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To cite this article: Lotte Pummerer, Carlotta Reinhardt & Michael Nielsen (30 Aug 2025): Leaving the Catholic Church: Cross-Sectional and Longitudinal Predictors of Leaving Intentions, The International Journal for the Psychology of Religion, DOI: [10.1080/10508619.2025.2553408](https://doi.org/10.1080/10508619.2025.2553408)

To link to this article: <https://doi.org/10.1080/10508619.2025.2553408>



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Leaving the Catholic Church: Cross-Sectional and Longitudinal Predictors of Leaving Intentions

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ABSTRACT

What predicts whether people are likely to leave the Catholic Church? We examine the role of different identification aspects and their interaction with acceptance of authority, possibility for change, and reputation of the Church in society. In a cross-sectional ($N = 583$) and longitudinal study with random intercept ($N = 271$) we find that specifically lower scores on the identification aspects of solidarity, satisfaction, and centrality predict leaving intentions. Cross-sectionally, the relationship between identification and leaving intentions is moderated by acceptance of authority, possibility for change, and reputation ($N_{\text{Range}} = 580\text{--}583$). However, this moderation is not confirmed in longitudinal cross-lagged panel analyses ($N = 263/195$). Overall, findings point to self-investment aspects of identification as a crucial factor in predicting leaving intentions and emphasize the importance of assessing identification with the Church multi-dimensionally and longitudinally.

During the last several decades, more and more people in Western/European countries have left institutionally organized Churches (Pew Research Center, 2015, 2018). One reason often discussed in this regard is a dissatisfaction with Church dogmas and authorities. For example, according to a recent German survey (Wunder et al., 2023), 85% of the sample indicated that priests should be allowed to marry and give blessings to homosexual couples, and 96% of Catholics think that fundamental changes are necessary if the Church wants to have a future. U.S. Catholics face similar challenges. A retrospective analysis of religious change found that two-thirds of U.S. Catholics who leave the faith cite a loss of belief in the Church's teachings (Pew Research Center, 2011). Religious beliefs and morals were the primary reason 48% of U.S. Catholics gave for leaving the religion, a figure higher than that for Protestant Christians (Pew Research Center, 2011).

However, dissatisfaction with Church dogmas and authorities only seems to be one reason for leaving intentions, which is a multifaceted process unfolding along a continuum from initial doubts through increasingly strong intentions, and ultimately to actual leaving behavior (Chen & Streib, 2025; Van Tongeren & DeWall, 2023). In addition to satisfaction with the church, other aspects important for identification (Leach et al., 2008) such as feelings of belonging, centrality for the self-concept, similarity to other group members, or the perceived ingroup homogeneity could also contribute to this process. This study focuses on the different aspects of identification (Leach et al., 2008), examining and comparing their respective impacts on leaving intentions across time. It further examines how different aspects of identification interact with individual and contextual factors, such as the role of

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 Supplemental data for this article can be accessed online at <https://doi.org/10.1080/10508619.2025.2553408>

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acceptance of authority, the perception that the religious leadership is open to changes, and the perceived reputation of the religious institution in society.

It is situated in the context of a religious charity organization in Germany, in which religious affiliation is supported (though not required) by employers. This provides an ideal environment to study processes of religious disidentification, as a) participants have enough encounters with religion, thus, are sufficiently familiar with religious content to meaningfully respond to questions about belief, identity, and institutional affiliation, while b) religious adherence is not mandatory, allowing for sufficient variation, resulting in c) conscious choices about religious identity, including leaving intentions.

Intentions to leave one's religion

This study is not the first one to look into leaving intentions, which is an important outcome variable in research on religious disaffiliation (e.g., Streib, 2021; Van Tongeren & DeWall, 2023). Previous research has looked at disaffiliation from different angles. Some studies investigated the impact of individual attributes, such as values, religious development, education, families' religiousness, or a persons' past service attendance (Te Grotenhuis & Scheepers, 2001). Other studies focus on contextual factors, such as a decreased feeling of and striving for community, increased heterogeneity in Church membership, or dissatisfaction with specific policies (Pew Research Center, 2011, 2015; Wunder et al., 2023).

All these studies paint disaffiliation as a multifaceted process. Thus, rather than focusing on another singular aspect, the current challenge seems to be in prioritizing and weighting different aspects, as research is still trying to identify "the most influential factors that characterize deconversion" (Streib, 2021, p. 1). A recent integrative framework by Van Tongeren and DeWall (2023) offers such an integrative approach. Based on Saroglou's (2011) four-dimensional model of religion, they distinguish four interrelated pathways through which individuals may deidentify from religion: *disbelief* (rejection of supernatural beliefs), *disengagement* (emotional and ritual detachment from the divine), *discontinuance* (abandonment of religiously prescribed moral behaviors), and *disaffiliation* (withdrawal from the religious community). These dimensions are conceptually distinct but interrelated – individuals may leave one aspect of religion while remaining engaged with others. While this model constitutes an important theoretical advancement, an empirical investigation of the different aspects contributing to disaffiliation so far is missing. Moreover, the model does not provide a specification of the temporal unfolding of these processes. This is a critical limitation, given that some studies (e.g., Hardy et al., 2023; Streib et al., 2011) suggest that some aspects – such as dissatisfaction or declining centrality – precede behavioral disaffiliation. Overall, there is a lack of longitudinal studies examining leaving intentions which has also been noted by other researchers (e.g., Streib, 2021).

The present study addresses this gap by applying a longitudinal design, allowing us to examine which aspects of identification predict *leaving intentions*. In doing so, it allows for a direct comparison of how various aspects of identification and their interactions with contextual and individual factors contribute to religious disidentification over time. We use the identification model by Leach et al. (2008) as an overarching framework for examining how different aspects of identification predict leaving intentions. This hierarchical, multi-dimensional model of in-group identification has been widely applied in different disciplines, having been cited more than 2400 times (Google Scholar, 04. Dec 2024). Through the different dimensions, it also offers a way to compare the impact of different aspects of identification which so far have often been studied separately. While it does not directly match the four aspects described in Van Tongeren and DeWall (2023), the solidarity, and satisfaction dimensions of Leach et al. (2008) relate to aspects of disaffiliation and discontinuance, characterizing social and moral withdrawal. Centrality relates to disengagement, as declining personal relevance relates to emotional investment. Self-stereotyping and Ingroup Homogeneity offer details regarding aspects of group identity and personal fit therein, thus, describing aspects of discontinuance and disaffiliation. In the following, we describe the main propositions of the model, how it relates to existing research on religious disaffiliation, and its utility for comparing and weighting different aspects discussed as causes for leaving intentions.

Identification according to Leach et al. (2008) and its relation to leaving intentions

Overall, the identification model (Leach et al., 2008) consists of five distinct components of social identification: Solidarity, Satisfaction, Centrality, Individual Self-Stereotyping, and Ingroup Homogeneity, clustered in two general dimensions: self-investment (Solidarity, Satisfaction, and Centrality) and self-definition (i.e., Individual Self-Stereotyping, Ingroup Homogeneity).

Solidarity, a “psychological bond with, and commitment to, fellow ingroup members” (Leach et al., 2008; also see, p. 147; Ellemers et al., 1999), describes the sense of belonging and behavioral aspects, like actively approaching rather than avoiding other group members. Solidarity is also an important part of religious identification. It likely increases through ritual attendance (Sosis & Alcorta, 2003), which is part of many religions. The importance of belonging over religious belief itself has been discussed by a recent paper showing the increasing importance of solidarity for religious individuals (Fowler et al., 2020; Pospíšil & Macháčková, 2021).

Satisfaction is related to positive emotions concerning one’s group and its direction, which marks a more general, however, very important aspect of identification (Leach et al., 2008; Turner et al., 1979). The role of satisfaction has been seen in a variety of institutional contexts, such as students’ satisfaction with their educational institution (Bowman & Denson, 2014). As such, satisfaction has been identified as mediator between identification and leaving an organization in previous studies (e.g., Van Dick et al., 2004). The Pew Research Center (2018) also asked religious “nones” about their reasons for leaving religion. 58% indicated they disagreed with their religion’s position on social issues, and 53% were unhappy about scandals involving religious institutions and leaders.

However, even if people might not be satisfied, they might still perceive religiosity as an important part of their self-concept: Centrality, indicating the level to which the ingroup is salient and important to the individual, is relevant for the awareness of group-related events and threats, as well as their active coping with it (Ellemers et al., 1999; Leach et al., 2008; Tajfel & Turner, 1979). The importance of centrality for religious identity has been found in recent research showing the influence of centrality for concealing religious identity when exposed to social identity threat (Mackey & Rios, 2023). In a qualitative study, Reinhardt and Duncan (2025) also found centrality to be one important element in making the effort to work through identity conflicts rather than leaving religion when conflict appears.

