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Personality and Politics in Context

The Interaction of Personality Traits and Contextual Factors in Shaping Political Behavior and Attitudes

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Preface

This cumulative dissertation comprises of five empirical studies on the interaction of psychological dispositions and contextual factors in shaping political behavior and attitudes. Four of the five studies have already been published in scientific journals ranked in the Social Science Citation Index (SSCI). That means, they have already undergone a thorough double-blind review process. Chapter 2 has been published in *Political Psychology*, Chapter 3 and 5 have been published in *Swiss Political Science Review* and Chapter 6 has been published in *Comparative European Politics*. Chapter 4 has been presented at several scientific conferences and is currently prepared for submission to a scientific journal. Information on co-authors as well as the exact references to the published articles can be found at the beginning of each chapter.

Being part of a cumulative dissertation, the empirical studies fulfill two requirements: First, they are part of an overall research framework. Chapter 1 and 7 place the articles within the context of this larger research framework. Second, as research articles published in scientific journals the studies are independent contributions. This necessitates a proper introduction of the relevant concepts and theories in each article and leads to inevitable similarities. Thus, readers should feel free to skip paragraphs that seem to be redundant. Moreover, the independence of the five research articles partly leads to differences in the empirical modeling strategy.

Finally, on a technical note, this dissertation was typeset in LaTeX. Data analyses and data visualization were conducted using Stata and R.

Summary

In this dissertation, I build on a growing literature examining the relationship between personality traits and political attitudes and behavior. I move beyond studying the direct effects of personality traits and examine whether and how they interact with contextual factors. Theoretically, the dissertation bridges the gap between personality psychological and contextual approaches to the study of personality and politics. Personality is conceptualized using the standard model of the Big Five personality traits. Empirically, I scrutinize the interaction between personality traits and contextual factors using data from Switzerland. Thus, this dissertation adds evidence on interaction effects to the existing research and it studies a case – Switzerland – that has not yet been considered in the literature on personality and politics. The empirical analysis consists of five research articles focusing on different aspects of political attitudes and behavior. Three studies are concerned with the interaction between personality traits and direct democracy as an institutional context; two studies deal with the interaction between personality traits and ethnic diversity as a structural context.

The first study (Chapter 2, co-authored with Markus Freitag) is motivated by inconclusive findings on the link between direct democracy and institutional trust. We argue that this inconclusiveness can be partly ascribed to the diverse effects of direct democracy on individuals. Direct democracy influences institutional trust, but how and to what degree depends on the individual's personality traits. Hierarchical regression models reveal three important findings: First, we show that the number of ballot measures is not directly associated with institutional trust. Second, we demonstrate that the Big Five personality traits affect the propensity to trust. And lastly, some of these traits alter the relationship between direct democracy and institutional trust, suggesting that certain personality types are more likely to be sensitive to popular votes than others, and that not every individual is equally likely to respond to political stimuli, even in highly democratic environments.

The second study (Chapter 3) is concerned with the link between psychological dispositions and political protest behavior. I argue that this relationship is not universal; but that it rather depends on political contextual factors. These factors are able to alter the meaning and understanding of participatory repertoires, such as taking part in political protest. This, in turn, leads to differential effects of personality on participation. I argue that direct democracy will act as moderating political context for protest participation. Estimating hierarchical regression models, I find that the personality traits openness to experience,

and extraversion affect protest behavior directly. The link between openness to experience and protest participation is, however, significantly moderated by direct democracy. This strengthens the idea that the expression of personality traits is moderated depending on the situational context.

The third study (Chapter 4) deals with the widely studied relationship between personality traits and political ideology. I argue that uncertainty about the meaning of left and right influences the strength of personality effects. The relationship between the Big Five and ideology should be stronger if people are better informed and know which ideological position resonates their personality. I argue that a vivid direct democracy provides an informational context in which political knowledge can be increased easily, offering cues regarding the meaning to ideology, and thereby strengthens the effects of personality. Hierarchical regression models confirm this hypothesis: The link between neuroticism and ideology is significantly moderated by direct democracy, especially for highly educated citizens.

The fourth study (Chapter 5, co-authored with Maya Ackermann) analyzes the link between personality traits and attitudes of Swiss citizens toward equal opportunities for immigrants. In particular, we examine the extent to which the links between personality traits and attitudes toward equal opportunities are strengthened by perceived ethnic diversity. Hierarchical regression models reveal two important findings: First, we are able to confirm existing finding on the direct link between personality traits and attitudes toward immigrants that were found outside the Swiss context. Second, our results show that the link between conscientiousness and attitudes toward equal opportunities is significantly moderated by the perceived share of foreigners in the neighborhood. Living in a diverse neighborhood, conscientious persons are less likely to hold negative attitudes toward immigrants.

Finally, the fifth study (Chapter 6, co-authored with Maya Ackermann and Markus Freitag) focuses on examining the psychological foundations of the tension between openness and closedness, which is one of the most important cleavages in Swiss political debates. We build on the Five-Factor Theory to explain the link between personality traits, contextual factors, and a general stance toward the cultural, economic, and political alignment of Switzerland. Empirically, we find clear evidence that personality traits affect political attitudes. Furthermore, we are able to demonstrate that the relationship between personality and attitudes toward the degree of openness of Switzerland is moderated by perceived ethnic diversity in the neighborhood.

1 Introduction

> *"In other words, to understand or to predict behavior, the person and his environment have to be considered as one constellation of interdependent factors."*
>
> *Lewin (1951, 239-240)*

1.1 Personality, Context and Politics

Understanding the basis of political attitudes and behavioral patterns is one of the central goals in political psychology as well as political sociology. Why do some people trust political institutions more than others? Why do citizens decide to take part in political protest? What explains the individual's ideological position? Why do citizens refuse equal opportunities for immigrants? What explains citizens' stance toward the countries' openness? In order to answer such questions, a growing literature focuses on personality traits as explanatory factors (for an overview, see Gerber et al. (2011b) and Chapter 1.2.2). I contribute to this strand of research in the present dissertation. Taking Lewin's (1951) claim, formulated in his seminar writing *Field Theory in Social Science*, as a guideline, I aim to answer the overall question, whether and how personality traits interact with contextual factors in shaping political attitudes and behavior.[1]

More generally, this research question is embedded in the field of political psychology. In the 1970s, political psychology was described as moving "haltingly at best around the periphery of political science, very much like an unwanted guest at a fancy ball" (Merelman, 1977, 1203). However, it has meanwhile – to continue the metaphor – arrived at the center of the dance floor. Political psychology has become an established subfield of political science but it is still a young one compared to other subfields. Therefore, one can recognize ongoing efforts to put psychological approaches to politics more in the spotlight (two special issues of the *Politische Vierteljahresschrift* – Klingemann and Kaase (1981) and Faas et al. (2015) – nicely illustrate these efforts for the German speaking countries). The application of psychological approaches in political science research is closely related to the limits of rational choice approaches. Rational choice-based theories build

[1] It is important to note that the terms context, situation, environment and external influences can be used interchangeably. The difference stems solely from their respective use in particular research domains. For instance, within political science, one uses most of the time the term context. Meanwhile, situation is more often used in psychology research.

on strong assumptions regarding an individual's preferences and information. In reality, these assumptions are rarely met, as the paradox of voting (Downs, 1957) or the Nobel Prize-wining research on cognitive biases (Kahneman, 2011; Kahneman and Tversky, 1979) show. Approaches in political psychology address these shortcomings by enriching theories of attitude formation and behavior with psychological mechanisms. Nevertheless, rational behavior remains the benchmark in these approaches (Marx and Tiefensee, 2015). Thus, rational choice theory is not the opposite pole but rather "a stimulus to political psychology" (Huddy et al., 2013, 6).

Political psychology is a highly diverse subfield of political science and the study of personality and politics is only one small part of it. Nevertheless, it gained momentum in the course of Mondak's (2010) seminal writing *Personality and the Foundations of Political Behavior*. The book illustrates that personality plays an important role in shaping political attitudes and behavior, similar to conventional explanatory factors, such as education or gender. Taking a simplified example, a highly-educated middle-aged man usually has a high propensity to take part in protest (Norris, 2002, 202). If he is, however, very conscientious, this propensity has been shown to decrease, explaining why he might not take part in demonstrations (Mondak et al., 2010). Just as socio-economic and -demographic factors and other explanatory variables, personality traits are by no means deterministic in shaping political attitudes and behavior. But personality traits account for at least as much variance in political behavior as standard demographic variables (Caprara and Vecchione, 2013, 32). Or, as Greenstein (1992, 124) puts it: "Political institutions and processes operate through human agency. It would be remarkable if they were *not* influenced by the properties that distinguish one individual from another." Hitherto, the studies on personality and politics have largely focused on the direct effects of personality traits and have mainly scrutinized these effects for the cases of the United States, Germany and Italy (Gerber et al., 2011b).

Against this background, this dissertation contributes to the existing literature on personality and politics in two ways. First, I examine the link between personality traits and political attitudes and behavior in a case that has so far not been examined: Switzerland. Analyzing this new case helps to evaluate former findings and their generalizability. Second, and most importantly, I move beyond studying direct effects of personality traits in this dissertation and examine whether and how they interact with contextual factors. Thereby, I follow Mondak et al. (2010, 90), who assume "that variation in people's psychological predispositions leads them to respond differently when exposed to common environmental stimuli, and, correspondingly, that the expression of personality traits will vary by situation." While it is largely acknowledged that this interaction exists and con-

tributes to the explanation of political attitudes and behavior, it is still often neglected in empirical research. As Mondak (2010, 19) notices, "the greatest contributions of research on personality will involve identification of interactive relationship between personality traits and other sorts of predictor variables". To follow this call, I draw theoretically on arguments from personality psychology as well as from contextual research in political sociology. Empirically, the interaction between personality traits and structural as well as global contextual factors is tested in five separate studies. In one of the studies, we examine whether personality traits are able to moderate the effect of a global contextual or institutional variable – in this case, direct democracy – on political trust. In two other studies, I conceptualize the interaction in the reverse direction and scrutinize whether an institutional context – again, using direct democracy – moderates the relationship between personality traits and political attitudes (ideology) and behavior (protest participation). Finally, in the last two studies, we analyze whether a structural context – in this case, perceived ethnic diversity – alters the relationship between personality traits and political attitudes (attitudes toward equal opportunities for immigrants and attitudes toward the openness of Switzerland). In sum, the main contribution of this dissertation is the development of an analytical framework on the interaction of person and situation and to test this framework empirically.

From a societal or practical point of view, studying the relationship between personality and politics and especially in interaction with contextual factors is relevant for several reasons. First, it is important to know how individuals with different personality structures react to institutional stimuli. Are, for instance, open-minded persons less likely to take part in protest activities in direct democratic contexts than in representational ones? These questions might be relevant when decision-makers decide about the design and the establishment of institutional settings. They should keep in mind that introducing one form of political participation might have unintended consequences for other forms and certain parts of the electorate. Second, political parties and elites might be interested to know whether voters react differently to certain appeals during campaigns depending on their personality.[2] Moreover, they might also want to know whether certain institutions can contribute to mobilize particular parts of the electorate. Under which conditions are, for instance, agreeable persons willing to participate in the conflict-laden political arena? Finally, it is relevant to know whether structural contexts moderate certain personality

[2] In the course of the United States presidential election 2016, the use and the effectiveness of a new form of micro-targeting based on personality traits has been discussed controversially. It means that, for example on social media platforms, users see individualized campaigns ads that resonate their personality scores. The debate was initiated by an article by Grassegger and Krogerus (2016b) in the Swiss weekly journal *Das Magazin*. For an important clarification by the authors, see Grassegger and Krogerus (2016a), and for a thoughtful contribution to the debate, see Schloemann (2016).

effects before political and administrative decisions are taken. Do conscientious individuals, for example, have a more positive outlook on immigration if they live in a diverse neighborhood? If so, city planners can take these results into account in order to diminish prejudice and negative attitudes of particular sections of the population. In this dissertation, I will shed light on some of these questions and thereby deepen our understanding of how personality conditions the reaction to contextual stimuli and how contexts moderate personality effects on political attitudes and behavior.

This dissertation is structured as follows. The remainder of Chapter 1 introduces the conceptual and theoretical framework of this dissertation focusing on the explanatory variables, i.e. personality traits and contextual factors. The outcome variables of this dissertation, on the other hand, cover a wide range of political outcomes, from attitudes toward the political system to political behavior and attitudes. These outcome variables will be introduced and defined in each of the empirical chapters. Chapter 2 presents an empirical study on the moderating role of personality in the relationship between direct democracy and political trust. Thereafter, in Chapter 3, I scrutinize the link between personality and protest and examine how this relationship is altered by direct democracy. In Chapter 4, I analyze whether the relationship between personality and ideology is strengthened in the context of a vivid direct democracy. While these three empirical chapters consider the interaction of personality traits and the political context, the remaining empirical chapters turn to the role of ethnic diversity as an important example of a structural context. Chapter 5, for instance, studies the moderating effect of perceived ethnic diversity on the link between personality and attitudes toward immigrants. Chapter 6 examines whether ethnic diversity interacts with personality in shaping attitudes toward the openness of the country. Finally, in Chapter 7 the findings of this dissertation, the implications and pathways for future research will be intensively discussed.

1.2 Personality and Politics

The second part of the introduction maps the research field this dissertation is embedded in: the study of personality and politics. First, the well-established standard model to conceptualize and measure personality – the Five Factor Model – will be presented. This model is used to capture personality in this dissertation. Second, the state of research on personality is presented. Finally, I will elaborate on the research gap this dissertation aims to close.

1.2.1 Conceptualizing and Measuring Personality – The Five Factor Model

In a broad sense, personality can be defined as a "dynamic system of psychological structures and processes that mediates the relationship between the individual and the environment and accounts for what a person is and may become" (Caprara and Vecchione, 2013, 24). In order to study personality, psychological research distinguishes at least six different approaches: the biological perspective, the cognitive perspective, the humanistic perspective, the learning perspective, the psychodynamic perspective, and finally the trait perspective (Cloninger, 2009, 4). This dissertation takes on the perspective of trait theory. Starting to develop in the 1930s, this perspective was strongly influenced by Gordon Allport. His seminal writing *Personality. A Psychological Interpretation* (Allport, 1937) is the first attempt to systematize the study of personality by developing and defining the relevant concepts and theories. Reviewing the definitions of personality used in different subjects, Allport (1937, 48) arrives at the following:

> "Personality is the dynamic organization within the individual of those psychophysical systems that determine his unique adjustments to his environment".

Allport (1937, 235) emphasizes that it is necessary to decompose personality in subunits in order to be able to measure, describe and compare the personality of two individuals. In his concept of personality these subunits are called characteristic dispositions or traits, which is defined as

> "[...] a generalized and focalized neuropsychic system (peculiar to the individual), with the capacity to render many stimuli functionally equivalent, and to initiate and guide consistent (equivalent) forms of adaptive and expressive behavior" (Allport, 1937, 295).

Thus, traits are considered the core of an individual's personality that allows to distinguish two individuals from each other. They have to be differentiated from habits, values, and attitudes (Allport, 1931, 1937; Olver and Mooradian, 2003; Roccas et al., 2002). In order to measure personality traits empirically, Allport (1937) and other founding fathers and mothers of personality psychology follow the *lexical hypothesis* (Allport and Odbert, 1936; Baumgarten, 1933; Klages, 1926). The first one to formulate this hypothesis was Francis Galton (1884), who was in search of empirical ways to measure the character of a person. The lexical hypothesis assumes that "[t]hose individual differences that are most salient and socially relevant in people's lives will eventually become encoded into their language; the more important such a difference, the more likely is it to become expressed as a single word" (John et al., 1988, 174). In a nutshell, the hypothesis presumes that personality

traits are embedded in our everyday language. To detect these personality traits, scholars use dictionaries to create lists of personality-relevant terms. For instance, Klages (1926) and Baumgarten (1933) provide inventories in German.[3] Allport and Odbert (1936) work with an English dictionary and classify the 17,953 terms they identify in four categories: personal traits, temporary states, social evaluations and metaphorical/ doubtful terms. A subset of this inventory is used by Cattell (1943) who applies clustering procedures in order to reduce dimensionality. He finds 35 clusters that form 12 factors (Cattell, 1945). This attempt to identify clusters in the inventory is followed by Fiske's (1949) work that suggests an even simpler factor structure comprising only five factors. The five factor solution is replicated by other scholars in the 1960s and shows a very high level of convergence with the later Five-Factor Model (FFM). Norman (1963) is the first scholar to label the five factors and almost all labels persist until today: Extraversion, Agreeableness, Conscientiousness, Emotional Stability and Culture (currently: Openness to Experience).

