

**Social Roles and Role Importance in Later Life: A Longitudinal Analysis of Stability
and Change**

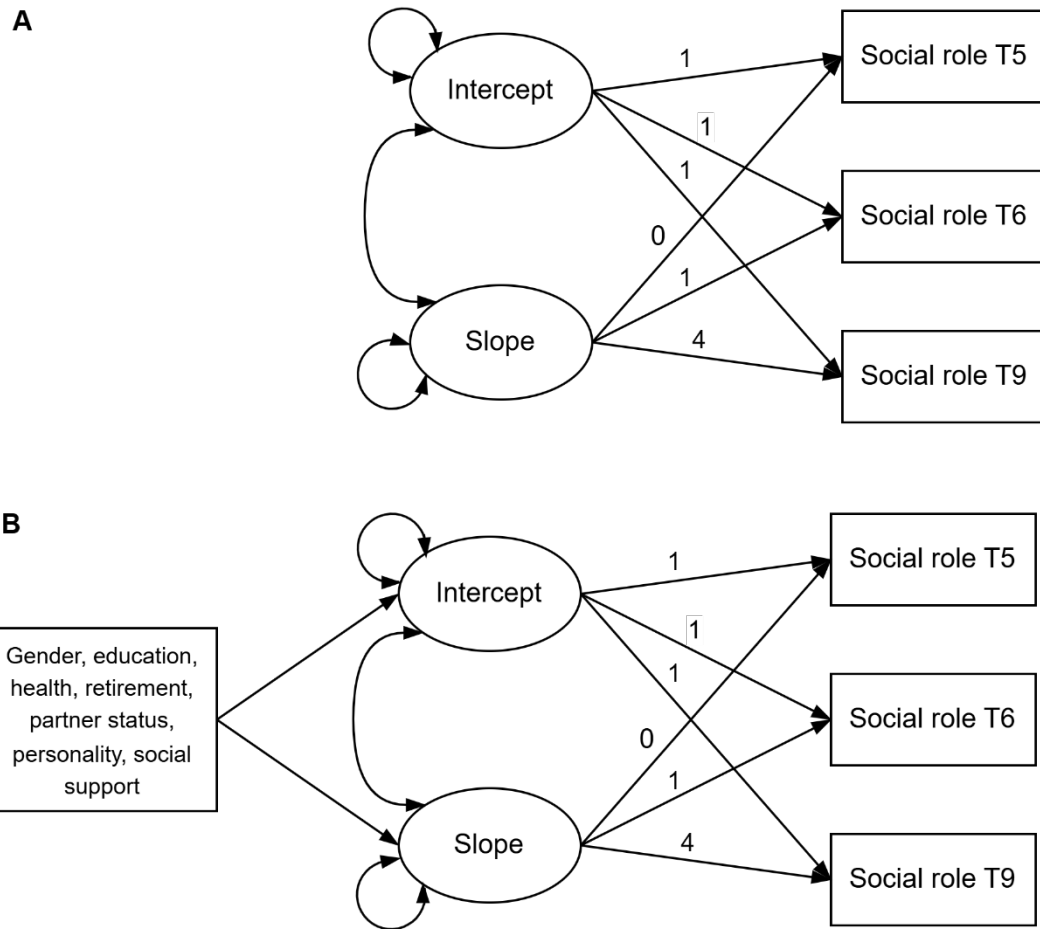
Supplementary Material

SUPPLEMENTARY TABLE S1. *Deviations from pre-registration*

#	Details		Original Wording	Deviation Description
1	Type	Data Preparation	“[...] we compute for every respondent the role-specific absolute importance and the relative importance. For the latter, we subtract the person-mean from the role importance. This variable ranges, in theory, from -3.6 to 3.6, with negative numbers indicating below-average importance, and positive numbers indicating above-average importance.”	Instead of subtracting the person-mean from the role importance, we divided the role importance by the person mean.
	Reason	New knowledge		
	Timing	After data access		Many participants rated the social roles as either ‘0’ or ‘5.’ In the original wording, their person-mean would be 5 and the relative importance therefore $5 - 5 = 0$. This would make it impossible to distinguish between 0 as the relative and absolute importance. Therefore, a relative importance above 1 indicates above-average importance, whereas a score below 1 indicates below-average importance.
2	Type	Data Preparation	“we will calculate the following person-specific variables: [...] the number of important roles, i.e., the number of roles rated equal to or higher than 4 (<i>important</i>).”	Instead of taking 4 (<i>important</i>) as the cut-off for important roles, we used 5 (<i>very important</i>).
	Reason	New knowledge		
	Timing	After data access		This is based on the fact that roles are very often allocated 5, whereas 4 is much less common. From that, we inferred that participants likely use 5 when they want to indicate a role as important instead of 4 and 5 together.
3	Type	Data Preparation	Respondents rated the importance of ten specific social roles [...]. The roles included: life companion (husband/wife/partner/etc.), sibling, parent, friend, grandparent, support and caregiver, volunteer, professional (if still working), connected to previous profession (if retired), and connected to activity (sports, culture, studies, organizations, congregation, etc.).	We combined the roles <i>professional (if still working)</i> and <i>connected to previous profession (if retired)</i> into one ‘(previous) work’ role and set the value based on the participants’ retirement status. This results in nine instead of ten roles.
	Reason	New knowledge		
	Timing	After data access		The questionnaire intended the participants to only fill in one of the two roles, depending on whether they were retired. However, we saw that many retired respondents filled in the previous profession role and vice versa, or filled in both. We decided to combine the roles into one ‘(previous) work’ role as follows: if a person is retired, the new role has the value given to the <i>previous profession</i> role; if a person is not retired, the new role has the value given to the <i>professional</i> role.

