Supplementary Table S1. List of all 65 measures of the test battery taken into account for the statistical analysis. Column A, "No." = Variable number; Column B, "Subject Area" = Subject area of variable: Matching, Hearing, Cognition, Health, Socioeconomic status, or Technology commitment and usage habits of media devices; Column C, "Variable" = Variable name and in case of a categorical variable possible response categories are listed; Column D, "Source" = Test or topic of self-reports; Column E, "Description" = More detailed variable information, in case of self-reports corresponding questions are presented.

No.	Subject Area	Variable	Source	Description
1	Matching	*PTA*	Audiogram	Pure-tone average in dB HL (better ear: 0.5,1,2,4 kHz)
2		*Age*	Self-reports: demographics	Age in years (year and month of birth at the time of answering the question)
3		*Sex* Male Female	Self-reports: demographics	Gender
4	Hearing	*50%-SRT*	Goettingen sentence test	Signal-to-noise ratio for 50% speech intelligibility
5		*Hearing loss detected* Yes No	Self-reports: hearing history and demands on sound quality	Have you, a doctor, relatives or friends determined that you have a hearing problem?
6		*Duration of hearing loss* No hearing problems <1 year 1 to 3 years 3 to 5 years 5 to 10 years 11 to 20 years >= 20 years	Self-reports: hearing history and demands on sound quality	Since when do you have hearing problems?
7		*Subjective hearing problems in quiet* No hearing problems	Self-reports: hearing history and demands on sound quality	How pronounced are your hearing problems in a quiet environment? (for HA-U: without hearing aid)

		Very slight Slight Medium Strong Very strong		
8		*Subjective hearing problems in noise* No hearing problems Very slight Slight Medium Strong Very strong	Self-reports: hearing history and demands on sound quality	How pronounced are your hearing problems in a noisy environment? (for HA-U: without hearing aid)
9		*Demand on sound quality of audio devices* Not at all Hardly A bit Rather Very	Self-reports: hearing history and demands on sound quality	How demanding are you regarding sound quality of audio devices?
10		*Current hearing aid use* Yes No	Self-reports: usage of hearing aids	Currently using hearing aids?
11		*Duration of hearing aid use*	Self-reports: usage of hearing aids	For how many years do you use or have you used hearing aids?
12		*Daily duration of hearing aid use* Not at all < 1h 1-4h 4-8h > 8h	Self-reports: usage of hearing aids	Hearing aid worn daily for how many hours in last 14 days?

13		*One- or two-sided hearing aid* One-sided Two-sided	Self-reports: usage of hearing aids	*Do you have a one- or two-sided hearing aid?*
14	Cognition	*Verbal intelligence*	German vocabulary test	Raw score in points
15		*Wordlist*	DemTect	Raw score in points
16		*Semantic verbal fluency*	DemTect	Raw score in points
17		*Number transcoding*	DemTect	Raw score in points
18		*Digits span reverse*	DemTect	Raw score in points
19		*Wordlist delayed recall*	DemTect	Raw score in points
20		*Cognitive sum score*	DemTect	Transformed total score based on variables no. 15 – 19 (Kalbe et al., 2004)
21	Health	*State of health in general* Excellent Very good Good Not so well Bad	Self-reports: SF-12	How would you describe your state of health in general?
22		*Impairment at vacuum cleaning* Yes, strongly impaired Yes, a little impaired No, not impaired at all	Self-reports: SF-12	Are you impaired at moderate activities by current health status (e.g., vacuum cleaning, playing golf) and if yes how strong?
23		*Impairment at taking several sets of stairs* Yes, strongly impaired Yes, a little impaired No, not impaired at all	Self-reports: SF-12	Are you impaired at taking several sets of stairs by current health status?
24		*Less accomplished due to physical health*	Self-reports: SF-12	Due to physical health less accomplished than intended in last 4 weeks?