The Emergence of the Five Factor Model

In the 1980s and 1990s, research on personality experiences a boost that is heavily influenced by the work of Goldberg (1990, 1981) and McCrae and Costa (1985). Building on the study by Norman (1963), Goldberg (1990) uses an inventory of 1,710 *trait adjectives* and contributes to clarify the five factor structure. He is also the first to use the term "Big Five" to express the broad content of the factors (Goldberg, 1981). In order to measure the Big Five empirically, Goldberg (1992) develops the Trait Descriptive Adjectives (TDA) which comprises a list of 100 unipolar adjectives. Later on, Saucier (1994) presents a short version of the TDA including only 40 of them.

More or less simultaneously to the development of the adjective measures, scholars embedded in the tradition of *questionnaire-based personality assessment* identify a "need for an integrative framework" (John et al., 2008, 124) to measure personality. Equally, building on Cattell's (1943) early work, Costa and McCrae conceptually derive six facets of neuroticism, extraversion and openness to experience and present the NEO Personality Inventory (NEO-PI) to measure them. The revised version of this inventory (NEO-PI-R) published in 1992 comprises 240 items, including facets scales to capture agreeableness and conscientiousness (John et al., 2008, 124; see also Costa and McCrae, 1995; McCrae and Costa, 1985).

[3] Franziska Baumgarten deserves special mention here. She was the second woman who habilitated at the Faculty of Humanities at the University of Bern in 1929 (Daub, 2011). In 1933, Baumgarten published the article *Die Charaktereigenschaften* that strongly influenced the development of modern personality psychology (Baumgarten, 1933). Allport and Odbert (1936, 23) explicitly refer to her work.

Table 1.1: The Five Factor Model of Personality

Trait	**Short Definition**	**Facets**
Openness to Experience	"[...] describes the breadth, depth, originality, and complexity of an individual's *mental and experiential life*." (John et al., 2008, 138)	Fantasy Aesthetics Feelings Actions Ideas Values
Conscientiousness	"[...] describes *socially prescribed impulse control* that facilitates task- and goal oriented behavior [...]" (John et al., 2008, 138)	Competence Order Dutifulness Achievement Striving Self-Discipline Deliberation
Extraversion	"[...] implies an *energetic approach* toward the social and material world [...]" (John et al., 2008, 138)	Warmth Gregariousness Assertiveness Activity Excitement Seeking Positive Emotions
Agreeableness	"[...] contrasts a *prosocial and communal orientation* toward others with antagonism [...]" (John et al., 2008, 138)	Trust Straightforwardness Altruism Compliance Modesty Tender-Mindedness
Neuroticism	"[...] contrasts emotional stability and even-temperedness with *negative emotionality* [...]" (John et al., 2008, 138)	Anxiety Angry Hostility Depression Self-Consciousness Impulsiveness Vulnerability

Source: Own illustration, based on John et al. (2008)

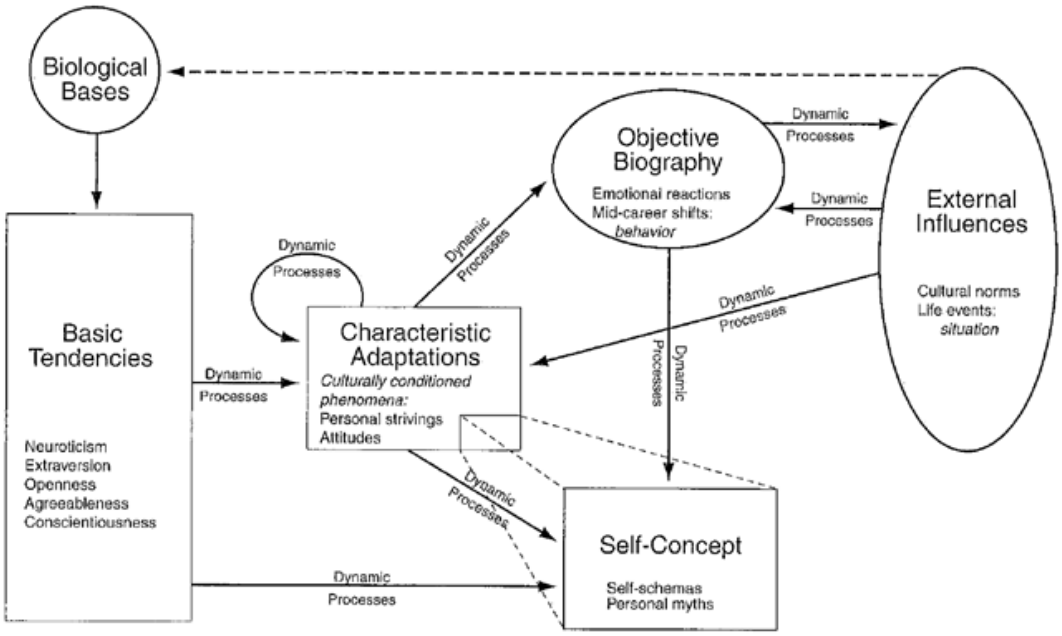
Table 1.1 shows the five identified traits together with a short definition as well as the six facets or sub-dimensions of each trait. *Openness to experience* "[...] describes the breadth, depth, originality, and complexity of an individual's *mental and experiential life*." (John et al., 2008, 138). In other words, it captures the perspectiveness and intellect of a person as well as to what degree he or she is attracted to new experiences. Generally, open-minded persons are curious, value knowledge, and are ready to question existing values and ideas. They are able and willing to view things from different perspectives. Furthermore, individuals scoring high on openness value artistic and aesthetic experiences, they have a lively imagination and they "experience their own feelings strongly" (McCrae and Costa, 2003, 49). The trait *conscientiousness* "[...] describes *socially prescribed impulse control* that facilitates task- and goal oriented behavior [...]" (John et al., 2008, 138). A person scoring high on conscientiousness is supposed to be organized, dutiful, ambitious, disciplined, rational, and informed. Furthermore, he or she thinks carefully before taking action and assumes to be competent (McCrae and Costa, 2003, 50). *Extraversion* "[...] implies an *energetic approach* toward the social and material world [...]" (John et al., 2008, 138). It describes how an individual behaves in interactions with others as well as one's temperament more generally. Extroverts are friendly and cordial towards others. They are outgoing and sociable and enjoy being part of a crowd of people. Furthermore, they are energetic, active, and attracted to risky and stimulating undertakings. Finally, they tend to be socially dominant and are keen on expressing their opinions (McCrae and Costa, 2003, 49). The trait *agreeableness* "[...] contrasts a *prosocial and communal orientation* toward others with antagonism [...]" (John et al., 2008, 138). An individual scoring high on agreeableness tends to put a high level of trust in others, is likewise trustworthy and selflessness. Agreeable persons are gentle and humble (McCrae and Costa, 2003, 50). Moreover, risk avoidance is assumed to be a typical behavioral pattern of agreeable persons (Mondak, 2010, 59). Finally, *neuroticism* "[...] contrasts emotional stability and even-temperedness with *negative emotionality* [...]" (John et al., 2008, 138). Individuals scoring high on neuroticism are disposed to experience negative emotions, such as sadness and hopelessness. They often feel inferior to others. Moreover, they are nervous, tense, and worry a lot. Since they also tend to experience anger more frequently than others, they "may prove hard to get along with" (McCrae and Costa, 2003, 48). Their behavioral patterns are characterized by impulsiveness and vulnerability. As a result, they show low resistance to stress (McCrae and Costa, 2003, 48). The literature on the Big Five personality traits shows a high degree of consistency regarding the designation of the traits. Neuroticism is an exception because its antipode – emotional stability – is also frequently used in the literature.

The above presented five factor structure has been validated using different methods. Next to self-ratings, peer- and observer-ratings also revealed the five factor structure (Goldberg,

1990; McCrae and Costa, 1987; Tupes and Christal, 1992). Furthermore, studies comparing self- to peer-ratings show that they are largely consistent (Funder et al., 1995; Soto and John, 2009). This raises confidence in the accuracy and validity of the FFM. Moreover, the structure has been validated for different countries and cultures (McCrae and Costa, 1997; McCrae et al., 2005; Schmitt et al., 2007). However, it is important to note that Schmitt et al. (2007, 185-187) report problems in replicating the five factor structure in Africa, South Asia, and Southeast Asia. This might be either due to poor translations of single items or for more substantial reasons. Nevertheless, Schmitt et al. (2007) conclude that "the generalizability of the factor structure across cultures was sufficient" (Schmitt et al., 2007, 187). Also, Allik and McCrae (2004) and Schmitt et al. (2007) find some interesting patterns when examining cross-cultural differences in the manifestation of the Big Five personality traits. Allik and McCrae (2004), for instance, report that American and European countries show higher levels of extraversion and openness to experience, while Asian and African countries score comparatively high on agreeableness. These cross-cultural differences in the mean levels of the Big Five personality traits do, however, not limit the cross-cultural generalizability of the model itself. The FFM can be validated for different countries but the traits are not equally distributed across different cultures.

Although the FFM has become the established standard model to assess personality traits, it is not undisputed. Block (1995), for instance, questions the assumptions of the lexical hypothesis as well as the validity of the five factor structure based on the questionnaire approach. Furthermore, the coverage of personality by the FFM as well as its reliability are doubted (Boyle, 2008). At the same time, the model is also accused of lacking a theoretical basis (Boyle, 2008). McAdams (1992) criticizes that the FFM is an over-simplified model of personality. From his point of view, its predictive and explanatory power are, for instance, limited when it comes to human behavior and experience. Amongst other reasons, this might be due to a neglect of contextual factors according to McAdams (1992). Another topic of discussion is the number of traits. Eysenck (1983) proposes a model related to the FFM, consisting of only three factors. Ashton et al. (2004), on the other hand, expand the FFM by the trait of *honesty-humility* and present the six factor HEXACO model. At the same time, the existence of potential higher-order factors is discussed in the literature. DeYoung (2006) and Digman (1997) argue that the five factors form two higher-order factors named *stability* (agreeableness, conscientiousness and emotional stability) and *plasticity* (extraversion and openness to experience). Some other scholars find evidence of just one general factor of personality (so-called "The Big One") (Amigo et al., 2010; Musek, 2007; Rushton et al., 2008), but the usefulness of this approach for empirical research is debated (Revelle and Wilt, 2013).

Figure 1.1: The Five Factor Theory



Source: McCrae and Costa (2008, 163).

Causes and Consequences of Personality Traits – The Five Factor Theory

To counter some of the above criticism, McCrae and Costa (2008) present the *Five Factor Theory* (FFT), an encompassing model of personality that elaborates on the causes and consequences of personality traits.[4] Figure 1.1 shows the graphical illustration of the FFT. It consists of components and dynamic processes that link the components. In this theory, traits are described as basic tendencies that "[...] are deeper psychological entities that can only be inferred from behavior and experience" (McCrae and Costa, 2008, 163). According to the FFT, traits distinguish individuals from each other. The traits are influenced by biological factors (or external factors that affect this biological basis), they are mostly developed through childhood and early adulthood, and they are hierarchically organized with the Big Five personality traits constituting the highest level (McCrae and Costa, 2008, 165). McCrae and Costa (2008, 163) emphasize the necessity of a clear distinction between basic tendencies and characteristic adaptations as separate components of the FFT. *Characteristic adaptations* describe "[...] habits, attitudes, skills, roles, relationships [that] are influenced both by basic tendencies and by external influences" (McCrae and

[4] The FFT was presented in 1996 for the first time (McCrae and Costa, 1996). In this dissertation, I refer to the slightly updated version of the theory that was published in 2008 (McCrae and Costa, 2008).

Costa, 2008, 163). More vividly, an individual's attitude toward a certain issue is not only influenced by basic tendencies and therefore characteristic but is also an adaptation because it is not independent from the context in which an individual is situated. The third component of the FFT, which is central to this dissertation, is *objective biography*. It describes a concrete behavior of an individual that is – according to the FFT – affected by characteristic adaptations and external influences and carried out in accordance with one's basic tendencies (McCrae and Costa, 2008, 165). McCrae and Costa (2008, 165) formulate 16 postulates to describe the dynamic relationships between the components of the FFT. Interestingly enough, these postulates not only go beyond the links portrayed in the graphical illustration of the theory (see Figure 1.1) but one of them also describes interaction effects between personality traits (basic tendencies) and contextual factors (external influences). It is these interactions that will play a crucial role in the development of the overall analytical framework of this dissertation (see Chapter 1.3).

McCrae and Costa (2008) themselves emphasize that the FFT needs to be further specified and refined, in the light of recent research findings. Especially, three questions seem to be relevant. First, what are the causes of personality traits? This hints at the *nature versus nurture* debate concerning the influence of genetic dispositions (nature) and experiences (nurture) on individual personality differences. For both positions, evidence is found (e.g. Borkenau et al., 2001; Bouchard and Loehlin, 2001), resulting in the idea that personality traits are influenced most likely, by both, genetic dispositions and individual experiences (e.g. Jang et al., 1998; Krueger and Johnson, 2008). Depending on the trait, about 40 to 50 percent of the variation is estimated to be influenced by genetic dispositions (Bouchard, 2004; Krueger and Johnson, 2008). The second interrelated question deals with the stability of personality traits over time. McCrae and Costa (2008, 167) state that personality traits are "*relatively* stable" over the course of life. This statement seems vague but describes the state of research rather accurate (for an overview see Caspi et al., 2005). Rank-order stability, that is the relative order of individuals on a trait scale, is reported to be high over the life span. Meanwhile, mean-level changes, that is changes in the mean score from one age group to another on a trait scale, are reported. The relation between age and openness to experience, for instance, has been found to be curvilinear (inverse u-shape) (Caspi et al., 2005, 468). Again, the question is whether these changes are caused by disposed processes of maturation or by experiences and life events. Existing research suggests that both mechanisms are at work (Bleidorn et al., 2009; Specht et al., 2011, 2013, 2014a). Lastly, there is the question about the consequences of personality traits. It is especially this question, that is central to this dissertation. According to the FFT personality traits affect characteristic adaptations, such as attitudes and habits, and thereby influence the observable behavior of an individual (i.e. objective biography) (Mc-

Crae and Costa, 2008). Against the backdrop of research findings from different fields, a direct relation between personality traits and behavioral patterns should be added to this reasoning (Matthews et al., 2009; Ozer and Benet-Martinez, 2006; Roberts et al., 2007). With regard to the topic of this dissertation, an increasing amount of studies points to the relationship between personality traits and political attitudes and behavior (for an overview see Gerber et al., 2011b). This will be reviewed in more detail in Chapter 1.2.2.

The Development of Short Measurement Instruments

A theoretical consequence of the establishment of the FFM, as the standard model to capture personality traits, has been the development of the above described FFT. An empirical consequence of the wider interest in the model and its possible applications in survey-based research has been the need for shorter instruments to measure the Big Five. Short instruments enable researchers to measure personality in larger psychological and social science surveys that do not primarily aim at personality assessment. Costa and McCrae themselves provide a 60-item version of their instrument that is called the NEO-FFI (John et al., 2008, 125). More or less at the same time, John (1990) presents the Big Five Inventory (BFI), an instrument consisting of 44 items. According to John et al. (2008, 131) the BFI has major advantages compared to the adjective-based measures as well as the NEO-PI-R; while it adds some clarifying information to the trait adjectives, the questions are less complex and easier to understand than the items of the NEO-PI-R.