4	Type	Data Preparation	“We will create two variables from retirement status, anchored at T5. One measures the years of retirement at T5, ranging from 0 (still working at T5) to 5 (retired at T1). The second variable measures the total years of working from T6 to T9, ranging from 0 (retired at T6 and no change until T9) to 4. This approach takes into account the possibility of individuals shifting in and out of retirement on multiple occasions.”	Instead, we computed three variables for retirement (and relationship) status: (1) status at T5; (2) does not have relationship/retirement at T5 but does at T9 (yes/no); (3) does have relationship/retirement at T5 but does not at T9 (yes/no).
	Reason	New knowledge		
	Timing	After results known		Due to the dynamical character of relationship and retirement, meaning that respondents can transition in and out on multiple occasions, the years since retirement/relationship does not indicate their current status, nor does it mean they have had this status for a long time. Therefore, we concluded that the status at the first measurement would be a better predictor of social role changes.
				As we do know changes in work and relationship can have large impact on older adults’ social lives, we still wanted to include a basic measure of change. Detailed change-change effects in the context of life transitions were not the focus of this article, and are suggested for future research.

Notes: Table template provided by Wilroth & Atherton (2024)



SUPPLEMENTARY FIGURE S1. Graphical representation of the LGCM. The upper figure (A) displays the latent growth model without predictors, assessing the change in social role importance over time. The lower figure (B) displays the model where the intercept and slope are regressed on the predictors, to examine predictors of change in social role importance.

SUPPLEMENTARY TABLE S2. *Descriptive statistics of predictors (measured at T5)*

Predictor	<i>N</i>	Range	<i>M</i>	<i>SD</i>
Years of education	3,803	0 – 40	13.66	3.45
Health status	3,882	1 – 6	4.60	0.99
Extraversion	3,819	1 – 5	3.24	0.92
Agreeableness	3,816	1 – 5	3.94	0.69
Conscientiousness	3,815	1.2 – 5	4.07	0.69
Neuroticism	3,813	1 – 5	2.19	0.80
Openness	3,813	1 – 5	3.41	0.84
Support from friends	3,808	1 – 7	5.65	1.53
Support from family	3,810	1 – 7	6.07	1.40
Support from Partner	3,812	1 – 7	5.92	1.56

Notes: *M* = Mean, *SD* = Standard deviation.

SUPPLEMENTARY TABLE S3. *Bivariate correlation coefficients of predictors and overall social role outcomes*

Predictor	Number of roles			Number of important roles			Average importance		
	T5	T6	T9	T5	T6	T9	T5	T6	T9
Female	−0.08***	−0.07**	−0.10***	0.17***	0.18***	0.18***	0.19***	0.18***	0.20***
Years of education	0.03	0.01	0.03	−0.01	−0.02	−0.01	0.00	−0.02	−0.01
Health	0.06**	0.05	0.09***	0.14***	0.15***	0.17***	0.12***	0.14***	0.14***
Retirement	−0.12***	−0.06*	−0.02	−0.09***	−0.05	−0.06	−0.04	−0.04	−0.07*
Relationship	0.28***	0.28***	0.28***	0.19***	0.17***	0.17***	0.10***	0.05	0.04
Extraversion	0.12***	0.12***	0.11***	0.25***	0.25***	0.26***	0.21***	0.21***	0.20***
Agreeableness	0.05*	0.05	0.04	0.32***	0.32***	0.31***	0.30***	0.29***	0.26***
Conscientiousness	−0.01	0.00	−0.03	0.22***	0.23***	0.21***	0.20***	0.21***	0.20***
Neuroticism	−0.02	−0.05	−0.05	−0.13***	−0.12***	−0.11***	−0.12***	−0.10***	−0.09***
Openness	0.06**	0.05	0.08**	0.10***	0.11***	0.12***	0.06**	0.06*	0.05
Support from friends	0.06*	0.06*	0.08**	0.40***	0.38***	0.37***	0.41***	0.37***	0.35***
Support from family	0.12***	0.12***	0.12***	0.39***	0.37***	0.36***	0.37***	0.34***	0.32***
Support from Partner	0.09***	0.10***	0.11***	0.34***	0.32***	0.32***	0.33***	0.27***	0.26***

Significance levels: * $p < .05$, ** $p < .01$, *** $p < .001$

SUPPLEMENTARY TABLE S4. *Bivariate correlation coefficients of predictors and family and friend roles*