Individual self-stereotyping describes the degree to which an individual perceives herself or himself as a stereotypical member of the group in comparison to other group members. It is based on the idea that to a certain extent a “depersonalized” self-perception is an integral part of ingroup identification (Leach et al., 2008; Tajfel, 1982), and individuals are more likely to self-stereotype when needs for assimilation are heightened (Pickett et al., 2002). Religion offers one way for such an assimilation, and Ward and King (2021) found that for religious individuals moral self-stereotyping might be particularly prevalent.

In-group homogeneity indicates perceived shared traits of the whole group, making the group homogeneous and appear like its own entity, distinct from other groups (Leach et al., 2002; Oakes et al., 1994). A recent experimental study found ideological homogeneity in a religious setting to be important for the level of belonging (Zhang et al., 2019), which, in turn, is linked to leaving intentions (Niemelä, 2015).

Overall, the model of Leach et al. (2008) describes different aspect that have already been argued to relate to identification or their counterpart of leaving intentions. At the same time, the model also makes specifications about the interrelatedness of these aspects, highlighting that Solidarity, Satisfaction, and Centrality are more closely interrelated, as they all mark forms of individuals’ self-investment, while Self-Stereotyping and Ingroup Homogeneity relate to group-level self-definition (Leach et al., 2008). Importantly, both theoretical accounts and recent empirical research indicate that these components differentially contribute to the development of leaving intentions. Thus, this model offers a promising guiding framework for examining and weighing how different, but interrelated aspects concerning the individual in relation to a group predict leaving intentions and therefore mapping the process by which individuals move toward religious disaffiliation.

Moderators of the relation between identification aspects and leaving intentions

In addition, we also examine individual (acceptance of authority) as well as perceived external factors (perceived possibility for change, perceived reputation of the Church in society) that might moderate the influence of these different identification aspects of leaving intentions.

Acceptance of authority relates to a higher willingness to follow orders, support for hierarchy, and acceptance of decisions made by an authority (Altemeyer, 1981, 1996; Lockhart et al., 2020). It is also linked to greater loyalty toward an ingroup (Graham et al., 2013; Vargas-Salfate et al., 2019). As such, we reasoned that individuals higher in acceptance of authority would be more likely to stay within an institutionalized religion structured in hierarchical terms and would be less likely to leave even if personal needs are unmet. Additionally, research on cognitive dissonance related to religious identity suggests that religious authorities can play an important role in the development, but also buffering of acute cognitive dissonance (Carminati & Hélot, 2023; Gibbs & Goldbach, 2021; Louis et al., 2023; Matos et al., 2024). Thus, low acceptance of authority might increase identity conflicts and might result in leaving intentions as a way to reduce this dissonance, while individuals high in acceptance of authority might refer to authoritative figures as a way to resolve identity conflict, as people might not deem their own evaluation as important.

In addition, the perceived possibility for change might be a moderating factor between identification aspects and leaving intentions. Given the growing dissatisfaction with some church dogmas, reform movements have arisen in some religious institutions. For example, in recent years, the Catholic Church in Germany has faced significant criticism regarding the role of women, their rejection of gay marriage, and the handling of abuse within the community. Movements like Maria 2.0 and “Out in Church” have called for fundamental changes (Giorgi & Palmisano, 2020) and might have sparked some hope about changes regarding these topics in the future. The perceived flexibility of the Church and the possibility for reforms may therefore be crucial factors influencing leaving intentions (Dollahite et al., 2019; Reinhardt & Duncan, 2025). The possibility for change may interact particularly with the identification aspect of satisfaction. If individuals perceive a possibility for change, especially when satisfaction is low, they might be less likely to consider leaving.

Lastly, the influence of identification aspects on leaving intentions might be moderated by the perceived reputation of the Church in society. Research suggests that group identity and reputation concerns are closely related. According to social identity theory, an ingroup is chosen based on positive group identity becoming relevant for the individual. This function is threatened when the group has a bad reputation that may transfer to the individuals’ reputation (Turner et al., 1979). In the eyes of some, the Catholic Church might be perceived as having a bad reputation through public and media attention around topics like abortion, abuse, the role of women within the Church as well as the number of people leaving the group. Therefore, in some contexts being a part of this group may damage instead of benefit one’s reputation, which may play into thoughts about leaving a certain group (Doosje et al., 2002; Packer, 2014).

Overall, we reasoned that acceptance of authority, perceived possibility for change, and the perceived reputation of the Church in society could be moderators between identification and leaving intentions, and that some of the moderators might be specifically important for certain identification aspects (e.g. satisfaction or centrality) than others.

Overview of current study

The goal of the present research was to explore how different identification aspects (i.e., Solidarity, Satisfaction, Centrality, Ingroup Homogeneity, Individual Self-Stereotyping) predict intentions to leave the Catholic Church, and whether they are moderated by Acceptance of Authority, Possibility for Change, and Reputation. We examined the relations cross-sectionally

as well as longitudinally, as longitudinal studies investigating leaving intentions so far are largely missing.

As a sample, we examined data from a larger project investigating identification and attitudes from a German non-governmental charity organization named “Caritas.” The German Caritas is the largest employer in the social sector in Germany and describes their objectives as protecting each person, living in solidarity, and working for people in need as a “partner of the disadvantaged” (German Caritas Association, 2016, p. 7). The Caritas is partially funded by Church taxes, which in Germany are collected by the state from the members of the Church. It has historically emphasized its Christian identity, but there has been a recent shift toward focusing on sharing Humanitarian values more broadly (cf. Jähnichen et al., 2015; Karić, 2022; Lewicki, 2021), and many of their employees do not belong to the Catholic Church. As part of this shift, employees are also free to change their religion (including leaving the Catholic church) without any consequences. Nonetheless, Caritas offers a range of voluntary spiritual and religious opportunities, such as pastoral care, meditative sessions, or retreats; and some facilities offer regular religious services and liturgical events. These offerings are non-coercive and inclusive, aiming to make the organization’s Christian ethos tangible in everyday professional life without exerting missionary pressure (German Caritas Association, 2022). As a result, employees are in a position to actively and reflectively engage with their religious identity, including the possibility of distancing themselves from it. This creates a religious environment in which Catholic identity is visible, while leaving space for individual variation in religious commitment – an ideal setting for examining how identification with the Catholic Church develops, weakens, or dissolves over time.

Together with project partners from the University of Tübingen as well as the Caritas association itself, we launched a study investigating identification and attitudes regarding the Caritas and the Catholic Church. The study was conducted in three waves (T1: October 23, 2023 to January 16, 2024, T2: February 21, 2024 to April 4, 2024; T3: June 4, 2024 to July 15, 2024) and involved employees from 21 cooperating institutions from the Caritas, who were invited to participate via e-mail and posters with QR codes. All surveys were conducted online and participation was voluntary and unpaid, though participants to our knowledge were allowed to use their work time for filling out the survey. A total of 10,115 employees were reached by e-mail. In the first wave (T1), 1,540 individuals (approximately 15% of those contacted) clicked on the questionnaire link, and 998 (about 10%) completed it. One response was excluded due to duplicate participation, resulting in 997 valid responses from people of different faiths (Catholic: 58.5%; Protestant: 24.5%; Orthodox: 1.1%; Muslim: 0.7%, no religious affiliation: 12.1%, other: 3.1%). In the second wave (T2), 645 complete responses were collected (Catholic: 60.2%; Protestant: 23.9%; Orthodox: 0.8%; Muslim: 0.3%, Jewish: 0.2% no religious affiliation: 12.6%, other: 2.0%). In the third wave (T3), 514 submissions were received, with seven duplicates excluded, resulting in 509 valid responses (Catholic: 58.7%; Protestant: 25.8%; Orthodox: 1.0%; other: 2.6%). For the purpose of the study, we only included participants who were Catholic at T1, resulting in 583 (T1), 389 (T2), and 302 (T3) valid responses. The Catholic respondents at T1 worked primarily in social work ($n_{T1} = 170$), counseling and consulting ($n_{T1} = 129$), administration and management ($n_{T1} = 178$), medicine (physicians and nurses, $n_{T1} = 100$), and education and learning ($n_{T1} = 83$, participants could choose more than one working sector). Participants were able to skip questions, resulting in some missing values (as reported for the respective statistics).

As outlined above, we examined the following research questions:

- (1) Which identification aspects are connected to leaving intentions cross-sectionally?
- (2) Which identification aspects predict leaving intentions longitudinally?
- (3) Is the relationship between identification and leaving intentions moderated by the acceptance of authority, possibility for change, and reputation of the Catholic Church in society cross-sectionally?

- (4) Is the influence of identification aspects on leaving intentions moderated by the acceptance of authority, possibility for change, and reputation of the Catholic Church in society longitudinally?

