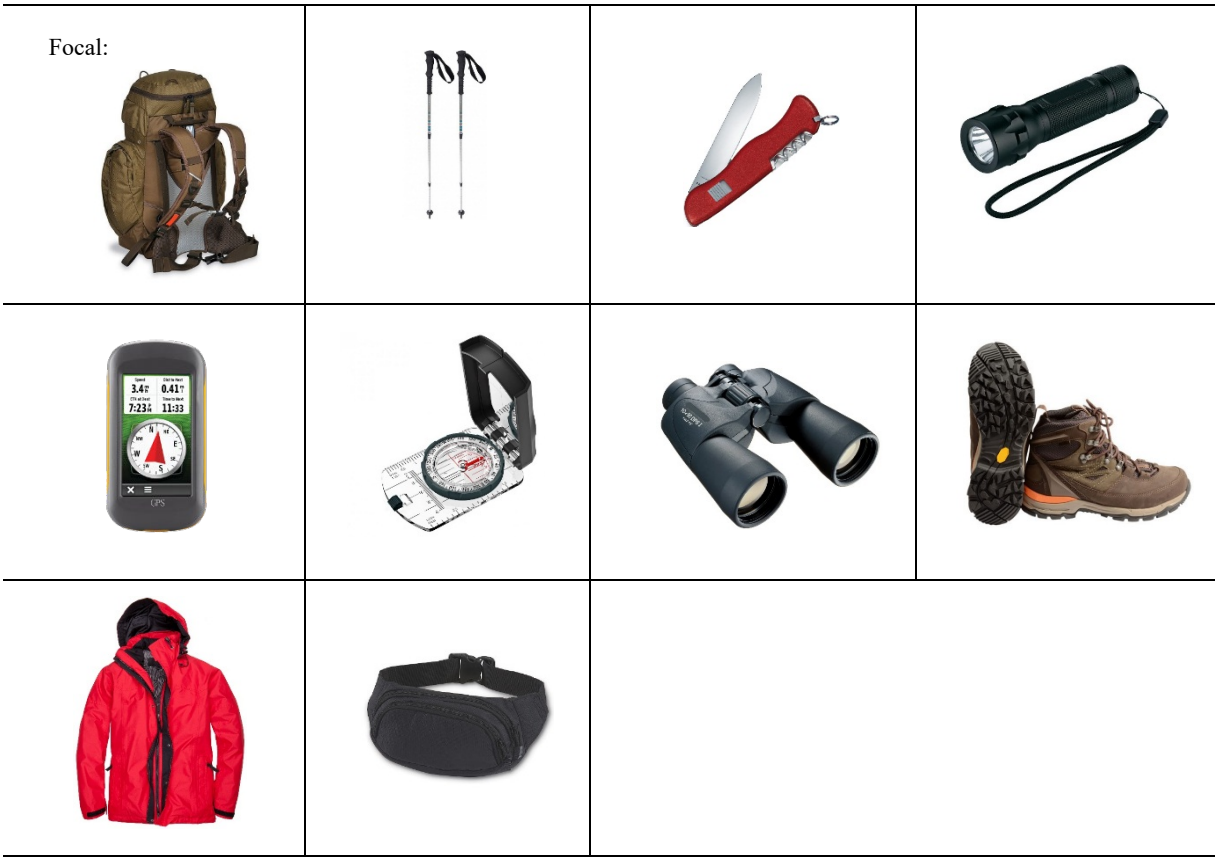
Exp. 2. Vegetables

Focal: 			
			
			

Note. From left to right: cucumber[ab], zucchini[a], salad[ab], radishes, bell peppers[a], carrots[ab], leek[a], potatoes[a], cauliflower[a], aubergines[a]. ([a]criterion 1 fulfilled: valence is *not* significantly different from sample's mean ($p < .05$); [b]criterion 2 fulfilled: variance < 4).