	Partner			Sibling			Parent			Friend			Grandparent		
	T5	T6	T9	T5	T6	T9	T5	T6	T9	T5	T6	T9	T5	T6	T9
Female	−0.15***	−0.15***	−0.15***	0.06	0.05	0.09**	−0.07**	−0.03	−0.05	0.04	0.08**	0.04	−0.05	−0.02	−0.06
Years of education	0.05	0.04	0.06	−0.03	−0.01	0.00	0.04	0.02	0.01	−0.06	−0.03	−0.02	0.00	0.00	−0.01
Health	0.02	0.01	0.04	0.01	0.00	0.01	−0.03	−0.04	−0.06	−0.01	−0.01	−0.01	−0.03	−0.05	−0.03
Retirement	0.06	0.05	0.04	0.03	0.04	0.02	0.02	−0.01	0.02	0.04	0.04	0.03	0.05	0.01	0.04
Relationship	0.25***	0.22***	0.19***	−0.06	−0.06	−0.05	−0.02	0.00	0.00	−0.11***	−0.11***	−0.07*	−0.01	0.02	0.01
Extraversion	−0.06	−0.11***	−0.08*	−0.01	−0.02	0.04	−0.08**	−0.07*	−0.09**	0.07**	0.07*	0.10***	−0.08**	−0.09**	−0.08
Agreeableness	−0.11***	−0.12***	−0.10***	0.01	0.02	0.02	−0.11***	−0.11***	−0.09**	0.09***	0.08**	0.11***	−0.13***	−0.10***	−0.07
Conscientiousness	−0.07*	−0.06	−0.08	−0.01	0.01	0.02	−0.06	−0.07*	−0.06	0.03	0.01	0.02	−0.06	−0.08*	−0.07
Neuroticism	−0.05	−0.06	−0.07	0.00	−0.05	0.00	0.00	0.03	0.05	−0.05	−0.04	−0.01	0.02	0.03	0.01
Openness	0.00	−0.01	0.02	0.01	−0.01	0.00	−0.01	−0.04	0.00	0.02	0.02	0.05	−0.04	−0.04	−0.03
Support from friends	−0.08**	−0.07	−0.03	0.05	0.08**	0.07	−0.16***	−0.11***	−0.15***	0.20***	0.16***	0.16***	−0.17***	−0.14***	−0.12***
Support from family	0.07*	0.07	0.08*	0.02	0.05	0.07	−0.05	−0.04	−0.10***	0.00	−0.04	−0.01	−0.09**	−0.07	−0.04
Support from Partner	0.11***	0.09***	0.11***	0.01	0.06	0.05	−0.09***	−0.08**	−0.10***	0.04	0.02	0.04	−0.12***	−0.08*	−0.06

Significance levels: * $p < .05$, ** $p < .01$, *** $p < .001$

SUPPLEMENTARY TABLE S5. *Correlation coefficients of predictors and the relative importance of activity roles*

Predictor	Caregiver			Volunteer			(Previous) work			Active membership		
	T5	T6	T9	T5	T6	T9	T5	T6	T9	T5	T6	T9
Female	0.04	0.02	0.03	0.08	0.04	0.07	−0.02	−0.04	−0.01	−0.03	−0.03	−0.05
Years of education	−0.03	−0.06	−0.03	0.05	0.02	0.05	0.09 [*]	0.08 [*]	0.10 [*]	0.05	0.05	0.05
Health	−0.08	−0.03	−0.06	0.01	0.02	0.03	0.02	0.00	−0.03	0.11 ^{***}	0.08 [*]	0.11 ^{***}
Retirement	0.02	0.02	−0.03	0.07	0.04	−0.01	−0.46 ^{***}	−0.35 ^{***}	−0.22 ^{***}	0.07 [*]	0.01	0.00
Relationship	−0.02	−0.05	−0.08	−0.12 ^{***}	−0.15 ^{***}	−0.13 ^{***}	−0.04	−0.04	−0.07	−0.01	−0.04	−0.01
Extraversion	0.01	0.02	0.01	0.07	0.09	0.03	0.03	0.08	0.07	0.13 ^{***}	0.09 ^{***}	0.08
Agreeableness	0.08	0.08	0.04	0.10 ^{**}	0.12 ^{***}	0.05	0.04	0.02	0.02	0.06	0.04	0.08
Conscientiousness	0.03	0.04	0.03	−0.01	0.04	0.02	0.00	−0.02	0.02	0.08 ^{**}	0.03	0.02
Neuroticism	0.06	0.06	0.06	0.06	0.01	0.00	0.02	0.05	0.05	−0.05	−0.03	−0.08
Openness	0.01	0.03	0.02	0.05	0.02	−0.01	0.04	0.06	0.06	0.03	0.05	0.06
Support from friends	0.09 [*]	0.03	0.04	0.04	0.02	0.02	−0.04	−0.01	0.01	0.06	0.02	0.03
Support from family	0.03	0.01	−0.01	−0.05	−0.07	−0.04	−0.07	−0.06	−0.08	0.00	−0.03	0.00
Support from partner	0.11 ^{***}	0.09 ^{***}	0.11 ^{***}	0.01	0.06	0.05	−0.09 ^{***}	−0.08 ^{**}	−0.10 ^{***}	0.04	0.02	0.04