		Yes No		
25		*Doing only certain things due to physical health* Yes No	Self-reports: SF-12	Due to physical health only able to do certain things in last 4 weeks?
26		*Less accomplished due to mental health* Yes No	Self-reports: SF-12	Due to mental health less accomplished than intended in last 4 weeks?
27		*Less accurate due to mental health* Yes No	Self-reports: SF-12	Due to mental health not able to do things as accurate as usual in last 4 weeks?
28		*Influence of pain* Not at all A little Moderate Quite A lot	Self-reports: SF-12	To what extent has pain impaired everyday activities in last 4 weeks?
29		*Calm and relaxed* Always Mostly Quite often Sometimes Rarely Never	Self-reports: SF-12	In the last 4 weeks, how often have you been 'calm and relaxed'?
30		*Full of energy* Always Mostly	Self-reports: SF-12	In the last 4 weeks, how often have you been 'full of energy'?

		Quite often Sometimes Rarely Never		
31		*Discouraged and sad* Always Mostly Quite often Sometimes Rarely Never	Self-reports: SF-12	In the last 4 weeks, how often have you been 'discouraged and sad'?
32		*Frequency of influence of health problems on social contact* Always Mostly Quite often Sometimes Rarely Never	Self-reports: SF-12	In the last 4 weeks, how often no normal contact to other people due to physical or mental problems?
33		*Physical sum score*	Self-reports: SF-12	Standardized summarizing score based on variables no. 21 – 32 (Bullinger and Kirchberger, 1998)
34		*Mental sum score*	Self-reports: SF-12	Standardized summarizing score based on variable no. 21 – 32 (Bullinger and Kirchberger, 1998)
35		*Health mean score*	Self-reports: SF-12	Arithmetic mean of variables no. 33, 34
36	Socioeconomic status	*School graduation*[1] Schüler/in Von der Schule abgegangen Hauptschulabschluss Realschulabschluss Polytechnische Oberschule	Self-reports	

[1] Response possibilities in German

		der DDR mit Abschluss der 8. oder 9.Klasse Polytechnische Oberschule der DDR mit Abschluss der 10. Klasse Fachhochschulreife Abitur Abitur über zweiten Bildungsweg Anderen Schulabschluss		
37		*Professional degree*[1] Noch in Ausbildung Schüler/in berufsorientierter Aufbau-/Fachschule Keinen beruflichen Abschluss Beruflich-betriebliche Ausbildung abgeschlossen Beruflich-schulische Ausbildung abgeschlossen Ausbildung an Fachschule in DDR abgeschlossen Ausbildung an einer Fach-, Meister-, Technikerschule Bachelor Fachhochschulabschluss Universitätsabschluss Promotion Anderen beruflichen Abschluss	Self-reports	
38		*Main professional occupation*[2]	Self-reports	

[2] Response possibilities in German

		Schüler / Student / arbeitssuchend Selbstständige/r Landwirt/in, genutzte Fläche unter 10ha Selbstständige/r Landwirt/in, genutzte Fläche 10 und mehr ha Genossenschaftsbauer Akademiker, keine Mitarbeiter Akademiker, bis 4 Mitarbeiter Akademiker, 5 und mehr Mitarbeiter Selbstständig im Handel, keine Mitarbeiter Selbstständig im Handel, 1-4 Mitarbeiter Selbstständig im Handel, 5 und mehr Mitarbeiter PGH-Mitglied Beamter/Beamtin, einfacher Dienst Beamter/Beamtin, mittlerer Dienst Beamter/Beamtin, gehobener Dienst Beamter/Beamtin, im höheren Dienst Angestellte/r, ausführende Tätigkeit nach Anweisung Angestellte/r, qualifizierte Tätigkeit nach Anweisung Angestellte/r, eigenständige Leistung mit verantwortlicher Tätigkeit Angestellte/r, umfassende		

		Führungsaufgaben Arbeiter/in, ungelernt Arbeiter/in, angelernt Facharbeiter Vorarbeiter Meister Mithelfende/r Familienangehörige/r		
39		*Net income per household* No information < 1.250 Euro 1.250 - 1.750 Euro 1.750 - 2.250 Euro 2.250 - 3.000 Euro 3.000 - 4.000 Euro 4.000 - 5.000 Euro 5.000 - 6.000 Euro > 6.000 Euro	Self-reports	
40		*Socioeconomic status sum score*	Self-reports	Sum of three indices *Job*, *Education*, and *Income* that are calculated according to Winkler and Stolzenberg (2009) using variables no. 36 – 39
41	Technology commitment and usage habits of media devices	*Overstrained with new technology* Strongly disagree = 5 Disagree = 4 Partly agree = 3 Agree = 2 Strongly agree = 1	Self-reports: technology competence	I often feel overstrained with dealing with new technological developments
42		*Dealing with new technology is difficult* Strongly disagree = 5 Disagree = 4 Partly agree = 3 Agree = 2	Self-reports: technology competence	Dealing with new technology is difficult for me – I'm unable most of the times