The BFI has inspired the development of a number of even shorter instruments for measuring personality traits. Gosling et al. (2003) introduce two short scales: the Ten Item Personality Inventory (TIPI) and the Five Item Personality Inventory (FIPI). Both instruments prove to be valid measures of the Big Five personality traits showing, for instance, a reasonable convergent and discriminant validity and acceptable levels of test-retest reliability. Not surprisingly, the TIPI reveals better psychometric results than the FIPI. Rammstedt and John (2007) also present another ten item instrument to measure the Big Five: the BFI-10. It differs from the TIPI with regard to the concrete formulation of the items. While the items of the BFI-10 are based on the original items of the BFI, the items of the TIPI are developed on the basis of different existing instruments to measure the Big Five. In comparison, the BFI-10 shows slightly better psychometric properties than the TIPI (Rammstedt and John, 2007).

Finally, Gerlitz and Schupp (2005) introduce a 15-item instrument called the BFI-SOEP (BFI-S) that has originally been developed for the German Socioeconomic Panel (G-SOEP). Based on the result of a factor analysis of the BFI, the five items per trait with

the highest factor loadings have been selected (BFI-25) and included in a pretest of the G-SOEP. As a result of this pretest, the instrument is reduced to 15 items, three items per trait. These items have been selected according to several criteria: the content-related balance of the scales, the internal consistency of the scales, the dimensionality of the item battery and the representation of the BFI-25. The resulting BFI-S has been proven to be a valid instrument to measure the Big Five personality traits (Gerlitz and Schupp, 2005). In comparison to the NEO-PI-R, the scales of the BFI-S show acceptable levels of internal consistency, stability, discriminant validity and convergent validity. It should, however, be noted that the scale for agreeableness seems to be less valid than the other scales. It performs worse in terms of internal consistency, test-retest stability and convergent validity (Hahn et al., 2012). Further research shows that the BFI-S is by and large valid across different interview modes (Hilgert et al., 2016; Lang et al., 2011).[5]

In sum, existing research demonstrates that the short instruments measuring the Big Five have advantages and limitations at the same time.[6] Compared to larger instruments they are not able to cover the whole range of facets, show lower levels of reliability, and weaker correlations with various outcome variables (Gosling et al., 2003). In this vein, Credé et al. (2012) demonstrate that already a slight increase in the number of items leads to a better representation of the five factors and less biased results. Nevertheless, given their brevity, short Big Five instruments are surprisingly valid and reliable. They are especially useful when time and space are limited and personality assessment is not the central goal of the survey.[7]

1.2.2 Personality and Politics - State of the Art and Research Gap

Studying the influence of personality on political attitudes and behavior is not a new idea. Already in the first half of the 20^{th} century, political scientists discuss the relation between personality and politics. Analyzing the link between personality and political

[5] Hilgert et al. (2016) as well as Lang et al. (2011) conclude that measurement invariance exists for computer assisted self interviewing (CASI) and computer assisted personal interviewing (CAPI) methods. Regarding the use in computer assisted telephone interviews (CATI), evidence is mixed; while Lang et al. (2011) find that it is less suited for assessing personality traits of older age-groups using CATI, Brust et al. (2016) are less skeptical.

[6] Apart from the presented short instruments, the Mini-International Personality Item Pool (Mini-IPIP) consisting of 20 items should be mentioned. It is less popular in the literature and thus, it is not discussed in detail here. Laverdière et al. (2013) provide more information on this instrument and demonstrate its validity.

[7] Ryser (2015) has a more skeptical outlook on the short Big Five instruments. She, therefore, advises that in order "[t]o avoid misinterpretation of the results, a study based on Big Five personality mini-markers should thoroughly examine the structure of the mini-markers before conducting further analyses." (Ryser, 2015, 14). As the method section (Chapter 1.5) will explain, I follow this advice in this dissertation.

attitudes, Vetter (1930, 188), for instance, concludes that "while the popular impression of the relation between political opinions and the personality of the individual cannot be substantiated, it is none the less obvious that among the causal factors making for the holding of the various shades of political and social opinions there must be included various factors that are at present best described as traits of personality. This, of course, without any attempt to deny or belittle the obvious part played by various other factors best described in cultural or environmental terms." Beyond Vetter's (1930) work, the first studies on personality and politics are heavily influenced by psychoanalytic theory, and look primarily at the personality of political leaders (for the most prominent example, see Lasswell, 1930, 1948).[8] After the Second World War, Adorno and colleagues (1950) develop their analytical model of the *Authoritarian Personality* aiming to examine the psychological underpinnings of prejudice. This model inspired many studies (for example, Frenkel-Brunswik, 1952; Janowitz and Marvick, 1953; Lane, 1955) and about 30 years later Altemeyer's (1981; 1996) work on Right-Wing Authoritarianism (RWA). According to Altemeyer (1981, 1996), RWA constitutes a personality trait and not simply an attitude. This view is, however, contested in more current literature (Caprara and Vecchione, 2013, 37).[9]

Even beyond research in the tradition of the *Authoritarian Personality*, the study of personality and politics gained momentum in the 1950s and 1960s. Levinson (1958) vigorously points to the importance of personality in the study of political participation, which was up till then mostly focused on social, economic, and cultural explanations. Against this backdrop, Smith (1958, 1968) provides an early example of a theoretical and analytical framework to study personality and politics. Regarding the empirical studies of that time, some apply rather broad conceptions of personality (McClosky, 1958; Milbrath and Klein, 1962; Mussen and Wyszynski, 1952), while others use single aspects of personality (Milbrath, 1960; Sniderman, 1975). Moreover, Campbell et al. (1960, 499-519) dedicate a whole chapter of their seminal writing *The American Voter* to the role of personality aspects in the process of electoral decision making. Although these studies are not unified by a common approach to personality and some are rather narrow in their conceptualization of it, they illustrate the relevance of personality in the study of political attitudes and behavior.

[8] See Winter (2005) for a good overview of other approaches to the study of political leaders' personality.

[9] RWA and its political consequences are often comparatively studied with Social-Dominance Orientation (SDO) (for example, see Duckitt, 2006; Ekehammar et al., 2004; Heaven and St. Quintin, 2003). Just as for RWA, it is also contested whether SDO is a personality trait or an attitudinal orientation. Research on the link between the Big Five personality traits and RWA and SDO suggests the latter (Akrami and Ekehammar, 2006; Perry and Sibley, 2012).

With the establishment of the FFM as a standard model in personality psychology, political scientists also start to use this model to capture personality. Although some earlier work deserve special mention (for example, Riemann et al., 1993; Schumann, 2001, 2002, 2005), the big wave of studies using the Big Five personality traits has started about ten years ago. Table A.1 in the Appendix presents – to the best of my knowledge – all studies that have been published in scientific journals in English or in German since 2006 in three fields of research: personality and attitudes toward the political system and civic attitudes, personality and political behavior, and personality and political attitudes and ideology. Only studies making use of the Big Five personality traits and studying citizens behavior and attitudes are considered. In total, 67 articles were found without accounting for the two review articles by Gerber et al. (2011b) and Schoen (2012) as well as the meta-analyses by Sibley and Duckitt (2008) and Sibley et al. (2012). It is not the aim of Table A.1 and this review section to provide a detailed overview over the theoretical arguments and empirical results of the existing literature. Rather it provides a broad overview over the development of the field.[10] Specific content-related literature reviews can be found in the theoretical parts of the empirical chapters.

Much of the literature on personality and its influences on political attitudes and behavior presented in Table A.1 has been inspired by Mondak's (2010) seminal writing *Personality and the Foundations of Political Behavior* in which he demonstrates that the Big Five personality traits are related to a number of political outcomes, such as political attentiveness, discussion, knowledge, partisanship, political attitudes and participation. His publication gave rise to a number of studies examining the linkage of personality and politics in different countries. Most of the work (around 52 percent) considers political behavior as well as political attitudes and ideology (around 43 percent) as outcome variable. Only a small part of the articles (around 13 percent) deals with attitudes toward the political system and civic attitudes.[11] Except for the studies included in this dissertation, none of the articles, however, examines how personality traits and various political outcome variables are related in Switzerland. Thus, the first contribution this dissertation makes is to add another case to the literature on personality and politics. Since cross-national comparisons are very rare in this research field, every new case helps to evaluate the generalizability of existing findings.

Taking a closer look at Table A.1, it becomes clear that the first wave of studies between 2006 and 2012 has been mostly concerned with the direct relationship of personality and

[10] This overview does not include studies that are primarily interested in the genetic foundations of political behavior and attitudes. Examples of studies in this particular field that also refer to personality traits are Bell and Kandler (2016); Dawes et al. (2014); Fowler et al. (2008); Funk et al. (2013); Kandler et al. (2012), and Alford and Hibbing (2004) for theoretical considerations.

[11] The values add up to more than 100 percent because of articles that consider different outcome variables.

politics. Since then, scholars have slowly started to consider indirect, conditional or conditioning effects of personality. According to Mondak et al. (2010, 87), moving beyond the assessment of direct relationships between personality and politics and scrutinizing the mechanisms through which the two concepts are linked is the most important research gap in the study of personality and politics. By addressing this gap, scholars can contribute more to the understanding of political behavior and attitudes than just adding another set of explanatory variables. Since Mondak et al. (2010) have identified this research gap, a number of researchers have followed their advice and examined mediating and moderating effects. In total, around 25 percent of the reviewed studies include mediating effects, even though not all of them use path models or full mediation analyses. About 38 percent of the reviewed studies estimate moderating effects and either specify personality traits as moderator or moderated variables. Around one fifth of these moderation studies have been written and published in the course of this dissertation project (Ackermann, 2016; Ackermann and Ackermann, 2015; Ackermann and Freitag, 2015a; Ackermann et al., 2016; Freitag and Ackermann, 2016). Consequently, this dissertation contributes to the literature on personality and politics by the consideration of interaction effects.

In almost all of his writings, Mondak (2010) emphasizes the importance of the incorporation of environmental factors and their interaction with personality. He argues that this will lead to a better understanding of political behavior and attitudes. This incorporation is, however, not only necessary in empirical work but also in theoretical efforts, which will ultimately lead to "more elaborate and powerful theories of how citizens engage the political world" (Mondak, 2010, 186). As Table A.1 shows, this dissertation is not the only study that aims to close this research gap by focusing on interactions. However, some of these studies do not consider the interaction of person and contextual factors, but scrutinize the interaction of personality traits and other individual characteristics, such as demographic and socio-economic factors or political predispositions (Bakker, 2016; Gerber et al., 2010; Kim et al., 2013; Mattila et al., 2011; de Neve, 2015; Osborne and Sibley, 2015; Quintelier, 2014; Rasmussen, 2015; Russo and Amnå, 2016; Wang, 2014). Again other studies are primarily concerned with the moderating effects of personality traits in different kind of experimental designs (Gerber et al., 2013; Lyons et al., 2016; Nielsen, 2016; Weinschenk and Panagopoulos, 2014) or with the interaction between individually defined context characteristics, such as network size, and personality (Dawkins, 2017; Dinesen et al., 2016; Gerber et al., 2012a; Hibbing et al., 2011; Mondak et al., 2010). Only two recent studies – conducted by Oskarsson and Widmalm (2014) and Fatke (2016) – explicitly study the interaction between personality traits and the political or structural context in shaping political attitudes. Consequently, little is known on whether and how institutional or structural contexts moderate the effects of personality traits. Vice versa, the role of personality

traits in altering institutional or structural effects is relatively unexplored. It is these two research gaps, that I want to explicitly address in this dissertation from a theoretical and empirical perspective. Theoretically, I bring arguments from contextual research in political science together with the reasoning of personality research and situational approaches in psychology. Empirically, I will test whether evidence for the proposed interactions can be found for the Swiss case.

1.3 Person and Situation - Bringing Contextual Factors In

The third part of this introduction is devoted to bridge the gap between personality and contextual research. In doing so, three steps will be made. First, the role of the situation in personality research will be presented. Second, the role of contextual factors in the research on political behavior and attitudes will be discussed. Finally, these two perspectives will be integrated and the analytical framework regarding the interaction of person and context in shaping political attitudes and behavior will be introduced.

1.3.1 The Role of Situation in Personality Research

As the historical outline on the emergence of the FFM in Chapter 1.2.1 illustrates, there has been a slump in personality research between the late 1960s until the 1980s. This period is the heyday of situational research in psychology. One of the most prominent proponents of the superiority of the situation over personality traits in explaining human behavior is Mischel (1968). Another well-known example is the "Stanford Prison Experiment", which was also interpreted by the involved researchers as evidence for the importance of the situation (Haney et al., 1973). In a nutshell, the main argument of "situationists" in the person-situation debate is that personality traits predict behavior to a very limited extent and that the contexts in which an individual behaves can be considered as having more predictive power (Funder, 2013, 133).[12] Currently, the two extreme positions have converged and the dichotomy between person and situation is no longer existing. Psychology has reached the "post-war era", how Funder (2009) calls it, and the importance of person as well as situation in the prediction of behavior is currently widely acknowledged.

An example of this is the FFT presented earlier (see Figure 1.1). It adopts a holistic position to study personality. Such as, the role of external influences in shaping attitudes and behavior is also taken into account. Although this is not represented in the

[12] A more extensive and solid overview over the person-situation debate, as well as some replies to the criticism of personality research is provided by Funder (2013).

graphical illustration, the postulates of the FFT even explicitly mention the interaction of personality traits and external influences (McCrae and Costa, 2008, 165). Meanwhile, this interactionist view is the standard within the field of trait psychology (Greenstein, 1992; Matthews et al., 2009; McGraw, 2006; Mondak et al., 2010). At least in theory, trait psychology acknowledges that person and situation do not only contribute separately to shape behavior and attitudes but also interdependently. Matthews et al. (2009, 53) notice that this theoretical view is, however, not accompanied by a general analytical framework to study this interaction. A step in this direction is taken by Sibley et al. (2012), who propose a Trait-Constraint Model (TCM) to study the link between personality traits and political attitudes. They argue that in 'extreme' situations (in their case, threatening situations), personality traits become less relevant in shaping attitudes.[13] Oskarsson and Widmalm (2014) apply a similar line of reasoning in their study on personality traits and political tolerance. Although the TCM is an important contribution to the study of a person-situation interaction, its general applicability as well as the definition of extreme situations are rather unclear. Against this background, I aim to develop a more general framework in this dissertation, thereby incorporating theoretical approaches from political science introduced below.

1.3.2 The Role of Context in Research on Political Behavior and Attitudes

Just as psychology acknowledges that individual behavior and attitudes are not only shaped by individual characteristics but also by situational factors, political science assumes that contextual factors matter for individual political attitudes and behavior (Books and Prysby, 1988, 1991; van Deth and Tausendpfund, 2013; Huckfeldt, 1983, 2007; Huckfeldt et al., 1993; Lowndes and Roberts, 2013). Contextual factors in the explanation of political attitudes and behavior have a long-standing history dating back to the early election studies of the *Columbia School* (Berelson et al., 1954; Lazarsfeld et al., 1944). Books and Prysby (1988, 1991) provide a useful analytical framework to systematize the study of contextual effects in political science. They distinguish between compositional, structural and global effects. Compositional effects describe the impact of aggregated individual characteristics, such as class affiliation. Structural effects refer to "relational patterns that are more than the simple aggregation of individual-level characteristics" (Books and Prysby, 1988, 216). Ethnic diversity, which is one of the context variables used in this dissertation, is a typical example of a structural context variable. Finally, global effects account for the role of abstract contextual properties, which are not linked to individual characteristics.

[13] With their Dual Process Model (DPM), Sibley et al. (2013) propose a similar model for the study of prejudice that also accounts for person and situation. In this model, they, do not, however, apply the Big Five personality traits to conceptualize the person.

Direct democracy, another contextual variable considered in this dissertation, and, more generally, political institutions are good examples of these global contextual variables.