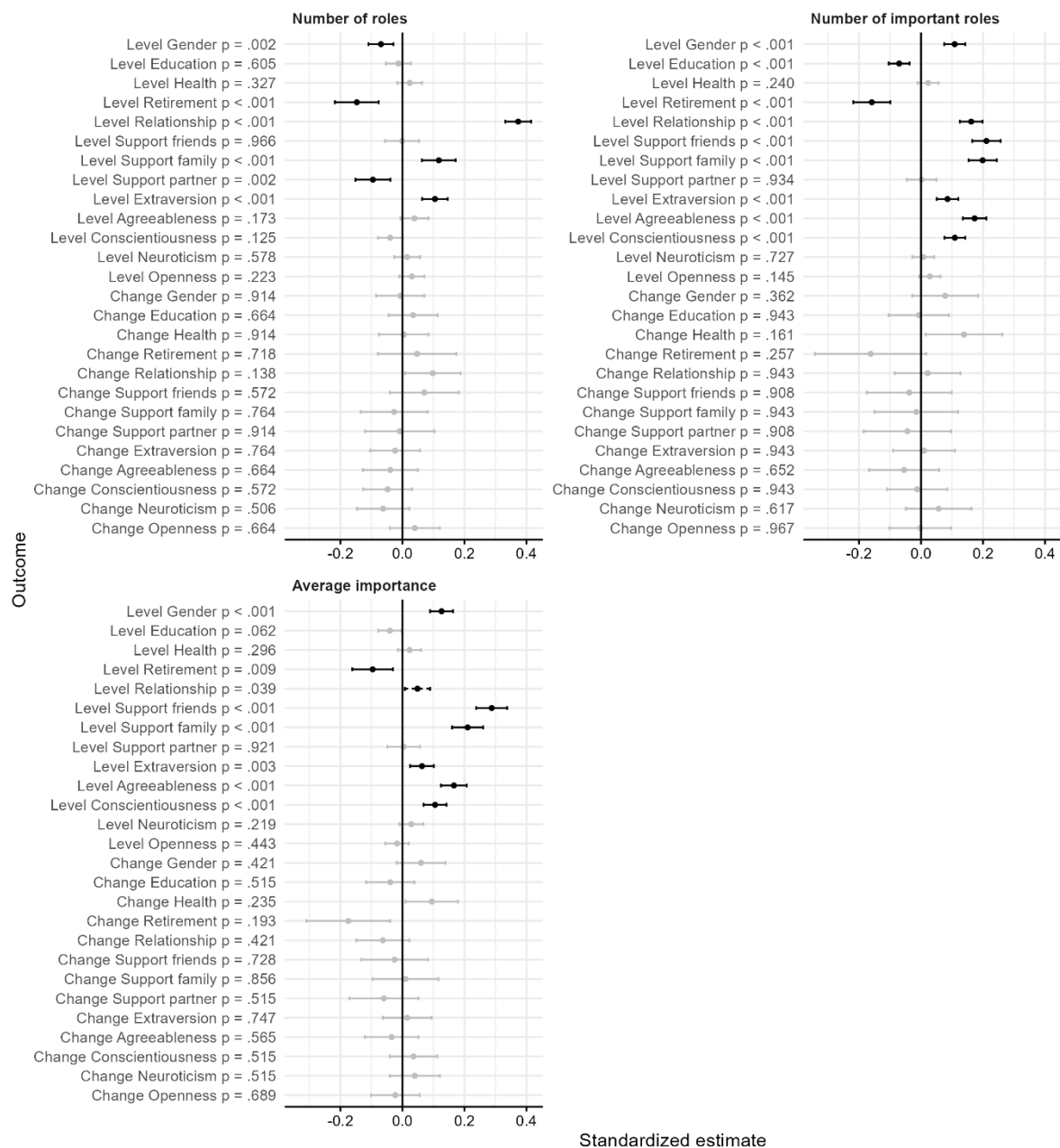
Significance levels: ^{*} $p < .05$, ^{**} $p < .01$, ^{***} $p < .001$

SUPPLEMENTARY TABLE S6. *Goodness of fit measures for LGCM with and without predictors*