		Strongly agree = 1		
43		*Afraid to fail with new technology* Strongly disagree = 5 Disagree = 4 Partly agree = 3 Agree = 2 Strongly agree = 1	Self-reports: technology competence	I'm often afraid to fail when dealing with modern technology
44		*Afraid of breaking new technical products* Strongly disagree = 5 Disagree = 4 Partly agree = 3 Agree = 2 Strongly agree = 1	Self-reports: technology competence	I'm rather afraid of breaking new technological developments instead of using
45		*Technology competence*	Self-reports: technology competence	For Figure 6, first, absolute frequencies per response category were counted and summed up across the variables no. 41 – 44 for both HA-NU and HA-U. Then relative frequencies were determined. Response categories 1 – 5 of variables no. 41 – 44 refer to the categories *Not at all* – *A lot* of variable *Technology competence* in Figure 6. According to Neyer et al. (2012) technology competence is assessed by variables no. 41 – 44.
46		*Curious about new technology* Strongly disagree = 1 Disagree = 2 Partly agree = 3 Agree = 4 Strongly agree = 5	Self-reports: technology acceptance	I'm very curious about new technological developments
47		*Interested in using new technology* Strongly disagree = 1 Disagree = 2	Self-reports: technology acceptance	I'm always interested in using newest technical devices

		Partly agree = 3 Agree = 4 Strongly agree = 5		
48		*Would like to use technical products more often* Strongly disagree = 1 Disagree = 2 Partly agree = 3 Agree = 4 Strongly agree = 5	Self-reports: technology acceptance	I would use technical products much more often if I had the opportunity
49		*Quickly take a shine to new technology* Strongly disagree = 1 Disagree = 2 Partly agree = 3 Agree = 4 Strongly agree = 5	Self-reports: technology acceptance	I quickly take a shine to new technological developments
50		*Technology acceptance*	Self-reports: technology acceptance	For Figure 6, first, absolute frequencies per response category were counted and summed up across the variables no. 46 – 49 for both HA-NU and HA-U. Then relative frequencies were determined. Response categories 1 – 5 of variables no. 46 – 49 refer to the categories *Not at all – A lot* of variable *Technology acceptance* in Figure 6. According to Neyer et al. (2012) technology acceptance is assessed by variables no. 46 – 49.
51		*Successful use is up to me* Strongly disagree = 1 Disagree = 2 Partly agree = 3 Agree = 4 Strongly agree = 5	Self-reports: technology control	It is in my hand whether the use of new technological developments succeeds
52		*Solving difficulties depends on me* Strongly disagree = 1	Self-reports: technology control	Solving difficulties in dealing with technology depends on me

		Disagree = 2 Partly agree = 3 Agree = 4 Strongly agree = 5		
53		*What happens is in my control* Strongly disagree = 1 Disagree = 2 Partly agree = 3 Agree = 4 Strongly agree = 5	Self-reports: technology control	It is in my control what happens when I work with new technological developments
54		*Success depends on me* Strongly disagree = 1 Disagree = 2 Partly agree = 3 Agree = 4 Strongly agree = 5	Self-reports: technology control	Success in dealing with modern technology depends on me
55		*Technology control*	Self-reports: technology control	For Figure 6, first, absolute frequencies per response category were counted and summed up across the variables no. 51 – 54 for both HA-NU and HA-U. Then relative frequencies were determined. Response categories 1 – 5 of variables no. 51 – 54 refer to the categories *Not at all – A lot* of variable *Technology control* in Figure 6. According to Neyer et al. (2012) technology control is assessed by variables no. 51 – 54.
56		*Technology commitment mean score*	Self-reports: technology commitment	First, mean values of variables no. 41– 44, 46 – 49, and 51– 54 were calculated. Then the arithmetic mean was calculated based on those three variables.
57		*Frequency of using a PC/notebook* No usage Less than once per month Once or more monthly Once or more weekly	Self-reports: usage habits of media devices	Do you use a PC/notebook and if yes, how often?