According to Books and Prysby (1988, 223), contextual effects emerge as "individual reactions to contextually patterned information". This information may be attained through social interactions, involvement, media or observations and influences individual attitudes and behavior through various mechanisms. One of these mechanisms is conformity to existing norms in the context; other mechanisms include conflictive relations between social groups or the simple regulation of certain behaviors and attitudes (Books and Prysby, 1988, 225-227). To fill these rather abstract theoretical reasoning with life, one can take the example of direct democracy as global contextual variable. Individuals living in contexts with varying degrees of direct democracy will likely receive different cues. For instance, an individual living in a context where ballot measures take place frequently will – by means of own evaluations and behavior or by means of interaction with others – take the cue that other non-institutionalized channels are less important to influence political decisions because there is a strong institutionalized alternative. Consequently they might be less likely to take part in non-institutionalized forms of political participation. Similar lines of reasoning can be made regarding structural and compositional effects. It is important to mention that, regarding institutional effects, the framework of Books and Prysby (1988) is compatible with theories of new institutionalism. Particularly, it resonates the assumptions and arguments of rational choice institutionalism, i.e. institutions are the 'rules of the game' that set the boundaries for norms, attitudes and behavior (Hall and Taylor, 1996; Kaiser, 1997; Lowndes and Roberts, 2013; March and Olsen, 1984). This reflects the reasoning by Books and Prysby (1988, 1991) that individuals act on the basis of the information transfered by institutions. Beyond direct effects, Books and Prysby (1991) also discuss the role of conditional effects of contexts. They explicitly mention that contextual analyses would benefit from the inclusion of psychological approaches (Books and Prysby, 1988, 227). While the authors rather think of approaches to information processing, the consideration of personality traits will also be valuable.

1.3.3 The Role of Context in the Study of Personality and Politics

The analytical framework of this dissertation integrates personality research and contextual approaches to the study of political behavior and attitudes. This is not an entirely new idea. Already in the very early studies on personality and politics, scholars argue that personality effects should not be studied independently from the context. For instance, Mussen and Wyszynski (1952, 81) make a case for the inclusions of personality in contextual studies by arguing that "[p]olitical activity and apathy are not functions only of

the general social structure and current historical events. The personality of the individual operating within the social-historical context must also be considered." Also Allport (1937, 313), coming from the field of personality psychology, acknowledges that "[n]o single trait – nor all traits together – determine behavior all by themselves. The conditions of the moment are also decisive." In a similar vein, Smith (1968, 19) states that "[t]he study of "personality and politics" cannot afford to neglect situational factors, which must in principle be taken into account if we are to isolate the distinctive contributions of personality." Finally, in the course of answering the criticism of the study of personality and politics, Greenstein (1967, 641) urges that the study of personality and politics should be advanced by examining "how and under what circumstances 'personality' affects political behavior."

The below presented analytical framework builds largely on the important work of Lewin's (1951) *Field Theory in Social Science*. In this seminal writing, he argues that human behavior is influenced by a certain combination of person and situation:

> "In general terms, behavior (B) is a function (F) of the person (P) and of his environment (E), $B = F(P, E)$" (Lewin, 1951, 239).

He elaborates that "[i]n this equation the person (P) and his environment (E) have to be viewed as variables which are mutually dependent upon each other. In other words, to understand or to predict behavior, the person and his environment have to be considered as *one* constellation of interdependent factor." (Lewin, 1951, 239-240). He emphasizes that the simple formula does not only hold for behavior but also for thinking. Consequently, the approach is equally useful to the study of attitude formation.

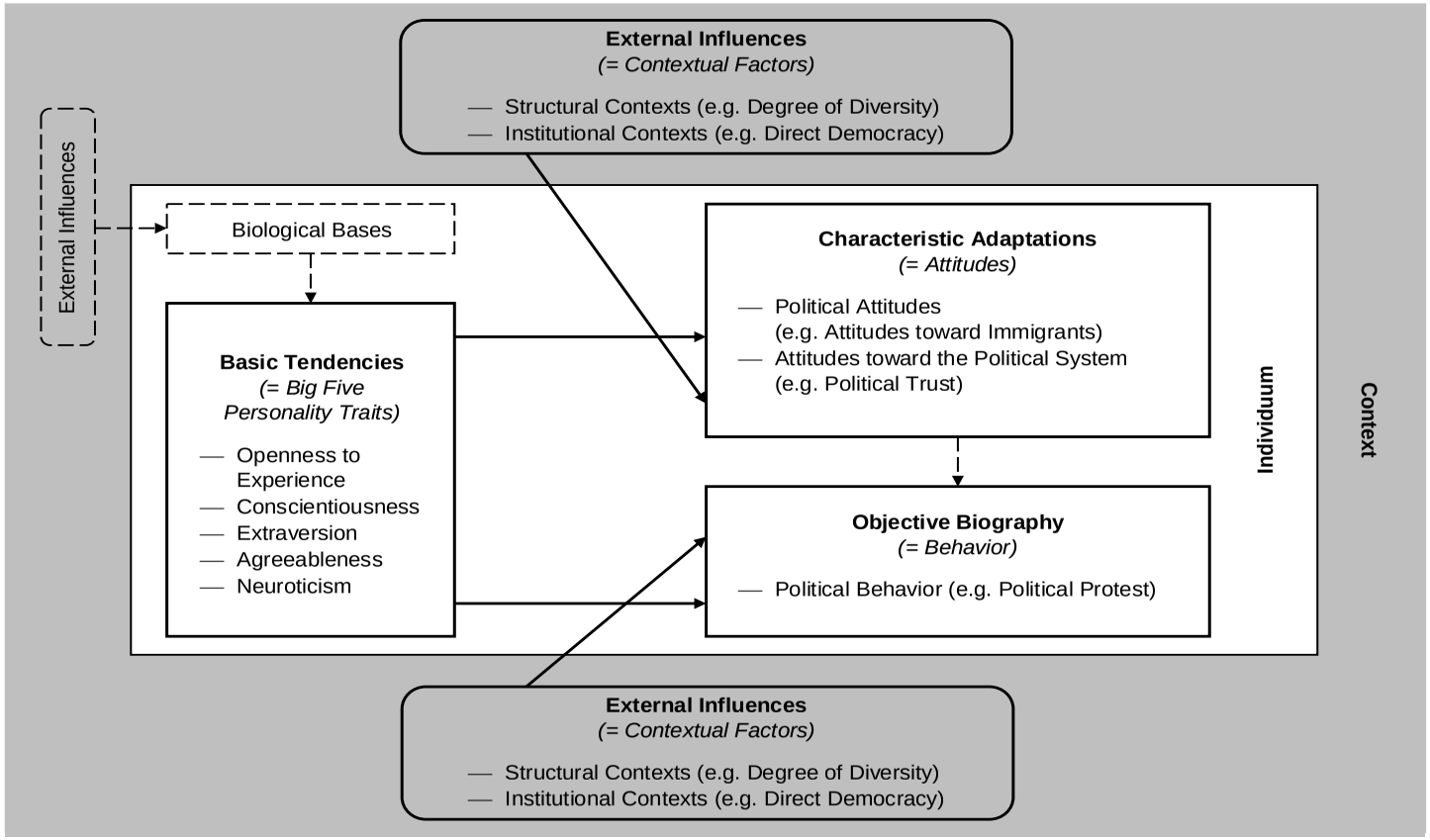
For explaining behavior or attitudes via Lewin's (1951) approach, the function (F), which links personal characteristics to the environment, needs to be found. Taking up his idea of an interdependence of person and environment, I argue that the effects of personality traits and contextual factors interact with each other. Following the interpretation of McGraw (2006), Lewin's (1951) approach encompasses both, an additive as well as an multiplicative linking of person and situation. I focus on the latter by arguing that personality traits interact with contextual factors in shaping political attitudes and behavior. This reasoning is inherent to interactionist approaches in personality psychology (Matthews et al., 2009) and it is also promoted by the postulates of the FFT. Although this is neither discussed extensively nor illustrated in the graphical representation of the theory, one postulate refers to such an interaction:

> "*5a. Interaction.* The social and physical environment interacts with personality dispositions to shape characteristic adaptations, and with characteristic adaptations to regulate the flow of behavior " (McCrae and Costa, 2008, 165).

The analytical framework, which is graphically shown in Figure 1.2, adapts the illustration of the FFT (Figure 1.1) by explicitly adding the interaction of personality traits (basic tendencies) and contextual factors (external influences). The arrows symbolize that personality traits as well as contextual factors might influence political attitudes and behavior independently from each other. The fact that these arrows are crossing each other is supposed to illustrate that the effects of personality traits and contexts might interact with each other. Since interaction effects are always symmetric (Berry et al., 2012), personality effects might depend on contextual factors and contextual effects might depend on personality traits. The direction of the moderation is not an empirical but a theoretical question. Thus, a solid theoretical argument on whether personality traits or contextual factors act as moderator should guide the empirical analyses.

The specific arguments on how the considered institutional and structural contexts – direct democracy and ethnic diversity – are supposed to interact with the Big Five personality traits in shaping political attitudes and behavior will be developed in the individual upcoming empirical chapters. In order to generally motivate these arguments, it is useful to include the analytical framework for the study of contextual effects in political sociology by Books and Prysby (1988, 1991), which has already been introduced. To recapitulate their main argument, contextual effects are supposed to emerge as "individual reactions to contextually patterned information" (Books and Prysby, 1988, 223).

Figure 1.2: The Analytical Framework



Source: Own illustration, adapted from McCrae and Costa (2008). *Note:* Only concepts and relationships in solid lines are considered. Concepts and relationships in dashed lines are portrayed for the sake of completeness.

Against this background, one line of reasoning is that individuals react differently to these contextually patterned information depending on their personality. That is, personality traits are expected to moderate the effects of contextual factors. Taking the example of direct democracy, a high number of ballot measures might reveal political and societal conflicts on a regular basis. An individual scoring high on agreeableness who tries to avoid conflicts and establish good relationships with others might be very sensitive and receptive to this cue of conflicts. Consequently, this person might react to this information by withdrawal from the political arena. Thus, one's chance to participate in politics or the level of trust in the institutions are supposed to be lower.

The interaction can also be conceptualized the other way around, i.e. contextually patterned information are able to alter the meaning of political stimuli (e.g. political issues, forms of political participation) and consequently, they can moderate personality effects as reactions to these stimuli. This reasoning is proposed by Gerber et al. (2010, 115), who argue that "dispositional traits shape the responses to stimuli that will have different meanings in different contexts."[14] Again taking the example of direct democracy, frequent ballot measures might change the importance of other forms of political participation. In these institutional settings, political protest can be rendered unnecessary as an instrument to put new topics and political ideas on the agenda. This might reduce the propensity of an open-minded person to participate in protest because an institutionalized form to push innovations forward is available. Just as a global contextual variable, a structural context is also able to alter the meaning of a political stimuli. Individuals living in a diverse neighborhood receive other and potentially more cues on immigrants' culture, their values, and attitudes than individuals living in a homogeneous one. These contextually patterned information might change the meaning of granting immigrants the same opportunities. An extroverted person living in a diverse neighborhood might be more in contact with immigrants and thereby learn about their norms and values, possible leading to a more positive outlook on immigration.

The developed arguments and the presented examples illustrate how personality traits and contextual factors can interact with each other and how this interaction can deepen our understanding of the foundations of political behavior and attitudes. The specific theoretical expectations will be derived and tested in each of the empirical chapters.

[14] McAdams and Pals (2006, 211) make a similar argument assuming that culture is able to affect the behavioral expression of personality traits.

1.4 Studying Switzerland - Institutional and Structural Conditions

The interaction of person and context in shaping political behavior and attitudes will be studied for the case of Switzerland. With regard to the institutional context, the analyses focus on the most characteristic feature of the Swiss political system: direct democracy. The role of this institution and the peculiarities of studying the behavioral and attitudinal effects of it will be discussed below. Considering the structural conditions, Switzerland is – like most developed countries – characterized by socio-economic cleavages, a rural-urban divide and ethnic diversity. In this dissertation, the emphasis is placed on ethnic diversity and its interaction with personality in shaping political attitudes. Again, the role and importance of ethnic diversity in Swiss society will be discussed below.

1.4.1 Direct Democracy

Direct democratic institutions can be classified as power-sharing institutions that are supposed to create a balance of power between different groups in pluralist societies (Vatter and Bernauer, 2009).[15] The heart of Switzerland's semi-direct democracy beats on the subnational level. In the Swiss cantons, direct democratic institutions are stronger than on the national level (Vatter, 2014, 353). The concrete design of direct democratic institutions as well as their usage differs considerably across cantons. According to Leemann (2016), the historical development of direct democratic institutions in the Swiss cantons has been influenced by an interaction of cleavage structures and the existence of majoritarian voting systems. Apart from that, economic considerations seem to have played an important role.

Ever since, Swiss democracy and its strong direct democratic feature has fascinated political and scientific observers as a "laboratory of democracy" (for an early example, see Lloyd, 1907). Meanwhile, it is contested whether direct democracy really holds the promise of a power-sharing institution, for example regarding the protection of minority rights (for different evaluations of this question, see Donovan and Bowler, 1998; Frey and Goette, 1998; Gamble, 1997; Haider-Markel et al., 2007; Hajnal et al., 2002; Vatter and Danaci, 2010). Nevertheless, the expansion of direct democratic rights is discussed in many countries. There are a number of recent examples for referenda and plebiscites across Europe, such as the Scottish independence referendum 2014, the United Kingdom European Union

[15] For a more nuanced classification of direct democratic instruments as power-sharing institutions, see Vatter (2000).

membership referendum 2016, the Dutch Ukraine-European Union Association Agreement referendum in 2016 and the recent Italian constitutional referendum. Strictly speaking, these ballot measures are no instances of direct democracy because they are either not binding or they depend on the government's will to let people directly decide on an issue (Leemann, 2016). Nonetheless, they clearly illustrate a trend towards more direct involvement of the people in many countries.

One important argument put forward by the proponents of direct democracy, is that this form of government is expected to increase political engagement (Smith and Tolbert, 2004). Against this background, it is particularly important to study the consequences of direct democracy.Generally, this can be done in two ways: analyzing the formal rules defined in the constitution or analyzing the actual usage of these formal rules in the political process.[16] Translated to the case of direct democracy, the formal rules describe the legal regulations of direct democratic instruments while the actual usage describes how often, by whom and in which policy field these instruments are used. In other words, the actual usage captures the "political reality" (Ladner and Brändle, 1999). In the Swiss cantons, strong formal rights of direct democracy are not necessarily linked to an extensive use of these rights. The use of direct democratic instruments is rather related to socio-structural and political peculiarities of the cantons (Milic et al., 2014).

Concerning the effects of the formal rules of direct democracy as well as their actual usage, at least two different types of effects are discussed in the literature. First, direct democracy is supposed to have *instrumental effects* (Smith and Tolbert, 2004; Tolbert and Smith, 2006). It adds another veto player to the political system by enabling citizens' to exert direct control over the political agenda and to check and possibly correct parliamentary decisions. Consequently, this should lead to policy outcomes closer to the median voter, either because policy makers anticipate citizens' preferences or because citizens can put issues on the agenda by means of initiatives (see for example Bowler and Donovan, 2004; Citrin, 1996; Hug, 2004; Hug and Tsebelis, 2002; Matsusaka, 1992; Matsusaka and McCarty, 2001; Papadopoulos, 2001; Stadelmann et al., 2013). Second, direct democracy might have secondary *educative effects* (Smith and Tolbert, 2004; Tolbert and Smith, 2006). Due to the procedural experience citizens' can make in the course of direct democratic processes, they are supposed to become more involved in politics, more knowledgeable, more interested, more efficacious and more trusting. This argument resonates participatory theories of democracy (Barber, 1983; Pateman, 1970). The empirical evidence on these educative effects is, however, mixed. While some studies find evidence in favor of

[16] Sometimes, the terms *rules-in-form* and *rules-in-use* are used to describe this dichotomy. For some readers, this might be misleading because the term *rules-in-use* usually describes informal rules and practices (Lowndes et al., 2006; Sproule-Jones, 1993).

them (see for example Benz and Stutzer, 2004; Bowler and Donovan, 2002; Cebula and Coombs, 2011; Smith, 2002; Smith and Tolbert, 2004; Tolbert and Smith, 2005; Tolbert et al., 2003), others find only evidence for educative effects under certain circumstances, no evidence or even evidence against the argument (see for example Bauer and Fatke, 2014; Bühlmann and Freitag, 2006; Childers and Binder, 2012; Donovan et al., 2009; Dyck, 2009; Dyck and Seabrook, 2010; Everson, 1981; Fatke and Freitag, 2013; Freitag, 2010; Freitag and Stadelmann-Steffen, 2010; Mendelsohn and Cutler, 2000; Schlozman and Yohai, 2008; Seabrook et al., 2015).[17]

In sum, there is evidence for secondary effects of direct democracy, although not all of it supports the educative-argument. Despite these mixed findings, the discussion illustrates the attitudinal and behavioral relevance of direct democracy. It is a central feature of the Swiss institutional system and, therefore, direct democracy will be considered as institutional context in study of personality and politics in Switzerland in the Chapters 2, 3 and 4 of this dissertation. Since citizens' actual experience with direct democracy is more likely to unfold attitudinal and behavioral relevance, the actual usage of direct democratic instruments is applied as contextual measure.