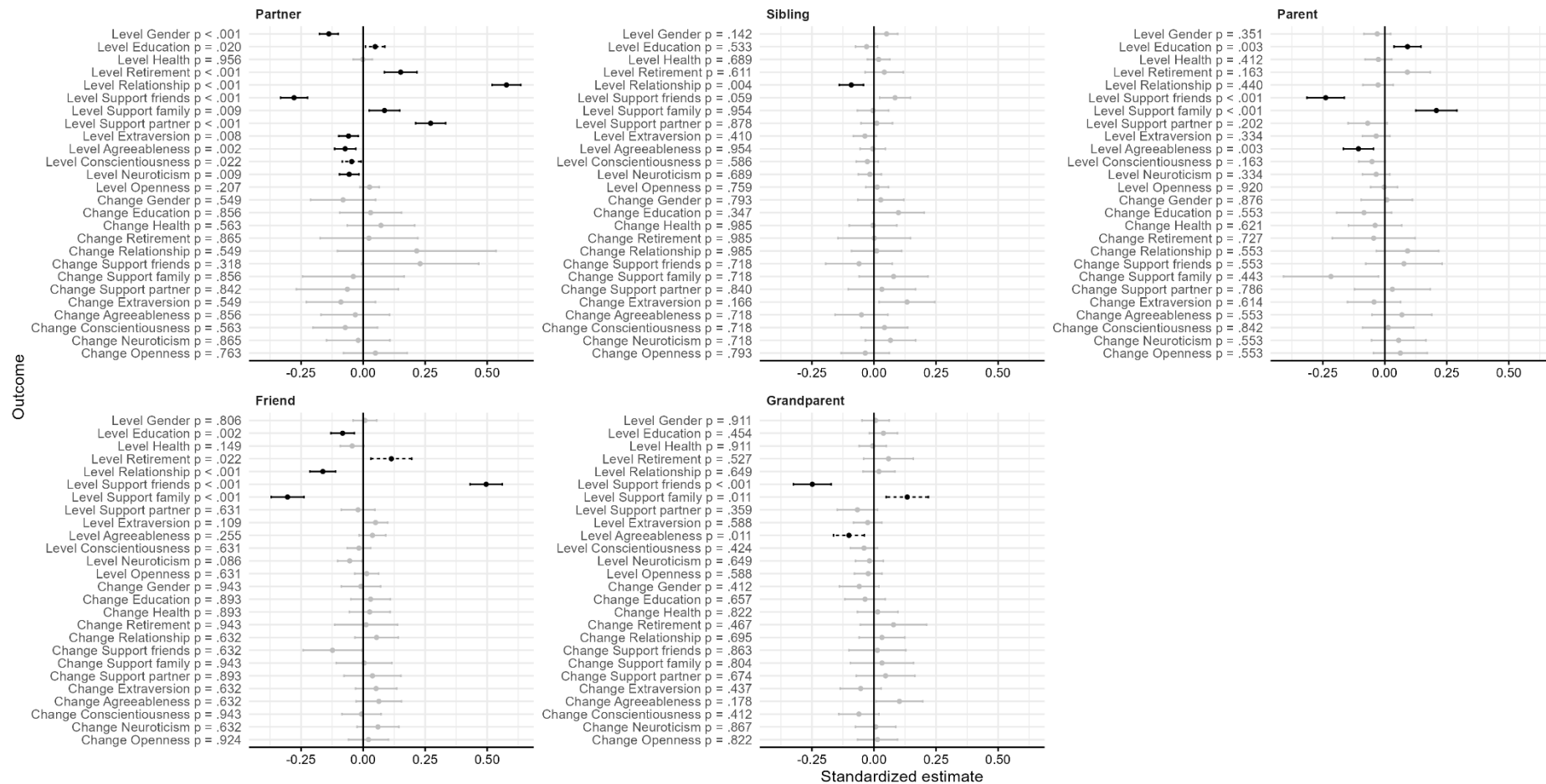
Outcome	LGM without predictors				LGM with predictors			
	$\chi^2(1)$	CFI	RMSEA	SRMR	$\chi^2(18)$	CFI	RMSEA	SRMR
Overall role outcomes								
Number of roles	0.59	1.000	0.000	0.003	17.73	1.000	0.000	0.004
Number of important roles	4.07*	0.999	0.028	0.007	22.26	0.999	0.008	0.004
Average importance	2.36	0.999	0.019	0.006	23.04	0.999	0.008	0.005
Relative importance of specific roles								
Partner	4.43*	0.997	0.032	0.010	23.40	0.997	0.009	0.008
Sibling	3.33	0.999	0.026	0.007	31.51*	0.994	0.014	0.005
Parent	1.36	0.999	0.010	0.006	23.34	0.993	0.009	0.005
Friend	0.06	1.000	0.000	0.001	14.29	1.000	0.000	0.003
Grandparent	0.13	1.000	0.000	0.002	13.66	1.000	0.000	0.004
Caregiver	1.57	0.998	0.015	0.009	12.67	1.000	0.000	0.005
Volunteer	0.01	1.000	0.000	0.001	17.85	1.000	0.000	0.005
(Previous) work	3.69	0.997	0.029	0.010	25.18	0.996	0.010	0.006
Active membership	0.01	1.000	0.000	0.000	18.62	0.999	0.003	0.006

Notes: LGCM = Latent Growth Curve Model; CFI = Comparable Fit Index; RMSEA = Root Mean Squared Error of Approximation; SRMR = Standardized Root Mean Squared Error.