		Once or more daily		
58		*Frequency of using a tablet* No usage Less than once per month Once or more monthly Once or more weekly Once or more daily	Self-reports: usage habits of media devices	Do you use a tablet and if yes, how often?
59		*Frequency of using a MP3 player* No usage Less than once per month Once or more monthly Once or more weekly Once or more daily	Self-reports: usage habits of media devices	Do you use a MP3 player and if yes, how often?
60		*Frequency of writing E-mails* No usage Less than once per month Once or more monthly Once or more weekly Once or more daily	Self-reports: usage habits of media devices	Do you write E-mails and if yes, how often?
61		*Frequency of using the Internet* No usage Less than once per month Once or more monthly Once or more weekly Once or more daily	Self-reports: usage habits of media devices	Do you use the Internet and if yes, how often?
62		*Frequency of using a fixed phone* No usage Less than once per month	Self-reports: usage habits of media devices	Do you use a fixed phone and if yes, how often?

		Once or more monthly Once or more weekly Once or more daily		
63		*Frequency of using a smartphone* No usage Less than once per month Once or more monthly Once or more weekly Once or more daily	Self-reports: usage habits of media devices	Do you use a smartphone and if yes, how often?
64		*Frequency of using a mobile phone without Internet* No usage Less than once per month Once or more monthly Once or more weekly Once or more daily	Self-reports: usage habits of media devices	Do you use a mobile phone without Internet and if yes, how often?
65		*Usage habits sum score*	Self-reports: usage habits of media devices	Sum of variables no. 57 – 64

Supplementary Table S2. Health status of HA-NU and HA-U. Shown are percentages across the different response categories of the health questions.

Health questions	**Response categories**	**HA-NU**	**HA-U**
		Percentages (%)	Percentages (%)
State of health in general	*Excellent*	4.4	5.4
	Very good	17.7	14.5
	Good	50.6	74.5
	Not so well	24.1	3.4
	Bad	3.3	2.2
Impairment at vacuum cleaning	*Yes, strongly impaired*	5.0	0.0
	Yes, a little impaired	37.5	27.2
	No, not impaired at all	57.5	72.9
Impairment at taking several sets of stairs	*Yes, strongly impaired*	5.5	0.0
	Yes, a little impaired	44.2	29.7
	No, not impaired at all	49.8	70.3
	Missing values[1]	0.6	0.0
Less accomplished due to physical health	*Yes*	30.9	27.4
	No	69.1	72.6
Doing only certain things due to physical health	*Yes*	26.2	17.9
	No	72.7	79.9
	Missing values[1]	1.1	2.2
Less accomplished due to mental	*Yes*	22.4	8.0