While we assumed a connection between all identification aspects and leaving intentions, as well as a moderation by acceptance of Authority, possibility for change, and reputation cross-sectionally based on the reasoning provided above, the cross-sectional analyses (RQ1 and 3) were not preregistered. We preregistered longitudinal analyses (RQ2 and 4) before merging the datasets (for details, see preregistration). Preregistration, data and code are openly available at <https://aspredicted.org/89sn-bcm6.pdf> (preregistration), <https://doi.org/10.23668/psycharchives.21154> (data) and <https://doi.org/10.23668/psycharchives.21155> (code) and will be made openly available upon publication. Additional information and analyses are reported in the Supplement.

Research question 1: which identification aspects are connected to leaving intentions cross-sectionally?

We first examined how the different identification aspects relate to Leaving Intentions cross-sectionally.

Method

Participants and measures

All Catholic participants of T1 were included ($N_{Overall} = 583$, N_{Range} for analyses = 579–583 due to missing values). At T1, participants were 47.24 years old on average (range = [22, 69]; SD = 11.45). One hundred and sixty-nine males, 396 females, and 17 nonbinary/other individuals participated.

To measure identification aspects, we adapted the German validation (Roth & Mazziotta, 2015) of the Leach et al. (2008) scale measuring Ingroup Identification. Participants answered 15 questions, 3 for each identification aspect on a scale from 1 (strongly disagree) to 7 (strongly agree). Example items include “I feel a bond with Catholics.” (solidarity); “I am glad that the Catholic Church exists” (Satisfaction); “The Catholic Church is an important part of my identity” (Centrality); “Others say that I seem like a typical Catholic” (Self-Stereotyping); and “Members of the Catholic Church have a lot in common with each other” (Ingroup Homogeneity). For Self-Stereotyping items, collaboration partners gave feedback that negatively worded items (e.g. “I am very different from (R) than most members of the Catholic Church.”) were more easily answered. These showed a good item correlation ($r = .68$), but low correlation with the positively coded item. Therefore, for the final scale only those two negatively worded items were kept. A codebook with all questions and response options is available through https://researchbox.org/3832&PEER_REVIEW_passcode=VVPREW. A confirmatory factor analysis with the remaining 11 items showed that the respective items largely loaded on the different subdimensions as theorized by Leach et al. (2008), for details, see Supplement, Table S1). Also, as theorized, the different identification aspects showed higher inter-correlations, with the subdimensions of solidarity, satisfaction, and

Table 1. Correlations and descriptive statistics of the identification scales (T1).

	<i>M</i>	<i>SD</i>	(1)	(2)	(3)	(4)	(5)
Solidarity (1)	3.67	1.57					
Satisfaction (2)	2.81	1.36	.68***				
Centrality (3)	2.81	1.67	.76***	.75***			
Homogeneity (4)	3.05	1.25	.54***	.51***	.49***		
Self-Stereotyping (5)	4.57	1.43	.12**	.06	.06	–.13**	
Overall Identification (6)	3.30	1.10	.89***	.86***	.89***	.68***	.22***

Note: Values in the cell reflect correlations. * $p < .05$, ** $p < .005$, *** $p > .001$.

centrality showing the highest correlations (see Table 1). The overall identification scale (i.e., including all subdimensions) also showed high reliability (Cronbach's $\alpha = 0.89$).

The dependent variable Leaving Intentions was captured in a single item: "Are you considering leaving the Catholic Church?" (0% – I am not considering leaving the Catholic Church at all, 100% – I am strongly considering leaving the Catholic Church), with an overall mean of 34.15 and standard deviation of 35.87. Answers to this variable were right-skewed (for a histogram, see Supplement, Figure S1), which prompted us to adapt our analyses in order to account for non-normal distribution of this variable.

Analyses

In order to account for the skewed data of Leaving Intentions while maintaining statistical power, we analyzed the data using Huber robust regression analyses (Huber, 1973, as implemented in the MASS R package; Venables & Ripley, 2002) with the different identification aspects predicting Leaving Intentions. Huber regression analyses are less sensitive to skewed data, as they use an iteratively reweighted least-squares algorithm that effectively handles asymmetric distributions, giving less weight to extreme data points. We z-standardized both the independent and dependent variables to obtain coefficients conceptually similar to Pearson's r (i.e., standardized regression weights ranging from -1 to 1), and additionally report Pearson's r (which does not differ too much from the reported beta-weights) in the Supplement (see Table S4).

Results

The robust regression effects revealed significant negative relations between Leaving Intentions and various aspects of Identification. Specifically, Leaving Intentions showed a medium positive relation with the three identification aspects clustered by Leach et al. (2008) under the headline of self-investment, namely the identification aspects of Solidarity ($\beta = -0.53$, 95%-CI $[-.60; -.45]$), Satisfaction ($\beta = -0.56$, 95%-CI $[-.63; -.49]$), and Centrality ($\beta = -0.56$, 95%-CI $[-.63; -.48]$), while correlations between Leaving Intentions and the two identification aspects characterizing self-definition were lower, Homogeneity ($\beta = -0.23$, 95%-CI $[-.31; -.15]$), and Self-Stereotyping ($\beta = -0.22$, 95%-CI $[-.30; -.13]$). These results suggest that specifically lower scores in self-investment are related to higher leaving intentions, emphasizing the importance of feelings of belonging and community, satisfaction with current group decisions, and the personal importance for the self-concept.

Research question 2: which identification aspects predict leaving intentions longitudinally?

Next, we examined whether the different identification aspects predict leaving intentions longitudinally using structural equation modeling. We hereby chose to model the respective identification aspects with a random intercept and within variations at each time point (i.e., as typically done in a random intercept cross-lagged panel model). The random intercept hereby can be thought of as a trait-like concept of identification, assuming that individuals have a trait-like component in how much they identify with other groups in general, and the Catholic Church in specific. The within variations reflect individual variations from this trait identification at a respective time point. We used these within variations to predict Leaving Intentions at the next time point. Given that Leaving Intentions are conceptualized as a behavioral intention rather than as a trait, we did not include a random intercept for Leaving Intentions, which we also preregistered. When predicting Leaving Intentions at T2 and T3, we were controlling for Leaving Intentions at T1 and T2, respectively. An overview of the model can be seen in Figure 1.

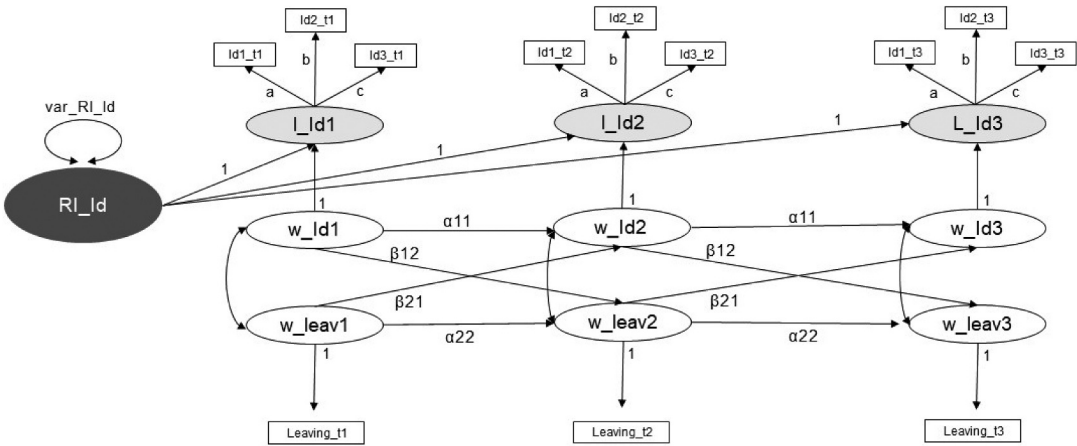


Figure 1. Overview of the model.

Again, we needed to adapt analyses in order to deal with the right-skewed data – and specifically the high number of people choosing 0 – for Leaving Intentions. Unfortunately, robust regressions are not available within structural equation models to deal with skewed data. Additionally, the aim of research question 2 was specifically to examine changes of Identification aspects and Leaving Intention. Therefore, we excluded all participants who chose a “0” for Leaving Intentions at all time points, thereby displaying stability more than anything else. Leaving Intentions was z-standardized to address substantial differences in measurement scales between variables and to prevent computational issues in model estimation. This standardization transformed Leaving Intention scores to have a mean of 0 and a standard deviation of 1 while preserving the relative differences between individual scores. The indicators for the different identification aspects, being part of a latent construct with comparable scales, were kept in their original metric. Missing values were handled using Full Information Maximum Likelihood.