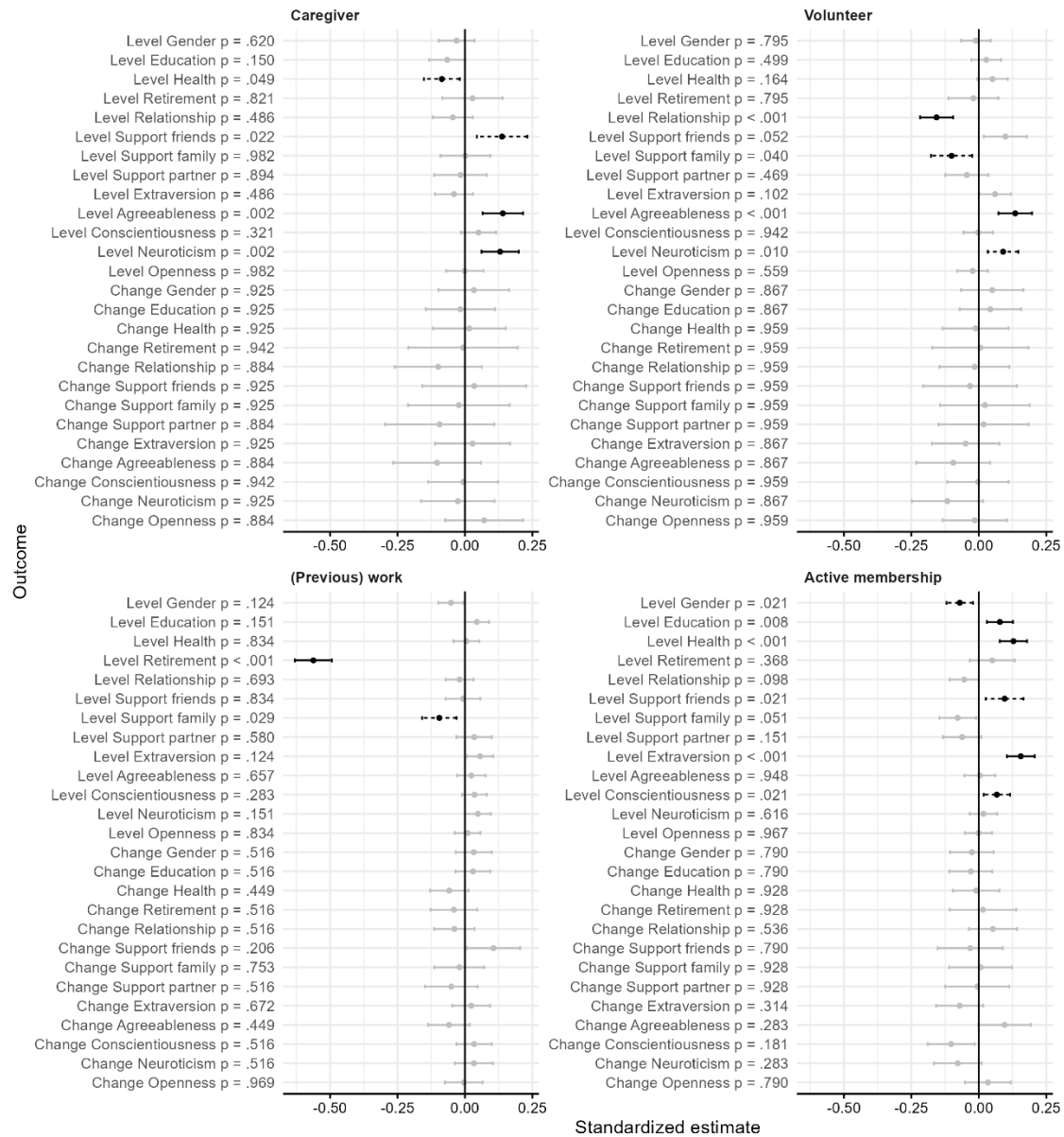
Significance levels: * $p < .05$, ** $p < .01$, *** $p < .001$



SUPPLEMENTARY FIGURE S2. Standardized LGCM level and change estimates of baseline predictors on the overall role outcomes. Figures show standardized point estimates (dots) with the 95% confidence intervals (lines). Grey solid lines indicate non-significant estimates, black dashed lines indicate $.01 < p < .05$, and black solid lines indicate $p < .01$.



SUPPLEMENTARY FIGURE S3. Standardized LGCM level and change estimates of baseline predictors on the family and friend roles. Figures show standardized point estimates (dots) with the 95% confidence intervals (lines). Grey solid lines indicate non-significant estimates, black dashed lines indicate $.01 < p < .05$, and black solid lines indicate $p < .01$.



SUPPLEMENTARY FIGURE S4. Standardized LGCM level and change estimates of baseline predictors on the activity roles. Figures show standardized point estimates (dots) with the 95% confidence intervals (lines). Grey solid lines indicate non-significant estimates, black dashed lines indicate $.01 < p < .05$, and black solid lines indicate $p < .01$.