1.4.2 Ethnic Diversity

Ethnic diversity or ethnic heterogeneity, defined as the "ethnic composition of a geographical area" (van der Meer and Tolsma, 2014, 462), is a key socio-structural characteristic of Swiss society. Next to Luxembourg, Switzerland has the highest rates of immigration in Europe. Almost one quarter of the Swiss resident population are non-nationals (Green et al., 2010). Immigration and the resulted ethnic diversity is not a new phenomenon in Switzerland. According to Hoffmann-Nowotny (2001, 13–15), four waves of immigration to the country since the 1830s can be distinguished. The first wave is characterized by liberal intellectuals from other European countries who left there countries for political reasons (approx. 1830–1850). It is followed by a second wave that is dominated by working class immigrants from the neighboring countries and ended with the First World War (approx. 1830–1914). The third wave of immigrants starts at the end of the Second World War and the number of immigrants tripled between 1950 and 1970. Finally, the fourth wave that begins in the 1970s is characterized by a shift in the countries of origin. The scope of countries of origin is broadened and, thus, ethnic diversity of the Swiss society is increased.

[17] For an excellent overview of the literature on the effects of direct democracy, see Leininger (2015).

No surprise, ethnic diversity and immigration policies have always been important issues in political and societal debates in Switzerland. Already in the 1970s, an initiative to reduce the share of immigrants was voted on ("Schwarzenbach-Initiative"). Due to globalization, issues of immigration and openness of the country became even more salient in recent years. The high politicization of these issues is closely connected to the rise of the Swiss People's Party (SVP) and illustrated by recent examples, like the initiative on "mass immigration" ("Masseneinwanderungsinitiative") and the ECOPOP-initiative from 2014 as well as the initiative "for the effective expulsion of foreign criminals" ("Durchsetzungsinitiative") from 2016 (Manatschal, 2015). Against the background, ethic diversity is a salient feature of Swiss society that is very likely to unfold attitudinal consequences.

In the social sciences, these consequences are mostly analyzed building on intergroup theories (see Allport, 1954; Blumer, 1958; Pettigrew, 1998). In this vein, Putnam (2007) has inspired a whole new strand of research with his seminal writing on the link between ethnic diversity and indicators of social cohesion (for an excellent overview on that, see van der Meer and Tolsma, 2014). Furthermore, the question whether and how ethnic diversity is linked to attitudes towards immigrants is, of course, an obvious but still very important one. The empirical evidence show a mixed picture (see, for example Ceobanu and Escandell, 2010; Danckert et al., 2016; Green et al., 2010; Ha, 2010; Hjerm, 2007, 2009; Lancee and Sarrasin, 2015; Markaki and Longhi, 2013; McLaren, 2003; Quillian, 1995; Rapp, 2015; Scheepers et al., 2002; Schneider, 2008; Semyonov et al., 2006; Sides and Citrin, 2007). Some of these studies, for instance Danckert et al. (2016), Green et al. (2010), Ha (2010), McLaren (2003), Piekut and Valentine (2016) and Schneider (2008), provide evidence that intergroup contact might indeed contribute to attenuate negative effects of diversity, as contact theory would assume. Meanwhile, others have a more pessimistic outlook on the effectiveness of contact (Enos, 2014).

Although the literature is divided on the direction and mechanisms of its effect, ethnic diversity is repeatedly shown to be an important driver of political attitudes. In the course of this research, a question that is debated heavily is whether objective or subjective measures of ethnic diversity should be used. Evidence suggests that perceived ethnic diversity (subjective measure) is more relevant for attitudes toward immigration and immigrants (Koopmans and Schaeffer, 2016; Piekut and Valentine, 2016; Semyonov et al., 2004; Strabac, 2011). Moreover, Piekut and Valentine (2016) point to an interaction of perceived and actual diversity. A disadvantage of subjective measures might lie in the potential bias that unobserved heterogeneity or reversed causation are able to induce. Due to a strong correlation between perceived and actual diversity (Koopmans and Schaeffer, 2016; Schaeffer, 2014), this problem might be less severe than expected. Thus, in Chapters 5 and 6

of this dissertation, a subjective measure of ethnic diversity in the neighborhood is used. It measures the relative ethnic group size of individuals with a different nationality in the neighborhood. Another striking advantage of this measure is that it captures diversity in a small scale context. These have been shown to me more relevant in terms of attitudes and behavior than larger geographic contexts (Dinesen and Sønderskov, 2015).[18]

1.5 Research Design

Since the present dissertation is a cumulative one that consists of independent research article unified by a broader research program, the research design of the articles shows some common features as well as some idiosyncrasies. The later one will be explained in detail in each research article. The common features of the research design will be outlined in the following.

Concerning the methodological approach, the articles are unified by a quantitative research design using hierarchical regression models. The clustered data structure with individuals nested in the Swiss cantons necessitates a hierarchical modeling strategy (Gelman and Hill, 2007; Steenbergen and Jones, 2002). Generally, Gelman and Hill (2007, 246) emphasize three motives for the estimation of hierarchical regression models. First, within and between group variation is considered in the estimation of group-level regression coefficients. Second, the variation of individual-level regression coefficients can be modeled. This describes the estimation of cross-level interactions and is especially relevant for the present dissertation. Third, regression coefficients can be estimated for a single group even when only a small number of observations is available for this group. Depending on the scale level of the outcome variable, a linear (Chapters 2, 4, 5 and 6) or a logistic (Chapter 3) hierarchical regression model is estimated.

The empirical analyses of the five research articles in this dissertation are all based on the data set "Politics and Society in Switzerland" (Institut für Politikwissenschaft, 2012). It was collected by the polling firm gfs.bern from 10^{th} October to 21^{st} November 2012. The interviews were conducted using the computer-assisted telephone interview (CATI) method. With the adult Swiss resident population as basic population, the sample was drawn following a stratified random sampling strategy. The three language regions of Switzerland

[18] A cantonal measure of diversity, for example, would be more crude and potentially inaccurate. Taking the canton Zurich, an individual living in the municipality of Truttikon (share of foreigners in 2015: 5.7 percent; data source: `https://goo.gl/BPxk4b`, 06/12/2016) would be assigned the same average value as an individual living in the municipality of Schlieren (share of foreigners in 2015: 46.3 percent; data source: `https://goo.gl/BPxk4b`, 06/12/2016). Their actual experience with ethnic diversity, however, is supposed to be very different.

(German-speaking, French-speaking and Italian-speaking part) serve as strata. Overall, the response rate amounts to 21.9 percent (Longchamp et al., 2012).[19] This individual-level data set is combined with contextual-level data on the Swiss cantons (for details, see the methods section of Chapters 2, 3, 4, 5 and 6).

Regarding the measurement of the Big Five personality traits, the data set makes use of the BFI-S. Next to other short instruments to operationalized the FFM, the BFI-S is presented and discussed in detail in Chapter 1.2.1 of this dissertation. It has originally been developed for the German Socioeconomic Panel (G-SOEP) and consists of 15 items, that is three items per personality trait (Gerlitz and Schupp, 2005). It has been proven to be a valid instrument to measure the Big Five with acceptable psychometric properties (Hahn et al., 2012). Figure A.1 in the Appendix shows the exact wording of the instrument that was used in the "Politics and Society in Switzerland" questionnaire. By means of a maximum-likelihood exploratory factor analysis with a promax rotation, the dimensionality of the FFM can be proven for Switzerland (for details see Table A.2 in the Appendix). Figure A.7 in the Appendix shows the distribution of the Big Five personality traits across the Swiss cantons.

Referring again to the statistical approach used in this dissertation, it needs to be clarified that regression analysis should be primarily understood as a descriptive method to examine the relationship between an explanatory and an outcome variable. The robust establishment of causality within the framework of a regression analysis is not impossible but a complex endeavor linked to a number of conditions (see Morgan and Winship, 2007, 129-142). One important step of this endeavor is to identify relevant control variables on which the explanatory and the outcome variable commonly depend and which, thus, might cause a spurious relationship (Jaccard and Jacoby, 2010, 142-143). Given the observational cross-sectional data used in this dissertation, this is the only step towards the establishment of causality that can be taken. Therefore, the empirical models presented in the following chapters will all be controlled for age, gender and education. On the one hand, these factors potentially influence the considered outcomes variables, such as political participation (see for example Norris, 2002; Verba and Nie, 1972; Verba et al., 1995). On the other hand, there is evidence that they influence the main explanatory variables of this dissertation, the Big Five personality traits (Anusic et al., 2012; Bleidorn et al., 2009; Costa et al., 2001; Dahmann and Anger, 2014; Goldberg et al., 1998; Specht et al., 2011, 2013, 2014a; Weisberg et al., 2011). Furthermore, relevant factors on the contextual level are controlled for. Since the Swiss cantons are embedded in a common institutional and socio-structural framework on the national level, many characteristics are hold constant

[19] The data collections was commissioned by the Institute of Political Science, University of Bern. Replication files are available upon request.

and do not need to be controlled for. As such, the research design resembles a most-similar systems design (Przeworski and Teune, 1970). Details on the research design are presented in each of the empirical chapters.

2 Direct Democracy, Political Trust and the Moderating Role of Personality Traits

Abstract

Direct democracy plays a prominent role in the explanation of institutional trust. To date, however, empirical findings on the effects of direct democracy remain inconclusive. In this article we argue that this inconclusiveness can be partly ascribed to the diverse effects direct democracy has on individuals. In other words, direct democracy influences institutional trust, but how and to what degree depends on individual's personality traits. Running hierarchical analyses of unique survey data from a random sample of eligible Swiss voters, we document three findings: First, we show that the number of ballot measures is not directly associated with institutional trust. Second, we demonstrate that the Big Five personality traits affect the propensity to trust. Third, some of these traits also alter the relationship between direct democracy and institutional trust, suggesting that certain personality types are more likely to be sensitive to popular votes than others, and that not everyone is equally likely to respond to political stimuli, even in highly democratic environments.

Note: This chapter is identical to an article, which I co-authored with Markus Freitag. It was published as Freitag and Ackermann (2016). First and foremost, my gratitude goes to my co-author Markus Freitag.

Acknowledgments: An earlier version of the article was presented at the 23^{rd} World Congress of the International Political Science Association (IPSA) in Montréal, CA. We are grateful to the participants in the workshop, the three anonymous referees and the editors of *Political Psychology* for their very helpful comments and suggestions. Also, we would like to thank Jennifer Shore for linguistic assistance and Philipp Kronenberg for assistance in preparing the manuscript. Errors remain our own. Both authors contributed equally to the article.

2.1 Introduction

Institutional trust is widely seen as a vital resource for the functioning of democratic political systems and an important element of the citizen-state relationship (Citrin, 1996; Dyck, 2009). It provides political actors with room to govern effectively and institutions with a stock of support that is independent from an incumbent's performance (Hetherington, 1998, 803). Conversely, low institutional trust can hamper the success of domestic policy making (Hetherington and Globetti, 2002; Rudolph and Evans, 2005). If we accept political trust as important, it is necessary to know how and why it is generated and under what social and political circumstances it thrives and dwindles (e.g. Banducci et al., 1999; van der Meer and Dekker, 2011). Recent literature in political sociology has increasingly been focusing on the role of direct democracy in the creation of institutional trust. While one of the leading hypotheses holds that direct democracy enhances trust by increasing the policy responsiveness of the system, another view, however, claims the opposite: Rather than promoting institutional trust, popular votes diminish trust by disclosing the deficits of the legislature (Bauer and Fatke, 2014; Dyck, 2009; Smith and Tolbert, 2004). To date, however, empirical findings on the effects of direct democracy on institutional trust remain inconclusive.

It is here that this investigation finds its starting point. We argue that much of this inconclusiveness can be ascribed to the diverse effects direct democracy has on each individual. In general, contextual factors are not assumed to affect an entire population in a uniform manner; instead, their effects vary depending on individual characteristics such as traits, values, and resources. In particular and looking to political psychological approaches, it is more realistic to suggest that people react differently to environmental stimuli depending on their personality (Mondak, 2010). In other words, environmental factors, such as institutions, influence political attitudes, "but how and to what extent they do differs as a function of individuals' traits" (Mondak et al., 2010, 85). People process information differently and therefore may show different reactions to the signals and stimuli environmental factors send (Taber, 2003). Accordingly, the way a person perceives the frequency of popular votes might influence his or her level of institutional trust. Against this background, we seek to demonstrate the importance of dispositions, situations, and their interactions. While personality has moved from being a bit player to center stage in contemporary political science, to date we have little evidence regarding the interplay between personality and situational or contextual factors (Ackermann and Ackermann, 2015; Dinesen et al., 2016; Gerber et al., 2010, 2012a; Mondak, 2010; Mondak et al., 2010).

We use the Big Five model as a broad framework to depict individual-level personality attributes and then provide evidence on the function and value of this framework for understanding the impact of personality on institutional trust. Building on recent work on the Five Factor Theory, we argue that political attitudes should be a product of essential dispositional traits and environmental factors (McCrae and Costa, 2008). Empirically, we focus on the case of Switzerland, which is the country with the most advanced forms of direct democracy worldwide. In this vein, the Swiss cantons present an excellent opportunity to assess the relevance of direct democracy. This unique institutional arrangement is almost impossible to study comparatively at the national level because the range of variation is so limited. Using data on more than 1000 Swiss citizens, we run hierarchical regression models and document three findings: First, we show that the number of popular votes is not directly associated with institutional trust. Second, we demonstrate that the Big Five personality traits affect one's propensity to trust. Third, some of these traits also alter the relationship between direct democracy and institutional trust in theoretically expected ways, thereby suggesting that certain personality types are more likely to be sensitive to popular votes than others, and that not everyone is equally likely to respond to political stimuli, even in highly democratic environments.

The article is structured as follows: In the first section, we discuss our theoretical framework by explaining the main concepts of our paper as well as the theoretic expectations regarding the relationships between direct democracy, personality, and institutional trust. Thereafter, the data and the statistical methods are presented. We then discuss the results of the empirical analysis and the robustness checks before concluding with a summary and critical evaluation of the major findings.

2.2 Direct Democracy and Institutional Trust

According to Gamson (1968, 54), institutional trust is defined as "[...] the probability, P_b, that the political system (or some part of it) will produce preferred outcomes even if left untended." This evaluation of the political world makes trust scores a kind of litmus test of how well the political system is performing in the eyes of its citizens: "Low trust suggests that something in the political system - politicians or institutions, or both - is thought to be functioning poorly. It may be that performance is poor, or that expectations are too high, but either way low trust tells us that something is wrong" (Newton, 2001, 205). In connection with the financial crisis, political scandals, low accountability, or a political system that fails to give citizens a voice, various scholars have identified a lack of trust in political authorities (van der Meer and Dekker, 2011). Increasing people's influence in

politics promises to be a cure against the current crisis of democracy by leading to higher levels of trust and consequently to higher stability and effectiveness of the political system (Gamson, 1968; Smith, 2009). This is where direct democracy comes into play.