Figure 8

Exp. 2. Hiking Equipment



Note. From left to right: rucksack, walking sticks, penknife, torch, GPS-devise, compass, binoculars, shoes, jacket, waist pack. ([a]criterion 1 fulfilled: valence is *not* significantly different from sample's mean ($p < .05$); [b]criterion 2 fulfilled: variance < 4).

Figure 9

Exp. 2. Kitchen Ware

Note. From left to right: blender[b], electric kettle[b], toaster[a], hand blender[b], sandwich toaster (valence item was missing, item was only used in ranks testing), milk frother, mini oven[a], coffee maker[a], hand mixer[ab]. ([a]criterion 1 fulfilled: valence is *not* significantly different from sample's mean ($p < .05$); [b]criterion 2 fulfilled: variance < 4).

Figure 10

Exp. 2. Cooking/Baking Equipment

Note. From left to right: Cake tin[ab], wok[ab], pot[ab], sieve[ab], pan[b], grate[b], measuring cup[a], baking tray[a], baking dish[ab]. ([a]criterion 1 fulfilled: valence is *not* significantly different from sample's mean ($p < .05$); [b]criterion 2 fulfilled: variance < 4).

Figure 11

Exp. 2. Sports Equipment

Focal: 		
		
		
		

Note. From left to right: Stair-stepper big[a], Stepper-small[a], skipping rope[ab], swinging rod, yoga mat, treadmill[a], dumbbells[ab], weight bench[a], gymnastic ball, bike[a], aerobic-stepper[a]. ([a]criterion 1 fulfilled: valence is *not* significantly different from sample's mean ($p < .05$); [b]criterion 2 fulfilled: variance < 4).