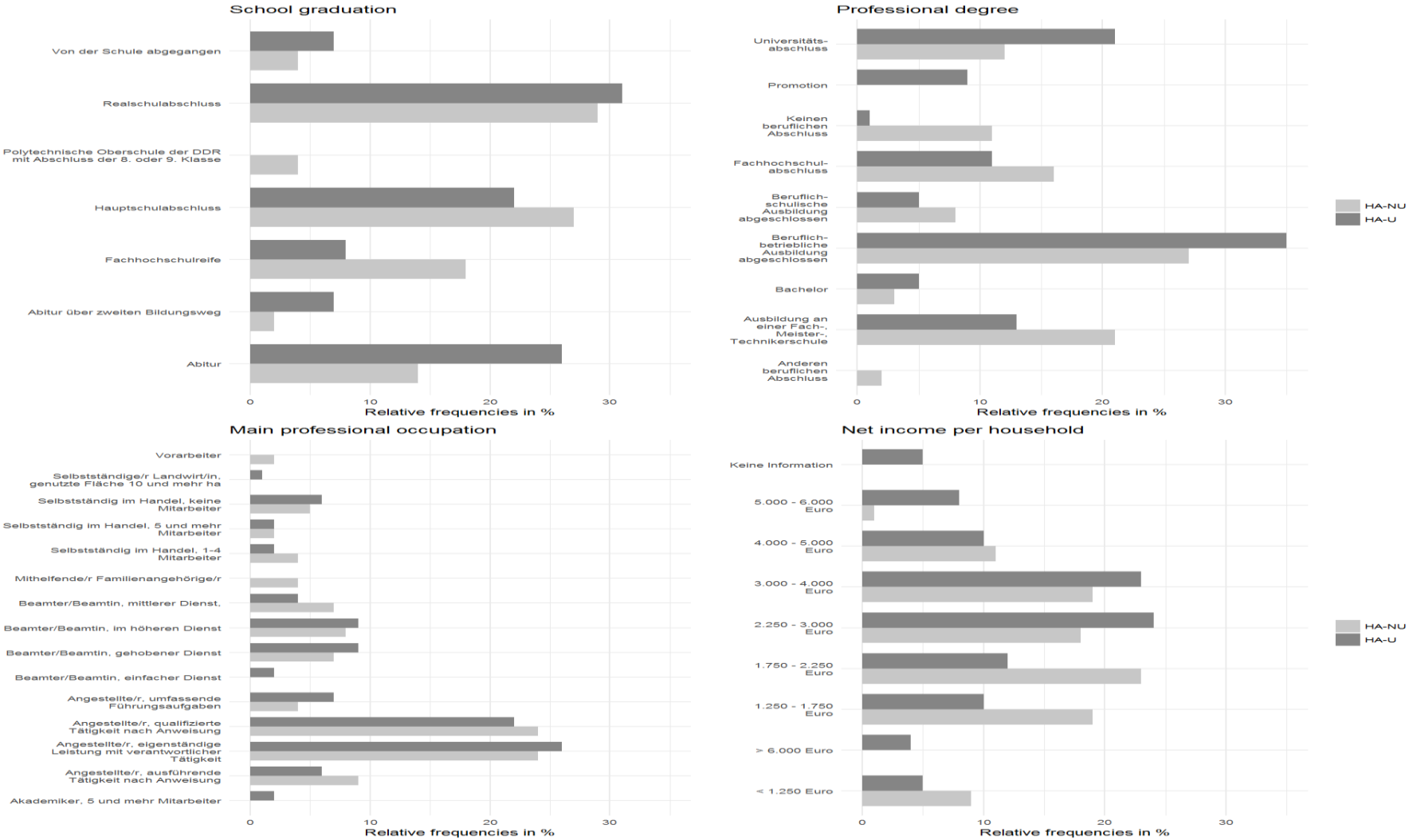
health	*No*	77.6	92.1
Less accurate due to mental health	*Yes*	16.5	8.3
	No	83.6	91.7
Influence of pain	*Not at all*	44.5	49.2
	A little	28.3	30.2
	Moderate	15.0	15.7
	Quite	11.2	4.9
	A lot	1.1	0.0
Calm and relaxed	*Always*	9.2	14.4
	Mostly	51.8	59.9
	Quite often	19.3	16.0
	Sometimes	8.3	9.7
	Rarely	9.5	0.0
	Never	2.0	0.0
Full of energy	*Always*	4.0	5.5
	Mostly	21.0	31.9
	Quite often	33.9	38.3
	Sometimes	17.6	18.0
	Rarely	21.4	6.3
	Never	0.0	0.0
	Missing values[1]	2.2	0.0
Discouraged and sad	*Always*	2.2	0.0
	Mostly	4.2	0.0
	Quite often	3.2	1.2
	Sometimes	19.8	12.7

	Rarely	37.3	46.4
	Never	31.0	39.7
	Missing values[1]	2.2	0.0
Frequency of influence of health problems on social contact	*Always*	0.0	0.0
	Mostly	4.2	0.0
	Quite often	17.8	11.0
	Sometimes	26.7	25.6
	Rarely	51.3	63.4
	Never	0.0	0.0