Appendix A. Supplementary Analyses: Change in Retirement and Relationship Status

To get a first impression of the effects of life transitions on changes in social role importance, we calculated variables indicating changes in retirement and relationship status. For both, we calculated two variables comparing status at T5 to status at T9. *Into retirement E-I* indicated whether someone was not retired at T5 but retired at T9 (*yes/no*), *out of retirement E-I* indicated those who were retired at T5 but not retired at T9 (*yes/no*). For relationship, *gain relationship E-I* measured those who were not in a relationship at T5 but were partnered at T9 (*yes/no*), and *lose relationship E-I* measured those who were in a relationship at T5 but not anymore at T9 (*yes/no*).¹

Results

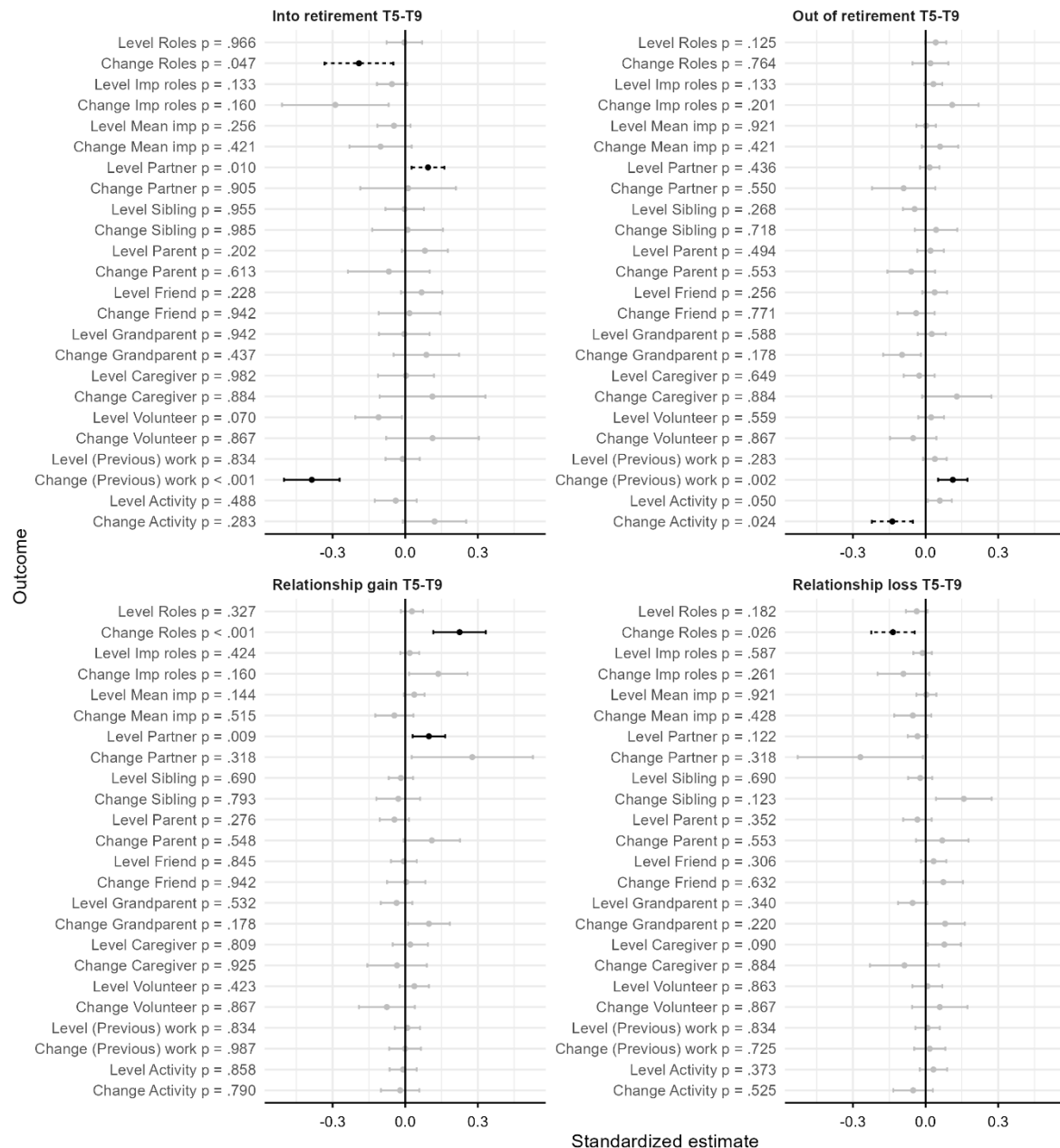
These results are based on the same models as in the main text, that is, with all baseline predictors also included). For retirement status, 2,806 (71.8%) were retired at T5. Between T5 and T9, 604 (21.3%) respondents retired and 50 (1.8%) transitioned out of retirement. For relationship status, 3,066 (80.2%) had a relationship at T5. Between T5 and T9, 47 (1.7%) gained a relationship and 123 (4.4%) lost their relationship.

The effects of the four variables are shown in Supplementary Figure S5. Regarding retirement, participants who were not retired at T5 but were retired at T9 had a higher relative importance of the partner role ($\beta = 0.09, p = .010$); no other significant level effects were found. We also found two significant change effects: transitioning into retirement was associated with a decrease in number of roles over time ($\beta = -0.19, p = .047$) and a decreased importance of the (previous) work role ($\beta = -0.39, p < .001$). For transitioning out of retirement (i.e., start working again) we found no level effects and two significant change

¹ Please note that these variables only compare the status at T5 and T9, and do not take into account possible changes that happened in-between.

effects: an increased relative importance of the work role ($\beta = 0.11, p = .002$) and a decreased relative importance of the active membership role ($\beta = -0.14, p = .025$).