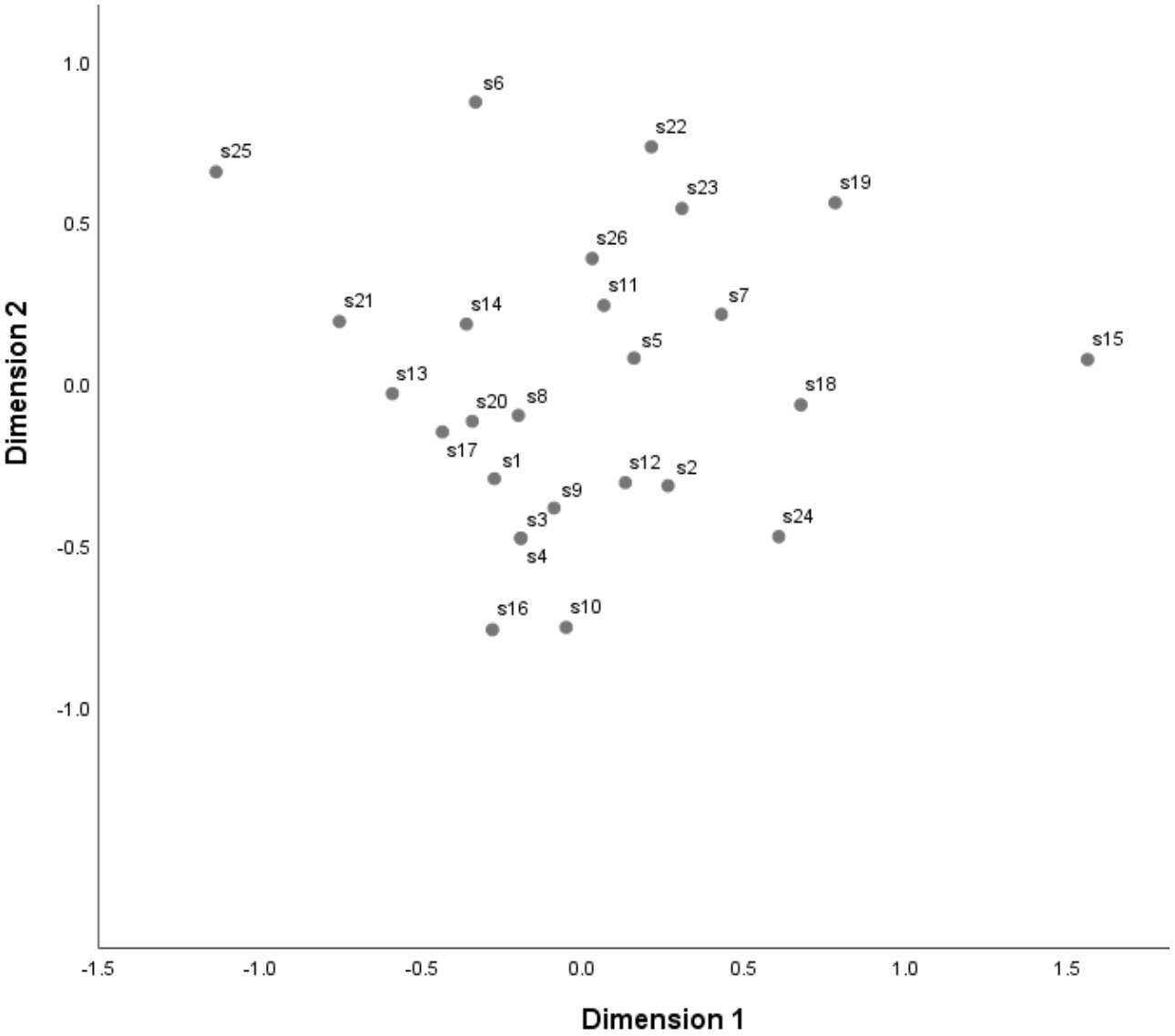
Figure 12

Exp. 2. Dairy Products

Note. From left to right: Milk[a], ricotta[b], quark[a], mozzarella, condensed milk, yoghurt[a], cream cheese, créme fraîche[a], butter[a], cream[ab]. ([a]criterion 1 fulfilled: valence is *not* significantly different from sample's mean ($p < .05$); [b]criterion 2 fulfilled: variance < 4).