Viewed analytically, this inquiry forces us to take hierarchical structures into account, as we assume that a macro-level condition (direct democracy) is related to micro-level attitudes (the propensity to trust). Theoretically, macro-level conditions can shape micro-level attitudes and behavior in three ways: they affect social interactions, they influence conformity to social norms, and they structure the flow of information (see Books and Prysby, 1991). In this regard, institutional contexts are able to influence the preference formation as well as the behavior of people directly by stimulating or limiting it in various ways (Hall and Taylor, 1996; Immergut, 1998; Kaiser, 1997). Institutional settings provide information about the political system, how it works, and how society is supposed to work with it. Thus, they can influence the ways individuals act or think.[20] In this regard, we can distinguish two competing arguments regarding the link between direct democracy and trust (Bauer and Fatke, 2014; Citrin, 1996; Dyck, 2009). On the one hand, frequent popular votes might undermine the trust in institutions in charge of policy making. Referendums can potentially signal that decisions taken by these institutions are not satisfactory and therefore have to be corrected by means of direct legislation. In this regard, initiatives might indicate that parliament and government are unable to take the necessary action in a certain field. Moreover, Hibbing and Theiss-Morse (2002) argue that people do not necessarily wish to even be involved in politics: While they want the system to work, they do not want to be the ones doing the work. Thus, frequent ballot measures "will make people more upset by immersing them in the very political arena they dislike so much" (Hibbing and Theiss-Morse, 2002, 184) and thereby hamper trust in political institutions. To sum up, frequent popular votes may diminish institutional trust. On the other hand, direct democracy could also be able to enhance institutional trust: "initiatives and referenda impel governments to revise their policies so as to take account of majority opinion and that doing so ultimately raises the public's trust in established institutions" (Citrin, 1996, 286). That is, by having direct democratic instruments, the role of citizens as veto players in the political process is strengthened (Bauer and Fatke, 2014, 52-53). Thus, policies are thought to be closer to the median voter's preferences than without direct democratic instruments, which should lead to higher levels of institutional trust (Hug, 2005). To date, however, empirical findings on the impact of direct democracy on

[20] Institutions are of course the result of citizens? collective action and may therefore be endogenous to individual behavior in the long run. We argue, however, that institutional arrangements can still be seen as exogenous framework conditions that cannot be changed by an individual in the short and medium-run; instead, they influence individual preferences and behavior patterns (see March and Olsen, 2008, 3).

the development of institutional trust remain inconclusive. While Dyck (2009), for example, finds a clear negative effect of direct democracy on trust, Citrin (1996) and Hug (2005) discover no relation between direct democracy and institutional trust at all. Bauer and Fatke (2014), again, argue for a theoretical distinction between two conceptions of direct democracy. Differentiating between the formal strength of direct democratic rights and the actual use of those rights, their analyses show positive effects of the former and negative effects of the latter on institutional trust. Against this background we suggest that the expectation of a relationship between direct democracy and trust is not assumed to be universally valid for all members of society; rather, we expect group-specific effects of direct democracy on individual-level political trust. That is, we believe that individuals cope in different ways with the information induced by popular votes and, as a consequence, are not equally likely to respond to these political stimuli (Taber, 2003).

2.3 The Five-Factor Model of Personality Traits

Personality is a "multifaceted, enduring, internal psychological structure" (Mondak et al., 2010, 86). Traits as the core component of personality cannot be observed directly, but are inferred from behavior (McCrae and Costa, 2008, 162ff.). They appear to be rooted in genetic factors and are highly stable through the life cycle (Mondak, 2010). Traits describe "what people are like", while values refer to "what people consider important" (Roccas et al., 2002, 790). As an individual's enduring goals, values are based on one's deeply held beliefs about what is right and wrong (Mondak, 2010, 6; Roccas et al., 2002, 790). Attitudes, in turn, are understood as a concrete, object-specific expression of values. Accordingly, values should precede attitudes; with personality traits further preceding personal values (see Roccas et al., 2002). Although there is no fully comprehensive way to conceptualize and measure an individual's personality, strong consensus has emerged in psychology that the Five-Factor Model (FFM) provides an appropriate way of measuring a person's dispositional personality traits (McCrae and Costa, 2008; Mondak, 2010; Mondak et al., 2010). This framework comprises five personality traits ? *openness to experience, agreeableness, conscientiousness, extraversion,* and *neuroticism* ? that can be documented regardless of differences in cultures and languages, indicating "[...] they capture a human universal" (Gallego and Oberski, 2012, 427). If personality traits can form an individual's broader worldview, these traits should also be capable of shaping one's propensity to place trust in political institutions. In recent years, the Big Five taxonomy has opened a promising new frontier in research on political attitudes and behavior. This research finds

that Big Five personality traits predict political ideology, partisanship, issue attitudes, and political behaviors (for an overview see Gerber et al., 2011b).

2.4 The Big Five Traits, Institutional Trust, and Direct Democracy

To our knowledge, very few studies have examined the relationships between an individual's Big Five traits and the propensity to trust political institutions, and no work has examined the interactions between the Big Five and institutional trust in direct democracies. Notable exceptions are the studies by Mondak and Halperin (2008) and Gabriel and Völkl (2005). Building on this work, we can formulate expectations regarding the direct effects of personality traits on the level of institutional trust. To begin, people with a high level of *openness to experience* are assumed to be creative, curious, imaginative, culturally interested, original, nonconforming, and to value intellectual matters (McCrae and Costa, 2003; Mondak and Halperin, 2008). Moreover, open-minded persons tend to be critical citizens. They critically examine existing political and social values and norms as well as authorities. Therefore high levels of openness to experience are expected to be negatively correlated with political trust (Mondak and Halperin, 2008). High levels of *conscientiousness*, again, characterize people who work efficiently and diligently, are organized, productive, thorough, ambitious, dutiful, responsible and reliable, and have a need for structure (Gerber et al., 2011a; McCrae and Costa, 2003; Mondak, 2010; Mondak and Halperin, 2008; Schoen and Steinbrecher, 2013). Moreover, individuals scoring high on this trait tend to be more cautious and value control. Conscientious persons make decisions very carefully and want to retain control over a situation (trust, but verify). Being cautious, conscientious persons do not easily trust in the information they get from others or in the actions and decisions of other people. Accordingly, Dinesen et al. (2014) find conscientious persons to show lower levels of interpersonal trust. However, conscientious people also tend to hold conservative and status-quo biased attitudes (Sibley and Duckitt, 2008). They adhere to norms and laws and are willing to accept authorities. Therefore conscientious citizens are assumed to place higher levels of trust in political institutions (Gabriel and Völkl, 2005). *Extraversion* applies to those who are more sociable, lively, and active, whereas its opposite, introversion, indicates a tendency toward withdrawal, passivity, and shyness (McCrae and Costa, 2008). In addition, high scorers on this trait tend to have conservative attitudes (Gerber et al., 2010). Conservative values and attitudes might further promote the acceptance of hierarchy. Since politics is inherently social, we assume that extraverts show higher levels of institutionalized trust, which go hand in hand with

the desire for social interaction and the acceptance of political authorities. Individuals who score high on the *agreeableness* scale are said to be more trusting, risk-averse, sociable, and generally pursue altruistic goals (Mondak, 2010); they avoid conflicts and are interested in having good relationships with their fellow citizens (Gerber et al., 2011a; McCrae and Costa, 2003). In this vein, agreeableness should accompany high levels of trust in political authorities. *Neuroticism* implies that emotionally unstable individuals are anxious, tense, edgy, and have a general tendency toward negative emotions (McCrae and Costa, 2008; Mondak, 2010). Individuals with high levels of neuroticism are easily worried and tend to interpret political and societal developments as unfair and unsatisfactory (Mondak and Halperin, 2008, 345). As a result, their outlook on politics is rather negative and their institutional trust should be low.

Our discussion so far has focused on the separate effects of dispositional (Big Five personality traits) and situational (direct democratic context) variables. The two variables may however interact with each other. In line with key insights of psychology, we thus maintain that the effect of a situation (here direct democratic context) depends on the person (Funder, 2008, 571; Newman et al., 2015, 130). In this vein, Mischel (1977, 253), for example, claims that "any given, objective stimulus condition may have a variety of effects, depending on how the individual construes and transforms it"; and Mondak et al. (2010, 90) note that "variation in people's psychological dispositions leads them to respond differently when exposed to common environmental stimuli [...]". A vigorous exercise of direct democratic instruments may be such a stimulus. Some people might feel pushed into the political arena by frequent ballot measures even though they do not really wish to be involved (Hibbing and Theiss-Morse, 2002). For others a high number of popular votes might disclose conflicts between the principal (e.g. the citizenry) and the agent (e.g. political authorities), thereby indicating a need for monitoring and controlling the agent (inducing a negative effect on institutional trust).[21] Still others might interpret frequent ballot measures as an inherent ability to ensure the agent's commitment to act in the interest of the principal, thus inducing a positive effect on institutional trust. Altogether, we argue that citizens' perceptions of direct democracy are not uniform and that personality might alter the way an individual reacts to this environmental stimulus.

Open individuals will appreciate the opportunity to influence policy issues directly through popular votes and to exchange ideas over the course of campaigns (Gerber et al., 2011a; Mondak and Halperin, 2008). Thus, one might argue that open individuals evaluate direct

[21] As various studies point out, direct democracy might operate as a 'valve' for citizens who are not satisfied with the decisions taken by political authorities (Fatke and Freitag, 2013; Kriesi and Wisler, 1996). In this respect, a frequent use of popular votes might indicate public dissatisfaction with the performance of political decision-makers.

democracy as a possibility to change politics and society beyond the purely representative decision-making process and may therefore develop more institutional trust. On the other hand, open persons are still critical citizens who might also interpret frequent ballot measures as signaling a need for correction of governmental policies. This should foster their skeptical view of the elected representatives and thereby decrease institutional trust for individuals with high scores on openness. For *conscientious* persons, we expect frequent ballot measures to hamper political trust for several reasons. First, conscientious citizens, known to be hard working and ambitious, might perceive a high number of popular votes as an indication for low responsiveness of political institutions and deficient political authorities. Moreover, an increased frequency of opportunities to vote may give them the impression that their opinion is trivialized by politics, which should diminish their institutional trust. Finally, several studies show that conscientiousness is not or is even negatively linked to political engagement (Gerber et al., 2011c; Mondak, 2010; Mondak and Halperin, 2008; Mondak et al., 2010). Thus, conscientious citizens are not eager to be involved in politics. In this regard, direct democracy leads conscientious individuals to have lower levels of trust because it forces them to engage in politics when they do not want to or feel equipped to deal with political matters. In other words, if people who do not want to be involved feel pressured by frequent popular votes, their political trust will drop (cf. Hibbing and Theiss-Morse, 2002). *Extraverted* citizens are particularly attracted by the social aspects of politics, such as participation in campaigns (Gerber et al., 2011a; Mondak, 2010; Mondak and Halperin, 2008). They will enjoy the possibility to participate in popular votes and to express their opinion in the process of campaigns. People scoring high on extraversion can cope with disagreement and they are therefore able to handle political conflicts that might emerge during campaigns (Gerber et al., 2012a; Mondak, 2010). Thus, frequent ballot initiatives and referendums should induce extraverted citizens to have a positive outlook on the political system and its institutions. Frequent popular votes not only provide possibilities for engagement and interaction, they can also reveal political and societal conflicts. *Agreeable* individuals should be particularly sensitive to this aspect of frequent ballot measures. As soon as the political arena radiates conflict, agreeable persons are assumed to withdraw from it in order to avoid conflict (Gerber et al., 2011a, 2012a; Mondak, 2010) or, as Mondak and Halperin (2008, 346) put it: "the confrontational aspects of politics are disconcerting to individuals with high levels of agreeableness". Thus, frequent ballot measures should act as a deterrent and make them critical toward the actors in this arena. Accordingly, an increase in the frequency of ballot measures should be accompanied by a decrease in institutional trust for agreeable individuals. Similar to agreeable persons, people scoring high on *neuroticism* avoid the conflictive sides of politics (Gerber et al., 2011a, 2012a). The complexity and conflict that is inherent to popular votes

might trouble them easily. Consequently, direct democracy should be negatively related to institutional trust for neurotic persons.

2.5 Research Design, Measurement, and Method

In the remainder of the article the relationships presented above will be empirically tested. Our objects of analysis are the 26 Swiss cantons. In analytical terms, the Swiss cantons meet the requirements of a most-similar cases design. It is therefore potentially less difficult to create ceteris paribus conditions for a systematic comparison of cantonal systems than for a cross-national comparison, since the cantons have many characteristics in common that can be treated as constants. In this regard, they exhibit a substantial degree of similarity with respect to consolidated structural elements and they differ considerably regarding the configuration of direct democratic institutions (Linder, 2010; Vatter, 2014).[22] Some cantons - mainly in the German speaking regions - have very extensive direct-democratic procedures, whereas others - typically the French and Italian speaking cantons - are more strongly oriented toward the ideal type of a pure representative democracy (Linder, 2010; Vatter, 2014). In order to measure *direct democracy*, we examine the frequency of popular votes. To operationalize the long-term use of direct democracy we draw on the average number of yearly cantonal ballot measures between 1990 and 2011 (Schaub and Dlabac, 2012).

Our dependent variable is reported trust in the cantonal authorities measured by the following question: *"Please tell me on a scale of 0-10 how much you trust the cantonal authorities."* We focus on cantonal institutional trust for at least two reasons. First, within the decentralized political system of Switzerland cantonal authorities are highly relevant for the functioning of the state as a whole. Article 3 of the Swiss Federal Constitution guarantees the cantons' sovereignty in all spheres that the constitution does not explicitly place within federal government's competence. Moreover, tax sovereignty lies primarily with the cantons and secondarily with the federal government (Vatter, 2014). It is on the subnational level where people encounter ample opportunities to engage in politics and to interact with officials. Politics on the cantonal level is therefore thought to be more proximate to the citizens, as it is at this level where the most relevant topics for people's daily lives are decided upon. Due to the relevance of cantonal politics for the citizens, they are also assumed to be more attuned to the process and actors involved in political decision-making (Fitzgerald and Wolak, 2014). Second, with regard to the level of the

[22] The average annual number of cantonal initiatives and facultative referendums between 1990 and 2011 is 1.74, with Valais holding the fewest (0.41) and Glarus the most (7.37).

Swiss political system, our object of trust (cantonal authorities) seamlessly corresponds to our crucial contextual factor (cantonal direct democracy).

Our moderating variables on the individual level, the *Big Five personality traits*, are measured by the BFI-S. This is the short version of the standard Big-Five-Inventory (BFI) compromising 15 items with three items related to each personality trait (Gerlitz and Schupp, 2005). Compared to the standard BFI or the more comprehensive NEO-FFI, this shortened version can be more easily implemented in surveys on general political and social attitudes. The personality measurement consists of 15 statements; the respondents were asked whether each statement applies to them using an 11-point scale.[23] Higher values indicate agreement with the statement (all items were recoded so that the scales have the same direction). In order to allow substantive interpretation of the results final trait scales were constructed by adding the indicators for the three items asked for each trait and then centering these scales to their means. Thus, 0 as the baseline of each scale measures the sample mean on the respective personality trait. [24]

Since we are interested in the links between direct democracy, personality, and institutional trust, we also control for factors that potentially confound this relationship (Jaccard and Jacoby, 2010, 141ff.). For the purpose of explaining individual trust in institutions, we integrate contextual as well as individual characteristics into our analyses. Therefore, we include sex, age, and education on the individual level and language region, share of tertiary education, median income and population size on the cantonal level. We use the values of the contextual factors measured prior to or throughout, but not after, the reported level of trust to assure that the potential cause precedes the effect.[25] Detailed information about the variables (their operationalizations and data sources) as well as some descriptive

[23] According to Gerlitz and Schupp (2005) compared to the Ten-Item Personality Inventory (TIPI), the BFI-S has proven to be more valid. Regarding the trait of agreeableness, implementing the BFI-S we refrained from using the item that explicitly refers to self-rated trust in order to avoid a potential inflation of the relationship due to the inclusion of similar indicators.