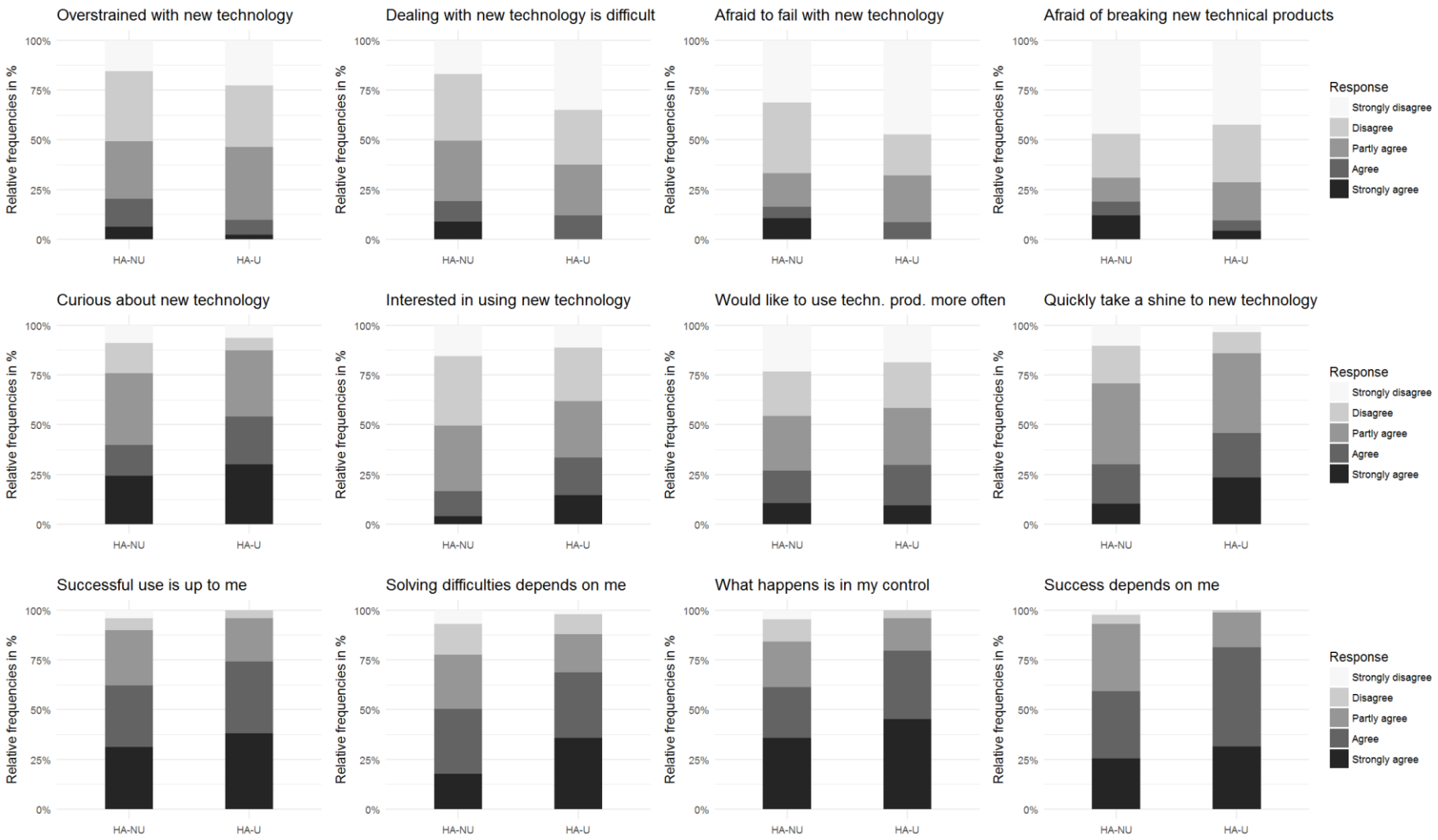
Note: Because of rounding percentages may add up to more or less than 100%.

[1]The category “Missing values” is listed only when at least one missing value occurs in HA-NU or HA-U.

Supplementary Figure S3. Frequency distributions of the single questions assessing the socioeconomic status among HA-NU and HA-U. Figure S3 shows relative frequency distributions of the four measures *School graduation*, *Professional degree*, *Main professional occupation*, and *Net income per household*. Here, the response categories are listed in German.



Supplementary Figure S4. Frequency distributions of the 12 single items assessing the technology commitment among HA-NU and HA-U. Figure S4 shows relative frequency distributions of the four questions addressing *Technology competence* (four upper panels), *Technology acceptance* (four middle panels), and *Technology control* (four bottom panels).



Supplementary Figure S5. Frequency distributions of the eight self-reports assessing the usage habits of media devices among HA-NU and HA-U. Figure S5 shows relative frequency distributions of the frequency of using a PC or notebook, tablet, mp3 player, writing emails, using the internet, using a fixed phone, smartphone, and a mobile phone without internet.