Regarding relationship gain between T5 and T9, we found one significant level effect (a higher partner role importance, $\beta = 0.10, p = .009$) and one significant change effect (an increase in the number of roles, $\beta = 0.22, p < .001$). For losing a relationship, we only found a significant decrease in the number of roles ($\beta = -0.13, p = .027$).

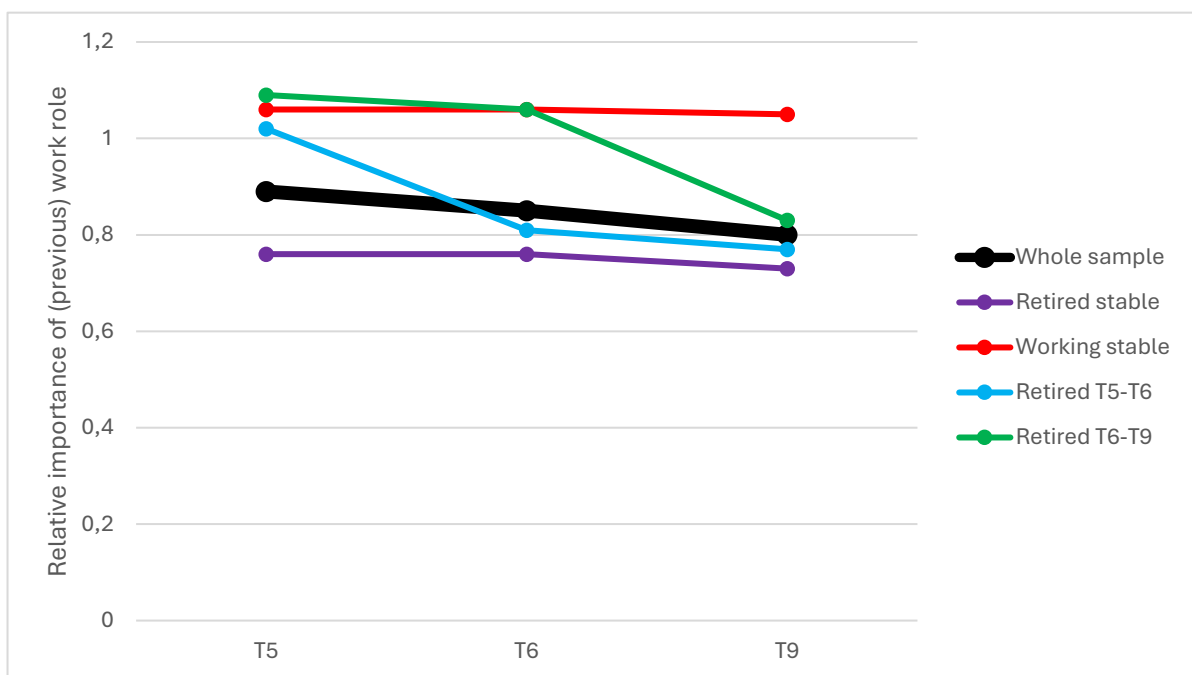


SUPPLEMENTARY FIGURE S5. Standardized LGCMLCM level and change estimates of change predictors of retirement and relationship status on the overall and role-specific importance outcomes. Figures show standardized point estimates (dots) with the 95% confidence intervals (lines). Grey solid lines indicate non-significant estimates, black dashed lines indicate $.01 < p < .05$, and black solid lines indicate $p < .01$.

Appendix B. Sensitivity Analysis: Change in Work Role Importance

Of the $N = 3,882$ participants at T5, 1,950 (50.2%) were retired at both T5 and T9, and 226 (5.8%) were working at both T5 and T9. Furthermore, 278 (7.2%) retired between T5 and T6, 296 (7.6%) retired between T6 and T9, 1027 (26.5%) did not participate on T9, and 105 (2.7%) had some other distribution (i.e., T5 missing, both waves missing, or retired at T5 and working at T9).

Supplementary Figure S6 below shows the descriptive statistics of the relative importance of the (previous) work role, per wave. It shows that work role importance decreases during and after retirement, while the decrease is smaller in the groups with stable retirement status over waves.



SUPPLEMENTARY FIGURE S6. Relative importance of the (previous) work role in the whole sample and several subsamples based on retirement, per wave

Next, we ran the LGCM for the relative importance of the combined work role on the subsample of those who remained stable during the study period (i.e., either remained working or remained retired; $n = 2176$). Results for this analysis showed that in the stable subsample, there remained a significant decrease in the work role importance over time ($b = -.01, p = .048, \beta = -0.08$).

References

Willroth, E. C., & Atherton, O. E. (2024). Best Laid Plans: A Guide to Reporting Preregistration Deviations. *Advances in Methods and Practices in Psychological Science*, 7(1). <https://doi.org/10.1177/25152459231213802>