[24] To test the reliability of our Big Five measurement we estimate the dimensions by means of a maximum-likelihood exploratory factor analysis with a promax rotation that allows correlations between factors (for details see Table A.2 in the Appendix). As the data generally follow a normal distribution, we have applied maximum likelihood as a method of factor extraction. The survey items do not exclusively load on one factor, which is why we use promax rotation to allow correlation between the extracted factors (cf. Costello and Osborne, 2005). Although some factor scores are low, values larger than 0.3 are still suitable. Analyses not documented here show the following Cronbach's alpha scores for openness to experience (0.59), agreeableness (0.43), conscientiousness (0.55), extraversion (0.56), and neuroticism (0.57). Moreover, confirmatory factor analyses confirm our results and show acceptable fit measures (RMSE = 0.08, SRMR = 0.06). In all our regression models the five traits are used simultaneously. As the highest correlation between them is r = 0.67 (conscientiousness and agreeableness), multicollinearity is not assumed to be a problem.

[25] Moreover, one can reasonably argue that it is the more stable ("sticky") contextual condition that causally affects the more volatile ("loose") individual behavior, and not vice versa (Davis, 1985).

statistics can be found in Table A.3 in the Appendix. For measuring the individual level variables we make use of the 2012 "Politics and Society in Switzerland (PUGS)" study.[26]

As indicated by the research question, we are dealing with a hierarchical data structure, i.e. individuals nested within institutional contexts that are thought to exert an influence on them. Therefore, we apply linear hierarchical models with random intercepts, implying that individual behavior can vary between cantons (Steenbergen and Jones, 2002). Additionally, such a multilevel model allows for the modeling of macro-level characteristics (in the present case, the direct democratic context), which explain the variance at the macro-level (the variance between cantons). We include cross-level interactions between personality and the direct democracy of the canton to test our interaction hypotheses. To gain flexibility in the estimation we fit random slopes for the personality trait, which interacts with direct democracy.

2.6 Empirical Findings

In this section, we present a two-step procedure to examine the relationship between the direct democratic context, personality traits, and individuals' propensity to trust cantonal institutions. In the first analytical step, we present basic models containing the direct effects of the intensity of direct democracy and personality traits (see figure 2.1; for detailed results of the regression analyses see Table 2.1). In the second step, interaction effects between the direct democratic contextual variable and the personality traits are added to expand the model (see Figures 2.2 and 2.3; for detailed results of the regression analyses see Table 2.1). To start with, model 1 of Figure 2.1 shows that the actual practice of direct democracy is not systematically related to cantonal institutional trust. In other words, an individual living in a canton with intense direct democratic exercise does not have a lower or higher propensity to trust in cantonal authorities than a person living in a canton where only few cantonal ballot measures are decided upon.[27] However, regarding

[26] The PUGS study was conducted through computer assisted telephone interviews (CATI) in 2012 (October to December). The response rate was 21.9%. Our sample drops from 1156 to 1094 cases due to missing cases on the Big Five traits, the dependent variable, and the control variables. The number of respondents per canton are: Zurich (114), Berne (125), Lucerne (42), Uri (22), Schwyz (28), Obwalden (23), Nidwalden (2422 Glarus (22), Zug (24), Fribourg (56), Solothurn (41), Basel-Town (32), Basel-Country (37), Schaffhausen (23), Appenzell Outer Rhodes (33), Appenzell Inner Rhodes (24), St. Gall (48), Grisons (30), Argovia (62), Thurgovia (32), Ticino (47), Vaud (90), Valais (28), Neuchâtel (38), Geneva (37), and Jura (27).

[27] One might raise concerns with respect to the problem of causality: Does direct democracy indeed influence trust, or is it rather a result of the level of institutional trust? However, regarding the frequency of popular votes, we have no reason to assume a causal relationship since it is not significantly related to both forms of institutional trust in our models. Frequent popular votes neither weaken institutional trust, nor do cantons with low institutional trust practice more direct democracy.

the direct effects of the personality traits (model 2 of Figure 2.1), some of our theoretical expectations are confirmed by the empirical test. Neuroticism is negatively linked to trust in cantonal authorities. Compared to a highly emotionally stable person (minimum on the neuroticism scale), the trust level of a highly instable person is 0.7 points lower on an 11-point scale. Agreeable persons seem to be more trusting. This is in line with the findings of Mondak and Halperin (2008).[28] However, the coefficient fails slightly to be significant (p-value = 0.12). Contrary to our theoretical expectations, extraverted persons show lower levels of trust than introverted people. The difference is about 0.9 points on an 11-point scale.

So far, only uniform effects of direct democracy on individual institutional trust have been modeled. As stated in the theory section, however, it is much more plausible to assume that popular votes do not influence the entire population in the same way; rather, institutional settings, such as direct democracy, might be perceived differently depending on one's personality. Thus, we assume that personality traits moderate the effect of direct democracy on institutional trust. Technically, this can be tested by modeling various cross-level interactions between the average number of popular votes and different personality traits (for detailed results see Table 2.1).

To begin, we estimate separate models including only one interaction per model (see models 3-7 in Table 2.1). Figure 2.2 presents only those interaction effects that are statistically significant (Berry et al., 2012). Most importantly, the results demonstrate that the frequency of cantonal ballot measures does not affect all individuals equally but depending on their personality. As the upper graph in Figure 2.2 shows, a high number of cantonal popular votes have a negative effect on trust in cantonal authorities for people scoring above average on conscientiousness. For conscientious people a high number of initiatives and facultative referendums implies that political institutions must be subject to the people's control. Accordingly, they perceive these institutions as less hardworking, competent, and efficient and thus place less trust in the cantonal authorities. People scoring below average on the dimension of conscientiousness are more likely to trust cantonal authorities in the context of frequent ballot measures. For people with more or less average levels of conscientiousness, direct democracy is not significantly linked to cantonal institutional trust.

[28] Mondak and Halperin (2008) also report a negative relation between openness to experience and local political trust. Moreover, Dinesen et al. (2014) find neuroticism to be negatively linked to generalized trust due to the anxiety of individuals scoring high on this trait.

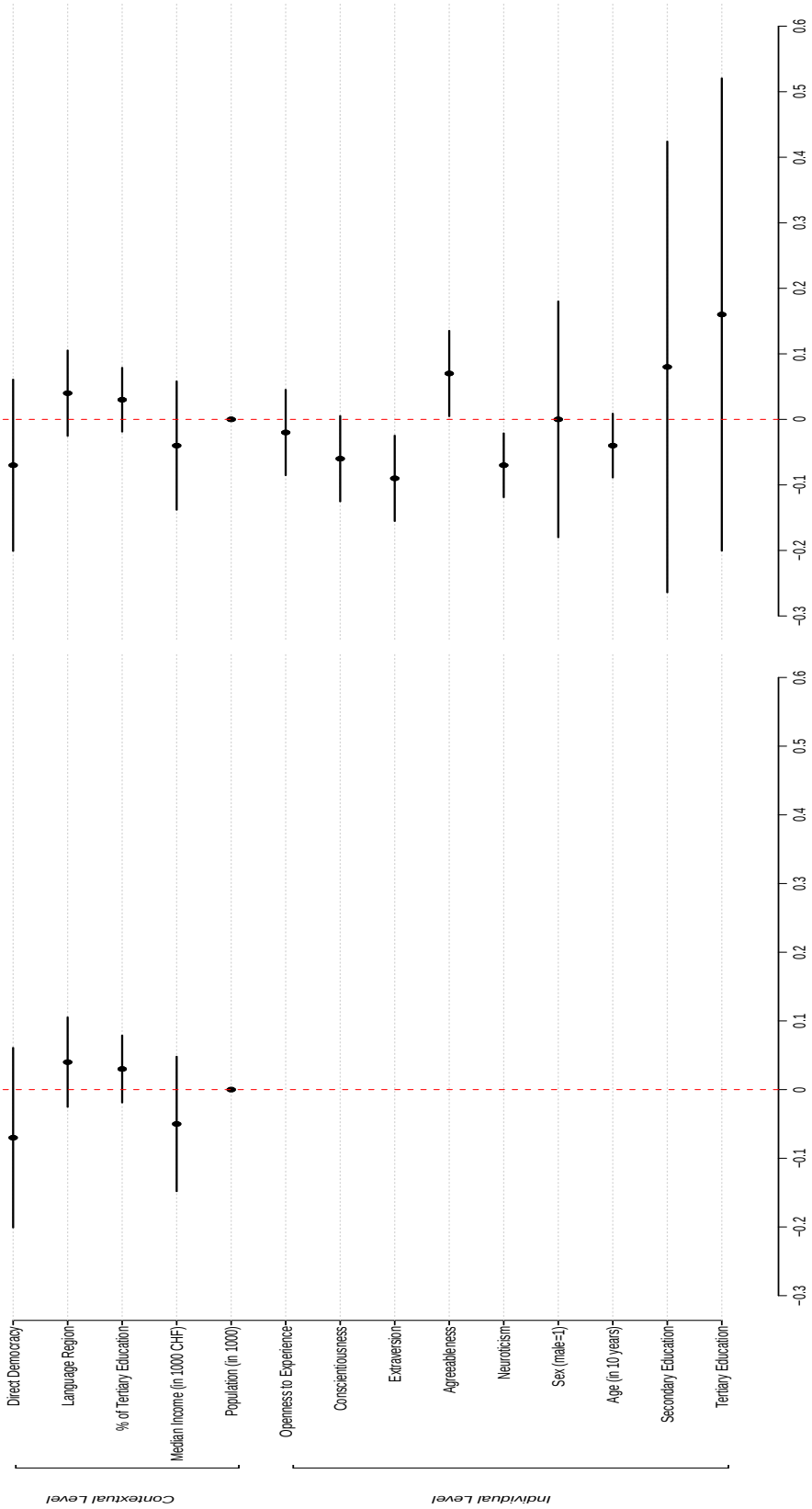
Table 2.1: Direct Democracy, Personality Traits, and Trust in Cantonal Authorities in Switzerland

	M1	M2	M3	M4	M5	M6	M7	M8
Fixed Effects								
Direct Democracy (DD)	−0.07	−0.07	−0.06	−0.06	−0.06	−0.08	−0.06	−0.07
	(0.08)	(0.08)	(0.08)	(0.08)	(0.08)	(0.08)	(0.08)	(0.08)
Language Region	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04
	(0.04)	(0.04)	(0.04)	(0.04)	(0.04)	(0.04)	(0.04)	(0.04)
Percentage of Tertiary Education	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03
	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)
Median Income (in 1000 CHF)	−0.05	−0.04	−0.04	−0.04	−0.04	−0.05	−0.04	−0.05
	(0.06)	(0.06)	(0.06)	(0.06)	(0.06)	(0.06)	(0.06)	(0.06)
Population (in 1000)	−0.00	−0.00	−0.00	−0.00	−0.00	−0.00	−0.00	−0.00
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Openness to Experience		−0.02	−0.01	−0.02	−0.02	−0.02	−0.02	−0.02
		(0.04)	(0.06)	(0.04)	(0.04)	(0.04)	(0.04)	(0.07)
Conscientiousness		−0.06	−0.06	0.08	−0.06	−0.06	−0.05	0.03
		(0.04)	(0.04)	(0.07)	(0.04)	(0.04)	(0.04)	(0.08)
Extraversion		−0.09**	−0.08**	−0.09**	−0.07	−0.09**	−0.09**	−0.11*
		(0.04)	(0.04)	(0.04)	(0.06)	(0.04)	(0.04)	(0.06)
Agreeableness		0.07	0.07	0.07*	0.07	0.23***	0.07	0.20***
		(0.04)	(0.04)	(0.04)	(0.04)	(0.07)	(0.04)	(0.07)
Neuroticism		−0.07**	−0.08**	−0.08**	−0.08**	−0.07**	−0.14**	−0.14**
		(0.03)	(0.04)	(0.03)	(0.04)	(0.03)	(0.06)	(0.06)
Sex (male = 1)		−0.00	−0.01	−0.01	−0.00	0.00	−0.00	−0.01
		(0.11)	(0.11)	(0.11)	(0.11)	(0.11)	(0.11)	(0.11)
Age (in 10 years)		−0.04	−0.04	−0.04	−0.04	−0.05	−0.04	−0.05
		(0.03)	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)
No/primary Education		Ref. cat.	Ref. cat.	Ref. cat.	Ref. cat.	Ref. cat.	Ref. cat.	Ref. cat.
Secondary Education		0.08	0.08	0.08	0.07	0.09	0.06	0.08
		(0.21)	(0.21)	(0.21)	(0.21)	(0.21)	(0.21)	(0.21)
Tertiary Education		0.16	0.16	0.17	0.16	0.17	0.14	0.16
		(0.22)	(0.22)	(0.22)	(0.22)	(0.22)	(0.22)	(0.22)

DD*Openness to Experience			−0.01							−0.00
			(0.03)							(0.03)
DD*Conscientiousness				−0.08**						−0.05
				(0.03)						(0.04)
DD*Extraversion					−0.01					0.01
					(0.03)					(0.03)
DD*Agreeableness						−0.08***				−0.06**
						(0.03)				(0.03)
DD*Neuroticism							0.03			0.03
							(0.03)			(0.03)
Constant	7.21***	7.23***	7.21***	7.27***	7.26***	7.24***	7.26***	7.25***		
	(1.74)	(1.76)	(1.76)	(1.75)	(1.76)	(1.76)	(1.74)	(1.74)		
Random Effects										
SD Slope (Openness to Experience)			0.07					0.07		
SD Slope (Conscientiousness)				0.08				0.07		
SD Slope (Extraversion)					0.05			0.02		
SD Slope (Agreeableness)						0.00		0.00		
SD Slope (Neuroticism)							0.09	0.08		
SD Constant	0.46	0.46	0.46	0.45	0.46	0.46	0.45	0.45		
SD Residual	1.80	1.80	1.80	1.79	1.80	1.79	1.79	1.78		
AIC	4473	4509	4518	4511	4518	4509	4515	4541		
N	26	26	26	26	26	26	26	26		
n	1094	1094	1094	1094	1094	1094	1094	1094		

Note: Estimations based on the data set "Politics and Society in Switzerland 2012" and context data from various sources (cf. A.3 in the Appendix); Multilevel linear regression models with random intercepts and slopes, standard errors in parentheses; * $p < 0.1$ ** $p < 0.05$ *** $p < 0.01$.

Figure 2.1: Direct Democracy, Personality Traits, and Institutional Trust in Switzerland



Note: The plot is based on Table 2.1. It shows the regression coefficients (dots) and the 90% confidence interval (horizontal lines).