Methods

Participants and measures

Participants from T1 and T2 were matched using a pseudonymized code that participants had to create at T1 and reenter at T2. For those participants that did not (perfectly) remember that code, participants were matched participants based on similarity of code, age, gender, and religion or excluded. As preregistered, we only included Catholic participants who filled out the survey at least 2 time points, resulting in a sample of $N = 352$. Among those were three participants whose religion changed during that time. Two people left the Catholic Church between T2 and T3. Their Leaving Intentions were set to 100 at T3. One person reported to have entered the Catholic Church. This person was excluded.

As described above, we additionally excluded all participants that chose “0” for Leaving Intentions at all timepoints ($N = 81$), which was 23,01% of the sample, resulting in a final sample size of $N = 271$. Of this sample, $N = 211$ had participated at t1, $N = 271$ at t2, and $N = 213$ at t3. Measures were the same as reported for research question 1. Given that self-stereotyping was only measured with two items (see RQ1), we did not compute any structural equation models for this identification aspect.

Measurement structure

Before running the models, we examined the measurement structure for each of the models, comparing a model where factor loadings were estimated freely to a model where the factor loadings are

constrained to be equal across time (e.g., item Solidarity_1 loading on the latent construct for solidarity to the same extent at T1 than at T2 and T3). We additionally compared model fits for a model with residual covariances to a model without residual covariances. In all cases, the model with constrained factor loadings performed at least equally well to the model without restrictions, and adding residual covariances improved model fit (see Supplement, Table S5). Thus, all models were estimated with restricted factor loadings and residual covariances.

Results

The specified models demonstrated good model fits, with CFI's ranging from .97 to 1.00, RMSEA ranging from .03 to .06, and SRMR between .03 and .07 (see Table 2). Longitudinally, Leaving Intentions were significantly predicted by within variations of all included identification aspects, Solidarity: $B(SE) = -0.38$ (0.11), $p < .001$, 95%-CI [-0.59, -0.17], *averaged standardized $\beta = -.41$* , Satisfaction: $B(SE) = -0.63$ (0.31), $p = .041$, 95%-CI [-1.24, -0.03], *averaged standardized $\beta = -.52$* , Centrality: $B(SE) = -0.45$ (0.20), $p = .026$, 95%-CI [-0.84, -0.05], *averaged standardized $\beta = -.42$* , Homogeneity, $B(SE) = -0.21$ (0.08), $p = .011$, 95%-CI [-0.37, -0.05], *averaged standardized $\beta = -.15$* . Additionally, there was also a cross-lagged effect of Leaving Intentions predicting within variations in identification aspects (see Table 2). Overall, all included identification aspects predicted leaving intentions across time. Due to the fact that we excluded those participants displaying stability (i.e., choosing "0" for Leaving Intentions at all timepoints), these findings apply to those people where a change in Leaving Intentions actually occurred rather than the whole sample (for analyses using the whole sample, see RQ3 and RQ4).

Research question 3: is the relationship between identification and leaving intentions moderated by the acceptance of authority, possibility for change, and reputation cross-sectionally?

Next, we examined whether the relationship between identification and Leaving Intentions is moderated by Acceptance of Authority, Possibility for Change, and Reputation of the Catholic Church in society.

Table 2. Cross-lagged predictors of the structural equation model including identification aspects and leaving intentions.

	Model Fit	β_{12}	β_{21}	α_{11}	α_{22}
		Ident \rightarrow Leaving	Leaving \rightarrow Ident	Ident \rightarrow Ident	Leaving \rightarrow Leaving
Solidarity	CFI = .97, RMSEA = .06, SRMR = .05	$B(SE) = -0.38$ (0.11), $p < .001$, CI = [-0.59, -0.17]	$B(SE) = -0.48$ (0.09), $p < .001$, CI = [-0.66, -0.31]	$B(SE) = 0.36$ (0.11), $p = .001$, CI = [0.14, 0.57]	$B(SE) = 0.47$ (0.10), $p < .001$, CI = [0.27, 0.67]
Satisfaction	CFI = .98, RMSEA = .06, SRMR = .07	$B(SE) = -0.63$ (0.31), $p = .041$, CI = [-1.24, -0.03]	$B(SE) = -0.28$ (0.12), $p = .027$, CI = [-0.52, -0.03]	$B(SE) = 0.56$ (0.18), $p = .002$, CI = [0.22, 0.91]	$B(SE) = 0.35$ (0.23), $p = .135$, CI = [-0.11, 0.80]
Centrality	CFI = 1.00, RMSEA = .03, SRMR = .04	$B(SE) = -0.45$ (0.20), $p = .026$, CI = [-0.84, -0.05]	$B(SE) = -0.27$ (0.09), $p = .002$, CI = [-0.45, -0.10]	$B(SE) = 0.54$ (0.11), $p < .001$, CI = [0.33, 0.75]	$B(SE) = 0.44$ (0.17), $p = .007$, CI = [0.12, 0.76]
Homogeneity	CFI = .98, RMSEA = .07, SRMR = .05	$B(SE) = -0.21$ (0.08), $p = .011$, CI = [-0.37, -0.05]	$B(SE) = -0.32$ (0.07), $p < .001$, CI = [-0.46, -0.17]	$B(SE) = -0.02$ (0.17), $p = .926$, CI = [-0.34, 0.31]	$B(SE) = 0.71$ (0.04), $p < .001$, CI = [0.62, 0.80]

Note: β_{12} = within variation in Identification predicting Leaving Intentions at next time point; β_{21} = Leaving Intentions predicting within variation in Identification at next time point; α_{11} = within variation in Identification predicting within variation in Identification at next time point; α_{22} = Leaving Intentions predicting Leaving Intentions at next time point. CI = 95% - Confidence Interval. The identification aspect of self-stereotyping was not included, as it only consisted of two items. For interpretation, please keep in mind that identification aspects were modeled with a random intercept, while Leaving Intentions were not.

Methods

Participants and measures

The sample and measurements for Leaving Intentions and Identification, including the different identification aspects, were the same as for research question 1 (N_{Range} for analyses = 580–583). Given that statistical details for all five identification aspects would exceed word count, we report statistics for the overall identification scale and summarize findings for the different identification aspects in the main manuscript, while reporting statistical details for all identification aspects in the supplement.

Acceptance of Authority was measured using an adaptation of the “Authoritarian subervience and conventionalism” subscale of the Short Scale Authoritarianism (KSA-3) by Beierlein et al. (2015). The scale included five items that were measured on a scale from 1 (totally disagree) to 7 (totally agree). Example items are “People should leave important decisions in the Catholic Church to the bishops and the Pope,” and “We need strong leaders in the Catholic Church.”

Possibility for Change was measured using one question: “To what extent do you perceive the Catholic Church in Germany’s openness to change?” Responses were given on a continuous scale from 0% (not at all) to 100% (very high).

Reputation of the Catholic Church in society was assessed with one question (“How would you rate the Catholic Church’s reputation in society?”) and again answered on a continuous scale from 0% (very poor reputation) to 100% (very good reputation).

Correlations and descriptive statistics of the scales are reported in Table 3.

Results

There indeed was an interaction between identification and the Acceptance of Authority ($B(SE) = 5.05$ (0.97), $\beta = .21$, $t = 5.19$, 95%-CI = [3.14; 6.96], see Table 4). That is, among individuals with low Identification (–1 SD), those low in Acceptance of Authority (–1 SD) reported significantly higher intentions to leave the Church ($M = 61.71$, $SD = 2.29$) compared to those high in Acceptance of Authority (+1 SD; $M = 43.74$, $SD = 3.33$, $t = -4.33$), while there was no difference between those low in Acceptance of Authority ($M = 8.78$, $SD = 3.06$) compared to those high in Acceptance of Authority ($M = 11.02$, $SD = 1.95$, $t = 0.73$), for those high in identification. Looking at the different aspects of identification, the interaction between identification aspects, and Acceptance of Authority on Leaving Intentions was found only for Solidarity ($B(SE) = 4.38$ (1.16), $\beta = 0.15$, $t = 3.76$, 95%-CI [2.10, 6.66]), Satisfaction ($B(SE) = 5.35$ (0.93), $\beta = 0.24$, $t = 5.74$, 95%-CI [3.52, 7.18]), and Centrality ($B(SE) = 4.74$ (1.04), $\beta = 0.18$, $t = 4.54$, 95%-CI [2.69, 6.78]); the relationship was not found for Self-Stereotyping ($B(SE) = 1.63$ (1.32), $\beta = 0.05$, $t = 1.23$, 95%-CI [–0.96, 4.22]), or Homogeneity ($B(SE) = 2.38$ (1.23), $\beta = 0.09$, $t = 1.94$, 95%-CI [–0.02, 4.79]). For full robust regression models, see Supplement, Table S6).

Table 3. Correlations and descriptive statistics of the scales (T1).