Figure 13

Exp. 3 (a). Result of Multidimensional Scaling



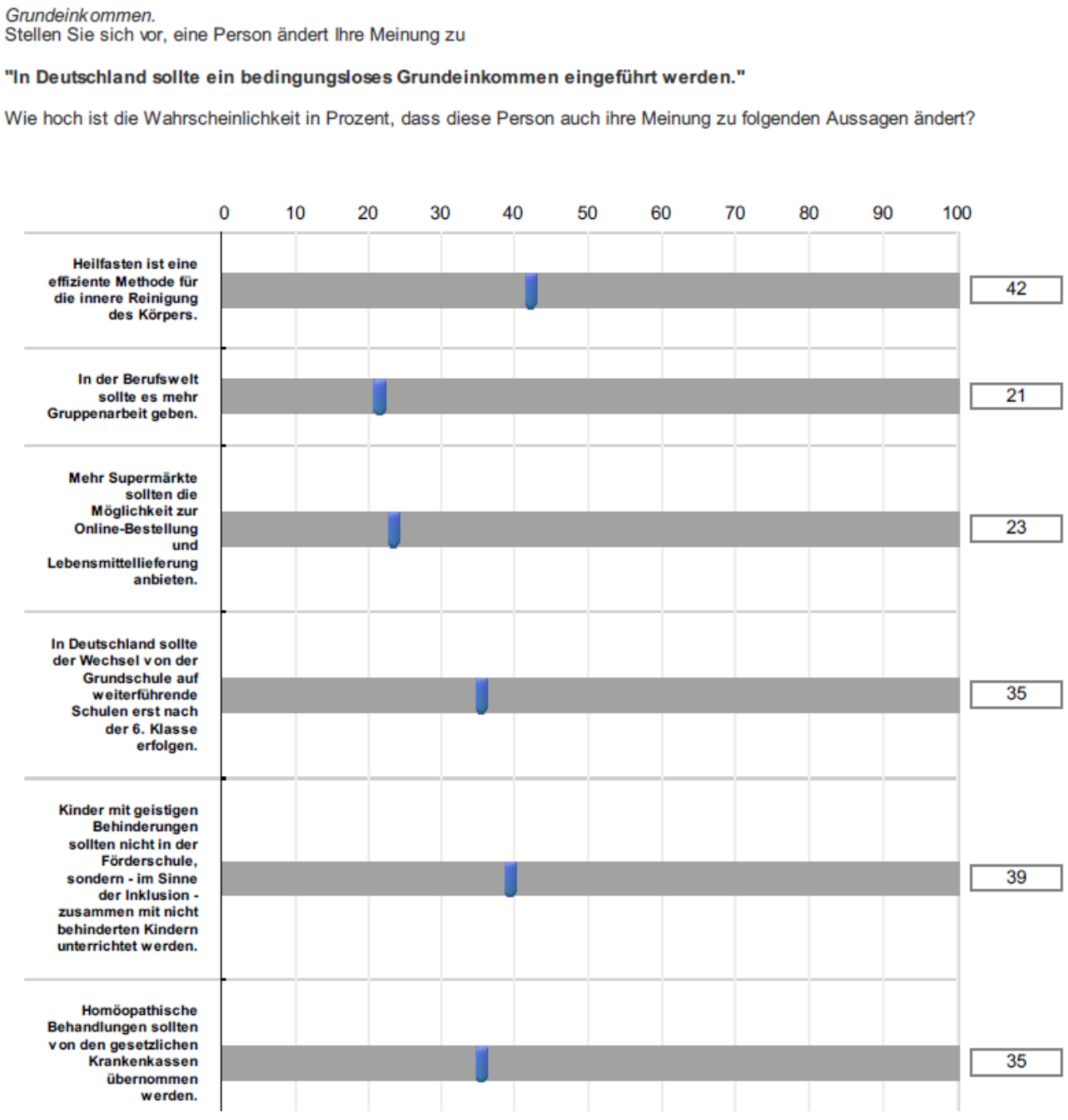
Note. All 25 (+ one example item) socio-political issues in a two-dimensional space:

s1	Example: Veggie day	s10	Smart houses	s18	Stricter speed limits[a]
s2	Fasting[a]	s11	Sensor controlled heating	s19	National sovereignty
s3	Homoeopathy[a]	s12	Prolonged primary[ab]	s20	Women quota[a]
s4	Car parks	s13	Inclusive schooling[a]	s21	Intercultural events at university[b]
s5	River exposure	s14	Sport breaks in school[b]	s22	European values
s6	Green spaces[b]	s15	Restriction of right of asylum	s23	Fake news
s7	Usage of old buildings[b]			s24	Religious symbols[a]
s8	Team work[a]	s16	Online voting[a]	s25	Multicultural society
s9	Online supermarket[a]	s17	Basic income	s26	Bypass[b]

[a]agreement is *not* significantly different from scale's midpoint ($p < .05$),
[b]importance is *not* significantly different from scale's midpoint ($p < .05$).