	<i>M</i>	<i>SD</i>	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Identification (1)	3.22	1.08								
Solidarity (2)	3.68	1.58	.89***							
Satisfaction (3)	2.82	1.37	.85***	.68***						
Centrality (4)	2.83	1.67	.89***	.76***	.74***					
Self-Stereotyping (5)	4.57	1.42	.21***	.11**	.07	.06				
Homogeneity (6)	3.05	1.25	.68***	.54***	.50***	.49***	–.13**			
Authority (7)	2.48	1.09	.49***	.37***	.56***	.43***	–.04	.37***		
Reputation (8)	28.60	17.98	.33***	.22***	.43***	.23***	.09*	.24***	.33***	
Possibility for Change (9)	25.70	22.45	.41***	.34***	.44***	.36***	.08+	.27***	.31***	.27***

Note: Values in the cell reflect correlations. * $p < .05$, ** $p < .005$, *** $p > .001$.

Table 4. Model parameters.

	Acceptance of Authority				Possibility for Change				Reputation of Church in society			
	B (SE)	β	t	95%-CI	B (SE)	β	t	95%-CI	B (SE)	β	t	95%-CI
Intercept	31.31 (1.36)		23.03	28.65; 33.98	31.73 (1.36)		23.25	29.05; 34.40	32.70 (1.35)		24.14	30.04; 35.35
Identification	-21.41 (1.48)	-.60	-14.48	-24.31; -18.51	-20.20 (1.41)	-.57	-14.28	-22.98; -17.43	-20.82 (1.39)	-.58	-14.96	-23.54; -18.09
Concept (1 –Authority, 2 – Change, 3 – Reputation)	-3.93 (1.55)	-.11	-2.54	-6.97; -0.90	-4.25 (1.48)	-.12	-2.87	-7.15; -1.34	-1.99 (1.40)	-.05	-1.42	-4.72; 0.75
Interaction Identification*Concept	5.05 (0.97)	.21	5.19	3.14; 6.96	4.63 (1.13)	.15	4.08	2.40; 6.85	3.41 (1.10)	.12	3.11	1.26; 5.55

Note: All independent variables were z-standardized. Regressions were calculated using a robust regression method (Huber regression).

There was also an interaction between identification and the perceived Possibility for Change ($B(SE) = 4.63$ (1.13), $\beta = .15$, $t = 4.08$, 95%-CI [2.40; 6.85], see Table 4). Similarly, among those with low Identification, those who perceived a low Possibility for Change reported significantly higher intentions to leave the Church ($M = 60.80$, $SD = 2.37$) compared to those who perceived a high Possibility for Change ($M = 43.06$, $SD = 3.31$, $t = -4.16$), while there was no difference between those who perceived a low Possibility for Change ($M = 11.14$, $SD = 2.98$) and those who perceived a high Possibility for Change ($M = 11.90$, $SD = 1.98$, $t = 0.25$) among those higher identified. Like for the Acceptance of Authority, the interaction effect was found only for Solidarity ($B(SE) = 3.98$ (1.34), $\beta = 0.12$, $t = 2.96$, 95%-CI [1.34, 6.61]), Satisfaction ($B(SE) = 5.36$ (1.16), $\beta = 0.19$, $t = 4.63$, 95%-CI [3.09, 7.63]), and Centrality ($B(SE) = 5.07$ (1.15), $\beta = 0.17$, $t = 4.40$, 95%-CI [2.81, 7.33]); and not for Self-Stereotyping ($B(SE) = 1.81$ (1.55), $\beta = 0.05$, $t = 1.17$, 95%-CI [-1.23, 4.86]), or Homogeneity ($B(SE) = 1.72$ (1.34), $\beta = 0.06$, $t = 1.28$, 95%-CI [-0.91, 4.35]). For full robust regression models, see Supplement, Table S7).

Lastly, there was also an interaction between identification and the perceived Reputation of the Catholic Church in society ($B(SE) = 3.41$ (1.10), $\beta = .12$, $t = 3.11$, 95%-CI [1.26; 5.55], see Table 4). Again, those who perceived low reputation reported significantly higher intentions to leave the Church ($M = 58.91$, $SD = 2.36$) compared to those who perceived a high reputation ($M = 48.12$, $SD = 3.01$, $t = -2.82$) among those with low identification; among those with higher identification there was no difference between those who perceived low reputation ($M = 10.46$, $SD = 2.95$) compared to those who perceived high reputation ($M = 13.30$, $SD = 2.09$, $t = 0.88$). This time, the interaction effect was only found for Satisfaction ($B(SE) = 4.95$ (1.07), $\beta = 0.18$, $t = 4.64$, 95%-CI [2.86, 7.04]) and Centrality ($B(SE) = 3.84$ (1.17), $\beta = 0.12$, $t = 3.29$, 95%-CI [1.55, 6.13]), and not for Solidarity ($B(SE) = 2.29$ (1.26), $\beta = 0.07$, $t = 1.81$, 95%-CI [-0.18, 4.77]), Self-stereotyping ($B(SE) = 0.53$ (1.34), $\beta = 0.02$, $t = 0.40$, 95%-CI [-2.10, 3.16]), or Homogeneity ($B(SE) = 0.72$ (1.20), $\beta = 0.03$, $t = 0.60$, 95%-CI [-1.63, 3.08]). Full robust regression models are found in Supplement, Table S8).

Research question 4: is the influence of identification aspects on leaving intentions moderated by the acceptance of authority, possibility for change, and reputation of the Catholic Church in society longitudinally?

In order to examine whether the interactions between Identification and Acceptance of Authority, Possibility for Change, and Reputation also predict Leaving Intentions longitudinally, we conducted robust multilevel regression analyses predicting Leaving Intentions at T2 and T3, respectively, while controlling for Leaving Intentions at T1, as preregistered.

Methods

Participants and measures

In the analyses, all Catholics from T1 that could be matched at T2 ($N = 263$) or T3 ($N = 195$), respectively, were included. The measurements for Leaving Intentions, Identification, including the different identification aspects, the Acceptance of Authority, Possibility for Change, and Reputation of the Catholic Church in society were the same as for research question 3.

Results

When analyzing the overall Identification scale, there was only a significant interaction between Identification and the Acceptance of Authority when predicting Leaving Intentions at T3 ($B(SE) = 1.31(0.67)$, $\beta = .06$, $t = 1.97$, 95%-CI [0.01; 2.61], see Table 6), but not for T2 (see Table 5). Looking at the different identification aspects, this effect seems to be mostly driven by the subdimensions of Solidarity ($B(SE) = -2.94(1.12)$, $\beta = -.08$, $t = -2.63$, 95%-CI [-5.12, -0.75]); there was no interaction effect for the other aspects (Satisfaction: $B(SE) = -1.49(1.24)$, $\beta = -.04$, $t = -1.20$, 95%-CI [-3.92, 0.95], Centrality: $B(SE) = -2.61(1.16)$, $\beta = -.08$, $t = -2.25$, 95%-CI [-4.88, -0.33]; for details, see Supplement, Tables S9 and S10).

Table 5. Predicting leaving intentions at T2.

	Predicting Leaving Intentions T2 with Moderator Acceptance of Authority				Predicting Leaving Intentions T2 with Moderator Possibility for Change				Predicting Leaving Intentions T2 with Moderator Reputation of Church in society			
	B (SE)	β	t	95%-CI	B (SE)	β	t	95%-CI	B (SE)	β	t	95%-CI
Intercept	30.15 (0.95)		31.63	28.28; 32.01	29.74 (0.94)		31.48	27.88; 31.59	29.51 (0.91)		32.30	27.72; 31.30
Leaving Intentions T1	28.84 (1.13)	.83	25.54	26.62; 31.05	28.56 (1.10)	.82	25.91	26.40; 30.72	28.45 (1.16)	.82	26.67	26.36; 30.54
Identification	-3.13 (1.24)	-.09	-2.52	-5.57; -0.69	-3.19 (1.18)	-.09	-2.70	-5.51; -0.87	-2.98 (1.16)	-.09	-2.58	-5.25; -0.71
Concept (1 – Authority, 2 – Change, 3 – Reputation)	0.67 (1.08)	.02	0.62	-1.45; 2.79	-0.45 (1.04)	-.01	-0.43	-2.49; 1.58	-0.84 (0.98)	-.02	-0.85	-2.77; 1.09
Interaction Identification*Concept	0.02 (0.68)	.00	0.03	-1.32; 1.35	1.00 (0.78)	.04	1.28	-0.53; 2.53	1.18 (0.69)	.05	1.73	-0.16; 2.53

Note: All independent variables were z-standardized. Regressions were calculated using a robust regression method (Huber regression).

Table 6. Predicting leaving intentions at T3.