Figure 14

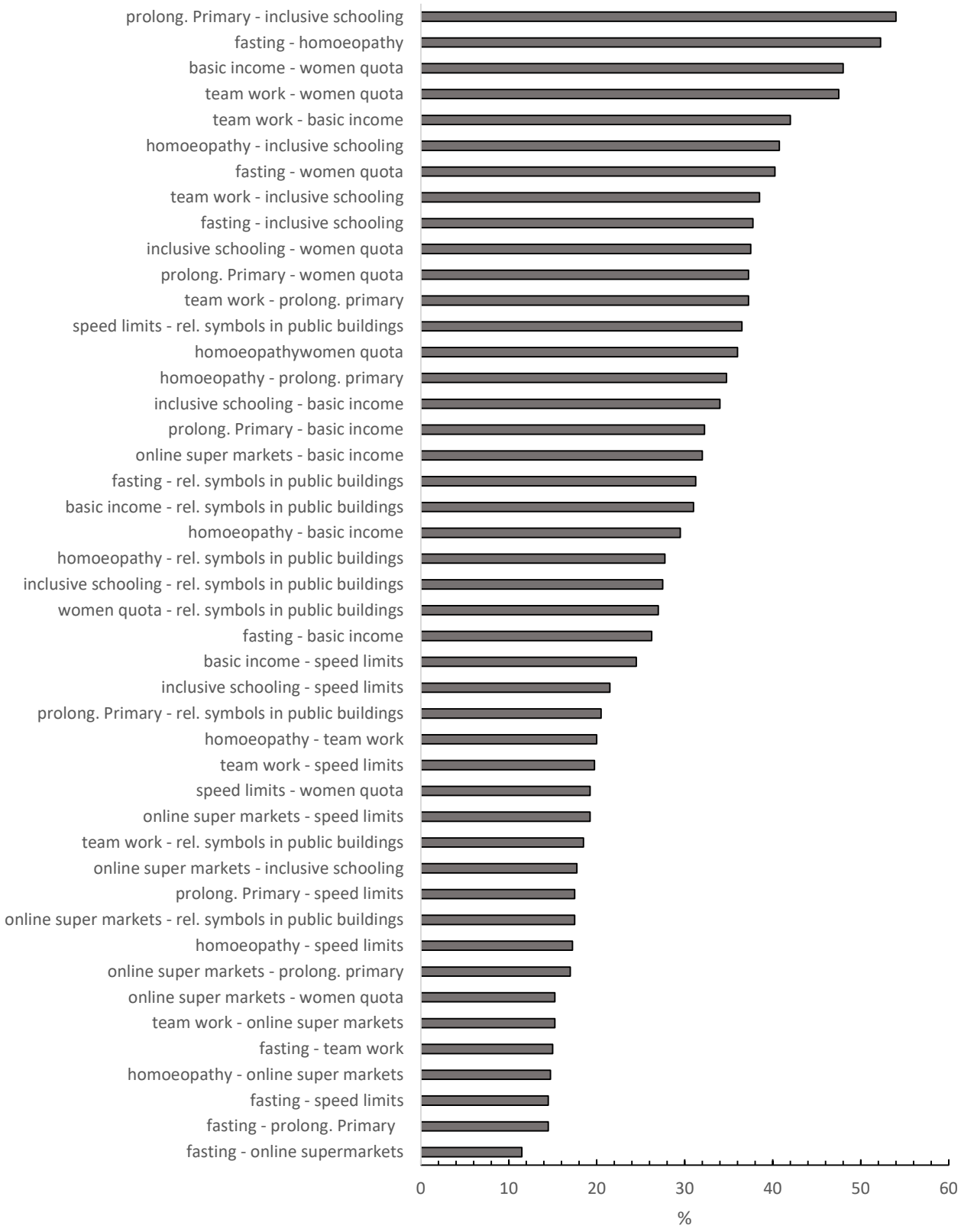
Exp. 3 (b). Example Item of the Study to Test Awareness of Similarity Between Nine Different Socio-Political Issues



Note. Depicted here: “Basic income. Imagine a person changes their attitude concerning “Basic income should be introduced in Germany.” How likely is it in percent that this person also changes their attitude concerning the following statements?” Below, different statements can be viewed on the left. The response scale from 0 to 100 % can be answered via slider. The given answer is depicted on the right hand side.

Figure 15

Exp. 3 (b). Awareness of Similarity of Attitude Socio-Political Issues



Note. Aggregated responses of participants concerning their estimation how probable it is that attitude toward attitude topic B (second topic named in X-axis) changes after attitude A (first topic named in Y-axis) had changed. Medians were aggregated from Experiment 3 (b).