	Predicting Leaving Intentions T3 with Moderator Acceptance of Authority				Predicting Leaving Intentions T3 with Moderator Possibility for Change				Predicting Leaving Intentions T3 with Moderator Reputation of Church in society			
	B (SE)	β	t	95%-CI	B (SE)	β	t	95%-CI	B (SE)	β	t	95%-CI
Intercept	30.34 (0.95)		32.10	28.49; 32.20	30.06 (0.97)		31.12	28.16; 31.95	30.30 (0.96)		31.65	28.42; 32.18
Leaving intentions T1	28.65 (1.18)	.81	24.18	26.33; 30.98	28.74 (1.18)	.81	24.36	26.43; 31.05	29.05 (1.17)	.82	24.80	26.76; 31.35
Identification	-4.17 (1.23)	-.12	-3.40	-6.58; -1.77	-3.99 (1.21)	-.12	-3.29	-6.37; -1.61	-3.50 (1.18)	-.10	-2.96	-5.81; -1.18
Concept (1 – Authority, 2 – Change, 3 – Reputation)	-1.53 (1.11)	-.04	-1.38	-3.70; 0.64	-1.13 (1.10)	-.03	-1.03	-3.29; 1.02	-1.27 (1.00)	-.04	-1.27	-3.22; 0.69
Interaction Identification*Concept	1.31 (0.67)	.06	1.97	0.01; 2.61	1.29 (0.77)	0.05	1.68	-0.22; 2.81	0.89 (0.75)	.03	1.19	-0.58; 2.36

Note: All independent variables were z-standardized. Regressions were calculated using a robust regression method (Huber regression).

There was no interaction between the full identification scale and Possibility for Change predicting Leaving Intentions at T2 ($B (SE) = 1.00 (0.78)$, $\beta = .04$, $t = 1.28$, 95%- $CI [-0.53; 2.53]$, see Table 5) or T3 ($B (SE) = 1.29 (0.77)$, $\beta = .05$, $t = 1.68$, 95%- $CI [-0.22; 2.81]$, see Table 6), including no interaction effects for the subdimensions (for details, see Supplement, Tables S11 and S12).

The same was true for the interaction between Identification and perceived Reputation of the Catholic Church in society, which did not predict Leaving Intentions at T2 ($B (SE) = 1.18 (0.69)$, $\beta = .05$, $t = 1.73$, 95%- $CI [-0.16; 2.53]$, see Table 5) or T3 ($B (SE) = 0.89 (0.75)$, $\beta = .03$, $t = 1.19$, 95%- $CI [-0.58; 2.36]$, see Table 6), including no interaction effects for the subdimensions (for details, see Supplement, Tables S13 and S14).

There was also no main effect of Acceptance of Authority, Possibility for Change, and Reputation in our analyses, showing that also these constructs itself do not seem to predict Leaving Intentions longitudinally when controlling for Leaving Intentions, Identification, and the interaction between Identification and the constructs at T1. Overall, while an interaction effect for these three constructs was found cross-sectionally, the same results were not seen longitudinally, questioning whether this interaction effect precedes the Leaving Intentions as well as the overall impact of the Acceptance of Authority, Possibility for Change, and Reputation of Church in society on forming Leaving Intentions.

Notably, there was a main effect of the full Identification scale on Leaving Intentions at T2 and T3. Confirming longitudinal analyses and interpretations of RQ2, this was specifically the case for the identification aspects of solidarity, satisfaction (though only when looking at the effect of t1 to t3), and centrality (here, only for the effect of t1 to t2; see Supplement, Tables S9–13), while there were no main effects (i.e., controlling for the respective moderator and interaction between moderator and identification aspect) for self-stereotyping and homogeneity.

Summary and discussion

The present study investigated the role of different identification aspects as well as the potential moderators of acceptance of authority, possibility for change, and reputation of the Church as cross-sectional and longitudinal predictors of leaving intentions. Cross-sectionally as well as in longitudinal analyses using a random intercept and within variations of identification aspects, all examined identification aspects predicted leaving intentions (RQ1, RQ2), with the three aspects marking self-investment (i.e. a sense of solidarity with other members, being satisfied with the Church, feeling that the Church is a central part of their identity) showing higher correlations for RQ1 (i.e., r between -0.49 and -0.54) and the standardized cross-lagged estimates showing higher values (β between $-.41$ and $-.52$) than the two aspects marking self-definition (i.e. seeing themselves as similar to other members, and identifying with the Church's values, r between -0.20 and -0.22 , β for Ingroup Homogeneity = $-.15$; due to self-stereotyping being only measured with two items, it was not included in structural equation models of RQ2). Also, most of the regression models of RQ4 confirm a main effect of the identification aspects of self-investments, but no main effects for ingroup homogeneity or self-stereotyping. Overall, longitudinal effects for the aspects of solidarity, satisfaction, and centrality were confirmed in different methodological approaches ranging from structural equation modeling to longitudinal regression analyses.

While acceptance of authority, possibility for change, and reputation all moderated the relation between identification and leaving intentions cross-sectionally (with moderations again mostly found for the three identification aspects marking self-investment), the moderation was not confirmed in longitudinal analyses apart from the moderation between acceptance of authority and identification (and specifically the aspect of solidarity) predicting leaving intentions longitudinally at T3 (though not T2).

There are three main take-aways from this study: First, our findings show that some aspects of identity – solidarity, satisfaction, centrality – predict intention to leave more strongly than self-stereotyping and ingroup homogeneity. These three aspects are coined the “self-investment” aspects of identity. They are also known to play a crucial role in one's active coping with identity threats (e.g.

Ellemers et al., 1999; Leach et al., 2008; Tajfel & Turner, 1979) and, for example, centrality has also been highlighted in other models as an important aspect for leaving intentions (Milanov et al., 2014). Thus, it might be specifically these identification aspects that motivate an individual to work through issues related to religious identity or not, thus, predicting whether an individual stays part of a Church on the long term. The notion that satisfaction predicts intentions to leave the Church may seem obvious, as it is commonly mentioned in the popular press (e.g. (Roeloffs, 2024). However, it so far has received scant attention in research on identity and religious group affiliation. Future studies might also investigate the dependencies between identification aspects. For example, it is possible that aspects like satisfaction predict centrality across time.

Second, our results confirm moderators of acceptance of authority, possibility for change, and reputation as cross-sectional, but not necessarily longitudinal moderators. Effects here were most pronounced among individuals low in identification, with low identifiers showing lower leaving intentions when acceptance of authority, possibility for change or reputation of the Church in society was high. However, the results were not confirmed longitudinally. That is, only the interaction between acceptance of authority and solidarity predicted leaving intentions longitudinally across a timespan of approximately 6 (but not 3) months. The missing longitudinal interaction effects are somewhat surprising. For example, it would have made sense to assume specifically a longitudinal interaction effect between the identification aspect of satisfaction and the possibility for change, as one would assume that dissatisfaction (e.g. with Church policies) would not lead to leaving intentions if individuals assume a high possibility for change. Future studies, thus, should confirm these findings.

This also gives rise to the third main take-away, which is the need for more longitudinal research. As our study showed, not all of the cross-sectional findings were also confirmed in longitudinal analyses. Thus, many of the factors that are discussed to be preceding intentions to leave institutionalized religion might actually be concomitants or even results from thinking about leaving a religion rather than their predecessors. In our study, this specifically applies to the potential moderators of acceptance of authority, possibility for change, and reputation, which apart from one exception) did not moderate the effect of identification on leaving intentions longitudinally, and also showed no main effects longitudinally (controlling for Leaving Intentions, moderators and interactions at t1). This might not only apply to the variables examined in our study but also to other concepts discussed as causes and antecedents of leaving intentions, which should be tested in the future longitudinal research.

In this study, we took a nuanced view on different identification aspects in a systematic way. Using the multi-dimensional identification model of Leach et al. (2008) hereby allowed a comparison of different identification aspects which is hard to reach by research looking only at single variables. We also combined cross-sectional and longitudinal methods, allowing to examine the importance of a concept for leaving intentions at one time point, but also across time. Another strength of this study is that it represents a sample of largely middle-aged adults rather than students. Although not representative of a national population, the sample was obtained in collaboration with a larger organization, potentially increasing motivation of respondents, and strengthening generalizability of findings for a larger population.

One limitation hereby might have been that respondents potentially could have felt the need to be loyal to the Catholic Church as their funding source and be hesitant to report leaving intentions. For example, it previously used to be grounds for dismissal when Catholic employees wanted to leave the Catholic Church (though not when they never were part of it, as leaving the Church was seen as a more conscious and direct rebuttal of Catholic values). However, this changed in 2023 with new statutes (German Caritas Association, 2023), opening the possibilities also for Catholic employees to leave the Church without consequences. Additionally, the German Caritas foundation nowadays emphasizes their diversity and inclusiveness (German Caritas Association, 2022). To still address any potential issues regarding employers, anonymity of respondents was also assured and highlighted throughout the survey. Overall, the limitations of being under a Catholic employer should be weighed against the unique advantages of a sample that is at the same time exposed enough to allow for a meaningful and reflected assessment of identification and disidentification, while also allowing for religious diversity within that same context. In this regard, the fact that only only

two participants ultimately left the Church within 9 months seems to provide a realistic estimate, which is also comparable to the percent of clergy who leave the ministry annually (Hamm & Eagle, 2021).

Another limitation is the use of a single item for the criterion variable. That is, while the use of a single self-reported measure of leaving intentions offers valuable insight into participants' intentions, it may not fully capture the complexity of actual behavioral outcomes. At the same time, asking respondents to indicate the percent likelihood that they would leave the religion allowed for a level of nuance ranging from 0 to 100% rather than simply a Yes or No. Nonetheless, further development of the construct of leaving religion is needed. Distinguishing between disbelief, disengagement, discontinuance, and disaffiliation (Van Tongeren & DeWall, 2023) provides a conceptual step in this direction. However, more fine-grained measures are also needed to better understand temporal processes. Another possibility worth considering is to examine what more general models of behavioral intention, such as Ajzen (1991), can add to studies of religious leaving.

Finally, the 9 time span between measurements was potentially too short to capture changes in leaving intentions. It was chosen to balance ecological validity and participant retention, as extending the period further would have risked substantial attrition due to job turnover or loss of contact. While a longer time span would be desirable in future studies, within the context of applied longitudinal research, this duration exceeds that of many psychological studies (e.g., Zhao et al., 2024) and provides a valuable window into the temporal dynamics of religious disidentification.

Overall, our research points to the self-investment aspects of identity as important concepts predicting leaving intentions cross-sectionally and longitudinally, while moderators showed to have an influence only cross-sectionally. It underscores the view of identification as a complex, multifaceted construct and the need for more longitudinal studies, examining and comparing constructs that are discussed to be predictors of leaving intentions.

Acknowledgments

The authors want to thank all participants, the German Caritas Association and especially Michael Schüßler and Bruno Schrage for the collaboration.

We also want to thank Timo von Oertzen and the Bayes Institute (<https://thomasbayesinstitute.org/>) for sharing their insights into Structural Equation Modelling.

Disclosure statement

No potential conflict of interest was reported by the author(s).

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Data availability statement

Details about research materials, preregistered analyses, and additional analyses can be found in the Supplement. Preregistration, data and code are openly available at <https://aspredicted.org/89sn-bcm6.pdf> (preregistration), <https://doi.org/10.23668/psycharchives.21154> (data) and <https://doi.org/10.23668/psycharchives.21155> (code) and will be made openly available upon publication.

Publication ethics

Informed consent was obtained from all participants included in the study.

All procedures in studies involving human participants were performed in accordance with the ethical standards of the institution's Human Research Ethics Committee (reference LEK 2023/024).

Use of generative AI tools

In accordance with the Taylor & Francis AI Policy, Claude 3.5 Sonnet (October 2024 version) and Microsoft Copilot were used as Generative AI tools during manuscript preparation. Specifically, the first author used Claude 3.5 sonnet for English language editing and for adapting code, e.g., to repeat analyses across different identification aspects. The second author used Microsoft Copilot, based on the GPT-4 architecture, with the latest update from December 19, 2024, for improving language of already existing sentences, improving code in R, such as solving errors if they appeared and changing a written code for another variable. All scientific content, interpretations, and conclusions were developed independently by the authors, and we take full responsibility for the content in the manuscript.

References

- Ajzen, I. (1991). The theory of planned behavior. *Organizational Behavior and Human Decision Processes*, 50(2), 179–211. [https://doi.org/10.1016/0749-5978\(91\)90020-T](https://doi.org/10.1016/0749-5978(91)90020-T)
- Altemeyer, B. (1981). *Right-wing authoritarianism*. University of Manitoba Press.
- Altemeyer, B. (1996). *The authoritarian specter*. Harvard University Press.
- Beierlein, C., Asbrock, F., Kauff, M., & Schmidt, P. (2015). Kurzskala Autoritarismus (KSA-3). *Zusammenstellung sozialwissenschaftlicher Items und Skalen (ZIS)*. <https://doi.org/10.6102/ZIS228>
- Bowman, N. A., & Denson, N. (2014). A missing piece of the departure puzzle: Student-institution fit and intent to persist. *Research in Higher Education*, 55(2), 123–142. <https://doi.org/10.1007/s11162-013-9320-9>
- Carminati, L., & Héliot, Y. G. (2023). Professional and religious identity conflict: Individual and organizational dynamics in ethically-charged circumstances. *Self and Identity*, 22(7–8), 1065–1092. <https://doi.org/10.1080/15298868.2023.2248686>
- Chen, Z. J., & Streib, H. (2025). Characteristics, predictors and outcomes of religious deconversion: A cross-sectional and longitudinal analysis. *The International Journal for the Psychology of Religion*, 1–18. <https://doi.org/10.1080/10508619.2025.2520104>
- Dollahite, D., Marks, L., Babcock, K., Barrow, B., & Rose, A. (2019). Beyond religious rigidities: Religious firmness and religious flexibility as complementary loyalties in faith transmission. *Religions*, 10(2), 111. <https://doi.org/10.3390/rel10020111>
- Doosje, B., Spears, R., & Ellemers, N. (2002). Social identity as both cause and effect: The development of group identification in response to anticipated and actual changes in the intergroup status hierarchy. *British Journal of Social Psychology*, 41(1), 57–76. <https://doi.org/10.1348/014466602165054>
- Ellemers, N., Spears, R., & Doosje, B. (Eds.). (1999). *Social identity: Context, commitment, content*. Blackwell Science.
- Fowler, D., Musgrave, J., & Musgrave, J. (2020). A traditional protestant church experiencing substantial membership decline: An organizational strength analysis and observations to attend or leave the institution. *International Journal of Organization Theory & Behavior*, 23(3), 207–223. <https://doi.org/10.1108/IJOTB-02-2019-0012>
- German Caritas Association. (2016). *Goals of the German Caritas Association*. <https://www.caritas-germany.org/german-caritasassociation/ourgoals/goals>
- German Caritas Association (2022, 24. Januar). *Vielfalt in der Caritas: Stellungnahme des Deutschen Caritasverbandes zum Manifest #outInchurch von Queeren Menschen in der Katholischen Kirche*. <https://www.caritas.de/presse/presse-meldungen-dcv/vielfalt-in-der-caritas-a1205be4-982e-478f-b378-d809ca46ca50>
- German Caritas Association. (2023). *Satzung des Deutschen Caritasverbandes e. V.* <https://www.caritas.de/glossare/satzung-des-deutschen-caritasverbandes-e>
- Gibbs, J. J., & Goldbach, J. T. (2021). Religious identity dissonance: Understanding how sexual minority adolescents manage antihomosexual religious messages. *Journal of Homosexuality*, 68(13), 2189–2213. <https://doi.org/10.1080/00918369.2020.1733354>
- Giorgi, A., & Palmisano, S. (2020). Women and gender in contemporary European Catholic discourse: Voices of faith. *Religion*, 11(10), 508. <https://doi.org/10.3390/rel11100508>
- Graham, J., Haidt, J., & Nosek, B. A. (2013). Liberals and conservatives rely on different sets of moral foundations. *Journal of Personality & Social Psychology*, 96(5), 1029–1047. <https://doi.org/10.1037/a0015141>
- Hamm, A. K., & Eagle, D. E. (2021). Clergy who leave congregational ministry: A review of the literature. *Journal of Psychology and Theology*, 49(4), 291–307. <https://doi.org/10.1177/00916471211011597>
- Hardy, S. A., Hendricks, J., Nelson, J. M., & Schwadel, P. (2023). Declines in religiousness dimensions across adolescence as predictors of religious deidentification in young adulthood. *Journal of Research on Adolescence*, 33(1), 141–153. <https://doi.org/10.1111/jora.12786>
- Huber, P. J. (1973). Robust regression: Asymptotics, conjectures and Monte Carlo. *Annals of Statistics*, 1(5), 799–821. <https://www.jstor.org/stable/2958283>
- Jähnichen, T., Nagel, A.-K., & Schneiders, K. (2015). *Religiöse pluralisierung: Herausforderung für konfessionelle wohlfahrtsverbände*. Kohlhammer. <https://elibrary.kohlhammer.de/book/10.17433/978-3-17-030315-7>

- Karić, S. (2022). Das christliche Profil der Caritas und Diakonie aus Sicht ihrer Fachkräfte. *Soziale Passagen*, 14(1), 59–76. <https://doi.org/10.1007/s12592-022-00418-4>
- Leach, C. W., Snider, N., & Iyer, A. (2002). “Poisoning the consciences of the fortunate”: The experience of relative advantage and support for social equality. In I. Walker & H. J. Smith (Eds.), *Relative deprivation: Specification, development, and integration* (pp. 136–163). Cambridge University Press.
- Leach, C. W., van Zomeren, M., Zebel, S., Vliek, M. L. W., Pennekamp, S. F., Doosje, B., Ouwerkerk, J. W., & Spears, R. (2008). Group-level self-definition and self-investment: A hierarchical (multicomponent) model of in-group identification. *Journal of Personality & Social Psychology*, 95(1), 144–165. <https://doi.org/10.1037/0022-3514.95.1.144>
- Lewicki, A. (2021). The Christian politics of identity and the making of race in the German welfare state. *Sociology*, 55(6), 1228–1244. <https://doi.org/10.1177/00380385211008368>
- Lockhart, C., Sibley, C. G., & Osborne, D. (2020). Religion makes and unmakes the status quo: Religiosity and spirituality have opposing effects on conservatism via RWA and SDO. *Religion, Brain & Behavior*, 10(4), 379–392. <https://doi.org/10.1080/2153599X.2019.1607540>
- Louis, W. R., Cila, J., Townshend, E., Chonu, G. K., & Lalonde, R. N. (2023). Religious norms, norm conflict, and religious identification. *Psychology of Religion and Spirituality*, 15(2), 290–297. <https://doi.org/10.1037/rel0000428>
- Mackey, C. D., & Rios, K. (2023). Identity centrality, social identity threat, and differences in concealment between religious minorities and nonreligious individuals. *The International Journal for the Psychology of Religion*, 33(1), 52–68. <https://doi.org/10.1080/10508619.2022.2064110>
- Matos, L., Park, C. L., Indart, M. J., & Leal, I. (2024). “It’s the God factor”: A qualitative study of Syrian Muslims’ postwar religious meaning-making. *Psychology of Religion and Spirituality*, 16(2), 163–172. <https://doi.org/10.1037/rel0000505>
- Milanov, M., Rubin, M., & Paolini, S. (2014). Different types of ingroup identification: A comprehensive review, and integrative model, and implications for future research. *Psicologia Sociale*, 9(3), 205–232.
- Niemelä, K. (2015). “No longer believing in belonging”: A longitudinal study of Finnish generation Y from confirmation experience to Church-leaving. *Social Compass*, 62(2), 172–186. <https://doi.org/10.1177/0037768615571688>
- Oakes, P. J., Haslam, S. A., & Turner, J. C. (1994). *Stereotyping and social reality* (pp. xiv, 255). Blackwell Publishing.
- Packer, D. J. (2014). On not airing our dirty laundry: Intergroup contexts suppress ingroup criticism among strongly identified group members. *British Journal of Social Psychology*, 53(1), 93–111. <https://doi.org/10.1111/bjso.12017>
- Pew Research Center. (2011). *Faith in flux*. <https://www.pewresearch.org/religion/2009/04/27/faith-in-flux/>
- Pew Research Center. (2015). *America’s changing religious landscape*.
- Pew Research Center. (2018). *Being Christian in Western Europe*. <https://www.pewresearch.org/wp-content/uploads/sites/20/2018/05/Being-Christian-in-Western-Europe-FOR-WEB1.pdf>
- Pickett, C. L., Bonner, B. L., & Coleman, J. M. (2002). Motivated self-stereotyping: Heightened assimilation and differentiation needs result in increased levels of positive and negative self-stereotyping. *Journal of Personality & Social Psychology*, 82(4), 543–562. <https://doi.org/10.1037/0022-3514.82.4.543>
- Pospíšil, J., & Machácková, P. (2021). The value of belongingness in relation to religious belief, institutionalized religion, moral judgement and solidarity. *Religions*, 12(12), 1052. <https://doi.org/10.3390/rel12121052>
- Reinhardt, C., & Duncan, L. E. (2025). Identity resolution in feminists raised Catholic: A narrative analysis of life histories. *Feminism & Psychology*, 35(3), 303–322. <https://doi.org/10.1177/09593535251324031>
- Roeloffs, M. W. (2024, September 26). Overwhelming majority of American Catholics want Church to change stance on birth control, new poll says. *Forbes*. <https://www.forbes.com/sites/maryroeloffs/2024/09/26/overwhelming-majority-of-american-catholics-want-Church-to-change-stance-on-birth-control-new-poll-says/>
- Roth, J., & Mazziotto, A. (2015). Adaptation and validation of a German multidimensional and multicomponent measure of social identification. *Social Psychology*, 46(5), 277–290. <https://doi.org/10.1027/1864-9335/a000243>
- Saroglou, V. (2011). Believing, bonding, behaving, and belonging: The big four religious dimensions and cultural variation. *Journal of Cross-Cultural Psychology*, 42(8), 1320–1340. <https://doi.org/10.1177/0022022111412267>
- Sosis, R., & Alcorta, C. (2003). Signaling, solidarity, and the sacred: The evolution of religious behavior. *Evolutionary anthropology: Issues, News, and Reviews*, 12(6), 264–274. <https://doi.org/10.1002/evan.10120>
- Streib, H. (2021). Leaving religion: Deconversion. *Current Opinion in Psychology*, 40, 139–144. <https://doi.org/10.1016/j.copsyc.2020.09.007>
- Streib, H., Silver, C. F., Csöff, R., Keller, B., & Hood, R. W. (2011). *Deconversion: Qualitative and quantitative results from cross-cultural research in Germany and the United States of America*. Vandenhoeck & Ruprecht.
- Tajfel, H. (Ed.). (1982). *Social identity and intergroup relations*. Cambridge University Press; Editions de la Maison des sciences de l’homme.
- Tajfel, H., & Turner, J. C. (1979). An integrative theory of intergroup conflict. In W. G. Austin & S. Worchel (Eds.), *The social psychology of intergroup relations* (pp. 33–47). Brooks-Cole.
- Te Grotenhuis, M., & Scheepers, P. (2001). Churches in Dutch: Causes of religious disaffiliation in the Netherlands, 1937–1995. *Journal for the Scientific Study of Religion*, 40(4), 591–606. <https://doi.org/10.1111/0021-8294.00079>
- Turner, J. C., Brown, R. J., & Tajfel, H. (1979). Social comparison and group interest in ingroup favouritism. *European Journal of Social Psychology*, 9(2), 187–204. <https://doi.org/10.1002/ejsp.2420090207>
- Van Dick, R., Christ, O., Stellmacher, J., Wagner, U., Ahlswede, O., Grubba, C., Hauptmeier, M., Höhfeld, C., Moltzen, K., & Tissington, P. A. (2004). Should I stay or should I go? Explaining turnover intentions with

- organizational identification and job satisfaction*. *British Journal of Management*, 15(4), 351–360. <https://doi.org/10.1111/j.1467-8551.2004.00424.x>
- Van Tongeren, D. R., & DeWall, C. N. (2023). Disbelief, disengagement, discontinuance, and disaffiliation: An integrative framework for the study of religious deidentification. *Psychology of Religion and Spirituality*, 15(4), 515–524. <https://doi.org/10.1037/rel0000434>
- Vargas-Salfate, S., Liu, J. H., & de Zúñiga, H. G. (2019). Right-wing authoritarianism and national identification: The role of democratic context. *International Journal of Public Opinion Research*, 32(2), 318–331. <https://doi.org/10.3390/rel12121052>
- Venables, W. N., & Ripley, B. D. (2002). *Modern applied statistics with S* (4th ed.). Springer.
- Ward, S. J., & King, L. A. (2021). Moral stereotypes, moral self-image, and religiosity. *Psychology of Religion and Spirituality*, 13(2), 160–174. <https://doi.org/10.1037/rel0000263>
- Wunder, E., Erichsen-Wendt, F., Jacobi, C., Kurschus, A., & Bätzing, G. Deutschland (Ed). (2023). *Wie hältst du's mit der Kirche? zur Bedeutung der Kirche in der Gesellschaft: erste Ergebnisse der 6. Kirchenmitgliedschaftsuntersuchung* (Evangelische Kirche in Deutschland, Ed.) Evangelische Verlagsanstalt.
- Zhang, H., Hook, J. N., Farrell, J. E., Mosher, D. K., Captari, L. E., Coomes, S. P., Van Tongeren, D. R., & Davis, D. E. (2019). Exploring social belonging and meaning in religious groups. *Journal of Psychology and Theology*, 47(1), 3–19. <https://doi.org/10.1177/0091647118806345>
- Zhao, H. H., Shipp, A. J., Carter, K., Gonzalez-Mulé, E., & Xu, E. (2024). Time and change: A meta-analysis of temporal decisions in longitudinal studies. *Journal of Organizational Behavior*, 45(4), 620–640. <https://doi.org/10.1002/job.2771>