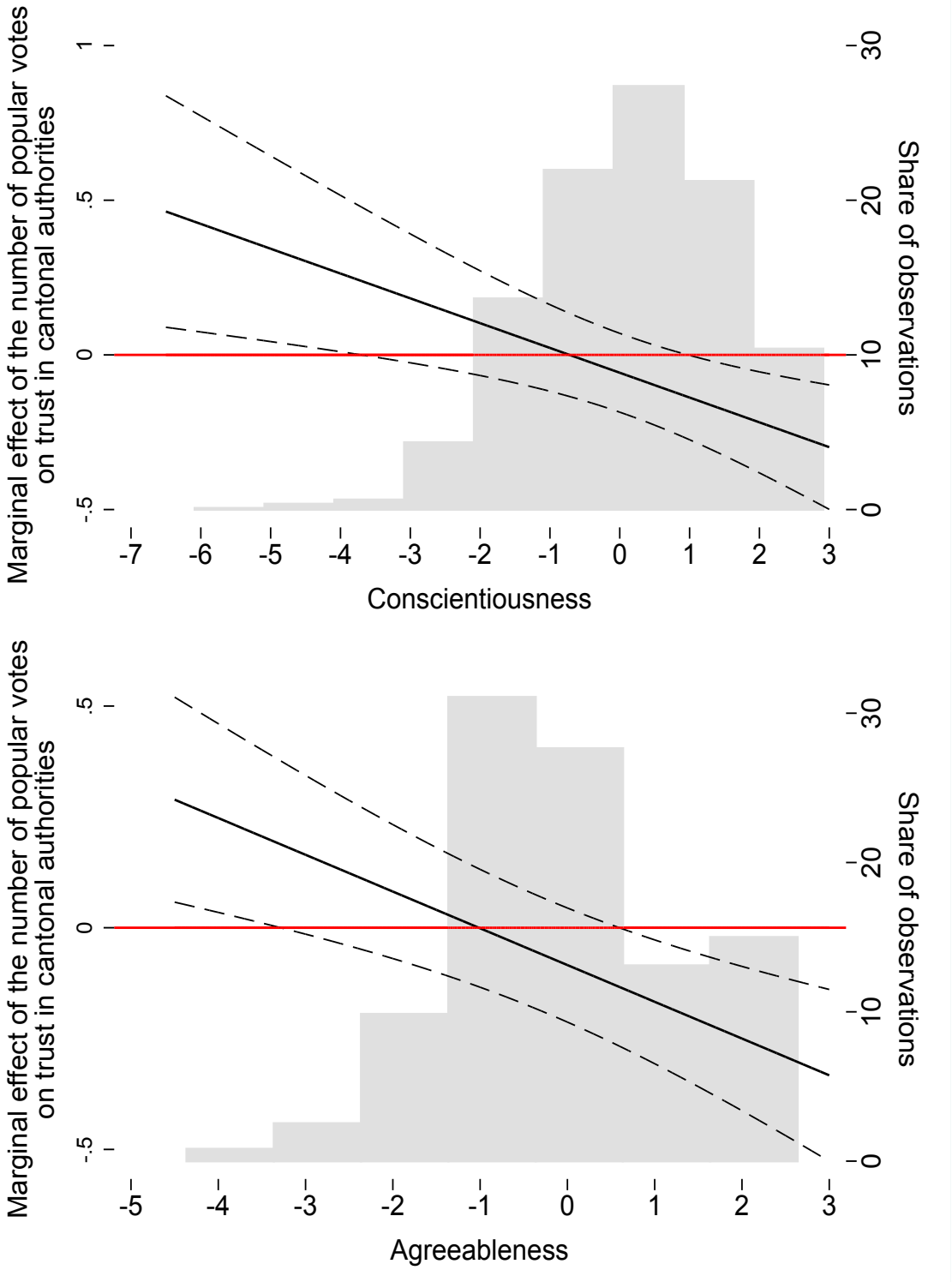
Furthermore, the lower graph in Figure 2.2 shows a differential effect of direct democracy depending on the level of agreeableness. For highly agreeable individuals frequent ballot measures seem to indicate conflict and disagreement within the political arena. This, however, is not in accordance with their nature and thus weakens their trust in cantonal authorities as an essential part of the political fabric. With regard to people scoring below average on this trait, a high number of popular votes seems to foster cantonal institutional trust. For people with an average level of agreeableness (or slightly below average) the link between direct democracy and institutional trust is insignificant. The remaining personality traits do not appear to alter the relationship between direct democracy and institutional trust in a substantial way.

Next, all five interactions are included simultaneously in one model (see model 8 in Table 2.1). In this fully specified interaction model, only the moderating effect of agreeableness remains significant. As Figure 2.3 shows the moderating effect of agreeableness becomes weaker when all other interactions are controlled for. Nevertheless, the moderation is still apparent and relevant. Accordingly, direct democracy is not linked to trust in cantonal authorities for people with average or below average agreeableness scores. For very agreeable persons, however, frequent ballot measures are negatively related to institutional trust. We argue that a high number of initiatives and referendums signal a high potential for political and societal conflict to agreeable persons. This makes them withdraw from the political arena and distrust in its actors, such as the cantonal authorities.[29]

In order to evaluate the robustness of our results, we conduct a variety of sensitivity analyses. Thereby our focus is on the robustness of the moderating effect of agreeableness in the fully specified interaction model. First, we consider the average number of popular votes both between 2000 and 2011 and between 1980 and 2011. Estimating our models using these alternative time points did not alter the results, as Figure A.2 in the Appendix shows. Moreover, we perform outlier analyses that demonstrate that the results presented are not sensitive to the exclusion of particular cantons (see Figure A.2 in the Appendix). Furthermore, we test for an interaction between age and direct democracy, as the exposure to ballot measures might vary by age. Again, our main findings remain stable in this model (see Table A.4 in the Appendix). The same holds for a model that includes an interaction

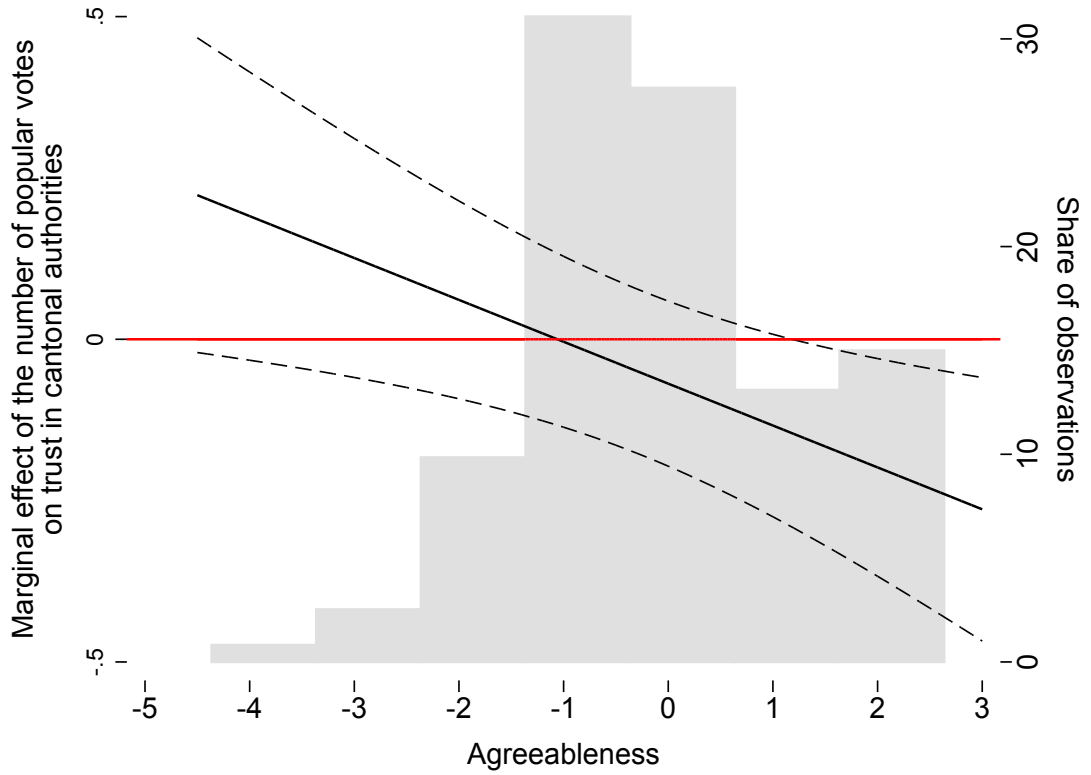
[29] One could certainly argue that rather the substance or visibility than the pure use of direct democracy could drive institutional trust. Accordingly, highly controversial referenda with consequences for political life in a canton might lead to more discussions among the voting population and promote higher turnout. In order to test the effect of turnout rates on political trust, we re-estimate our models using average cantonal turnout as context factor instead of the number of popular votes. Moreover, we run our models with the variance of the respective cantonal turnout rates to capture the attraction of single popular votes and the substance of direct democratic experiences. These sensitivity analyses do not reveal significant relationships with trust in cantonal authorities. Full results are available upon request from the authors.

Figure 2.2: Moderating Effects of Personality Traits on the Relationship between Direct Democracy and Trust in the Cantonal Authorities



Note: The plot is based on Table 2.1, model 4 and 6. The graphs show the effect of direct democracy on trust in cantonal authorities contingent on personality traits.

Figure 2.3: Moderating Effect of Agreeableness on the Relationship between Direct Democracy and Trust in the Cantonal Authorities (Fully Specified Model)



Note: The plot is based on Table 2.1, model 8. The graphs show the effect of direct democracy on trust in cantonal authorities contingent on personality traits.

between sex and direct democracy (see Table A.5 in the Appendix). Finally, we replicate our models using trust in the national government (see Table A.6 and Figures A.3 and A.4 in the Appendix). According to the results, conscientiousness and neuroticism in particular play an important role for trust in the national government, thus supporting the argument that trust in national governments and local authorities follow different logics and have distinctive roots (Fitzgerald and Wolak, 2014). Both of these traits exert direct effects and they alter the link between direct democracy and trust in the national government in a significant way. Again, conscientious persons might interpret frequent popular votes as a sign of incompetence and non-responsiveness on the part of the authorities and therefore exhibit lower levels of institutional trust in general. For neurotic persons a higher number of cantonal ballot measures might increase uncertainty and signal chaos in cantonal politics and they would be likely to place more confidence in a higher authority like the national government. In contrast to cantonal institutional trust, the moderating effect of agreeableness on trust in the government vanishes in the fully specified interaction model. Agreeable persons are interested in the relationships to their fellow citizens in their direct surroundings. Thus, they care more about local political issues because they are more closely connected to their everyday lives in the community or neighborhood (Gerber et al., 2011a), which might explain the absence of a significant effect of this trait regarding trust in the national government.[30]

2.7 Conclusion

What influence does direct democracy have on an individual's propensity to trust in political institutions? While some maintain that direct democracy enhances trust by increasing the policy responsiveness of the system, others argue that popular votes diminish trust by disclosing the deficits of the legislature (Bauer and Fatke, 2014; Dyck, 2009; Smith and Tolbert, 2004). Both views, however, are not supported by our hierarchical analyses of the 26 Swiss cantons. In this regard, frequent cantonal ballot initiatives and referendums neither stimulate institutional trust nor is a more vigorous exercise of direct democratic instruments associated with a reduction of individual trust in institutions. Against this background, we argue that different groups of individuals may react differently to the direct democratic context. In particular, one's personality could moderate the relationship between direct democracy and individual trust in institutions. Insights from political

[30] The inclusion of education in our analysis deserves special attention, since research finds that openness, in particular, is related to this outcome. Analyses not presented here show that our results are not sensitive to this variable. The direct and moderating effects of openness to experience remain insignificant in models without education. Full results are available upon request from the authors.

psychology indicate that people perceive and interpret information in different ways. We have tested this assumption by modeling cross-level interactions between different personality traits (openness to experience, agreeableness, conscientiousness, extraversion, and neuroticism) and the direct democratic context. Our empirical analyses reveal that in particular the trait of agreeableness moderates the influence of popular votes on trust in cantonal authorities in Switzerland. Thus, an intense use of direct democratic instruments diminishes the institutional trust of individuals who score high on this trait. We assume that for agreeable persons a high number of ballot measures might signal political and societal conflict. As a consequence, they have less trust in cantonal authorities as part of the political system. In this vein, Christian Democrats (who tend to be more agreeable) are especially disadvantaged by a system that utilizes a lot of direct democracy because it dampens their institutional trust. Moreover, especially for political parties, initiating an initiative or a referendum can thus be a double-edged sword. On the one hand, direct democracy provides parties with further opportunities to promote their political ideas. Their positions are widely reported in the media and their leaders frequently appear on television (Ladner and Brändle, 1999). On the other hand, since frequent popular votes appear to be eroding the trust in political authorities, a high degree of direct democratic activity could backfire on the initiating parties and generate genuine anti-party feelings.

Nevertheless, the general problem of how to comparatively approach the present findings beyond the Swiss case remains. According to the late Stein Rokkan (1970), however, Switzerland can be thought of as a microcosm of Europe because of its cultural, linguistic, religious, and regional diversity. Rokkan recommended that anyone wishing to study the dynamics of European politics should immerse him or herself in the study of Switzerland. In addition, Switzerland has been described as composed of three groups that "stand with their backs to each other" (Steiner, 2001, 145). In other words, conclusions drawn from empirical analyses in Switzerland are likely to be valid for other countries or cultural contexts in Europe as well.

In sum, merging ideas from new institutionalism and political psychology, our study contributes to two research fields. First, we add new theoretical insights to the study of the impacts of institutions, such as direct democracy, on political attitudes and behavior. Considering personality traits as moderators of these institutional effects offers a better understanding of how institutions structure individual behavior and attitudes. However, in order to fully scrutinize the interplay of direct democracy and personality further research is necessary. For example, Bauer and Fatke (2014) have shown that behavioral and attitudinal consequences of rules in use (actual use of direct democracy) and rules in form (availability of direct democracy) follow different logics. Second, we expand the literature

on indirect effects of personality on political attitudes and behavior. While the majority of empirical contributions regarding the effect of personality traits on political attitudes and behavior concentrate on direct effects, to date we have little evidence regarding the interplay between personality and situational or contextual factors (Ackermann and Ackermann, 2015; Dinesen et al., 2016; Gerber et al., 2010, 2012a; Mondak, 2010; Mondak et al., 2010). Here it could be promising to further investigate the substance of experiences rather than the frequency of direct democracy in a more detailed way. It may be that people's trust is more affected by the outcome of a popular vote that people care deeply about rather than the use of direct democracy per se.

In this vein, "the greatest contributions of research on personality will involve identification of interactive relationship between personality traits and other sorts of predictor variables" (Mondak, 2010, 19). Our analyses are only a first step on this research agenda. Although they point in the right direction, we need more investigations, which evaluate the role of the Big Five personality traits in different contexts with different aspects of civic engagement. A person's behavior is never determined by individual factors alone. The context creates the framework in which behavior takes place and attitudes are formed. It is commonly accepted that the ways in which individuals behave socially and politically depends on both who they are and on the context they are in (Funder, 2008). Future research should therefore focus more attention on these interactions.

Part of the reason that person-situation interactions have received relatively less attention within political science is the general lack of data appropriate for the task. Undoubtedly, this also reflects the perceived moral and ethical quandaries that emanate from biologically rooted explanations of human traits and behavior (Sturgis et al., 2010). Whatever one's view of the normative implications of biological explanations of social behavior, however, it is no longer justifiable for the scientific community to simply ignore the growing body of empirical evidence which suggests that political attitudes have a dispositional basis.

3 Personality Traits, Political Protest and Direct Democracy as Political Context

Abstract

Building on a growing literature concerned with the link between psychological dispositions and political protest behavior, we argue that this relationship is not universal, but rather depends on contextual factors. Political context factors are able to alter the meaning and understanding of participatory repertoires. This, in turn, leads to differential effects of personality on participation. We argue that direct democracy constitutes such a political context that can act as moderating factor with regard to protest participation. In order to test this interaction between person and situation empirically, we conduct a subnational comparative analysis of the Swiss cantons. Hierarchical regression models reveal that the personality traits openness to experience and extraversion affect protest behavior directly. Most importantly, however, the link between openness to experience and protest participation is significantly moderated by direct democracy. This provides evidence for variance in the situational expression of personality traits.

Note: This chapter is identical to a single-authored article, which is published online first as Ackermann (2016).

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3.1 Introduction

Political protest is not only a driving force of democratization processes, but also highly prevalent in modern Western societies. Against this background, social science research attempts to understand the emergence of protest movements as a whole as well as the decision of individual citizens to take part in political protest (Dalton et al., 2010; Rucht, 2007). Just recently, the psychological underpinnings of protest behavior have received special attention. In the course of a growing literature dealing with the impact of personality traits on political behavior and attitudes, several studies scrutinize the relationship between the Big Five personality traits and participation in political protest activities (Brandstätter and Opp, 2014; Gallego and Oberski, 2012; Ha et al., 2013; Mondak et al., 2010, 2011). Going one step further, we argue that it is relevant to consider contextual factors when studying the link between personality and protest. The importance and meaning of political protest is contingent on the context in which it takes place. Is there an institutionalized alternative to political protest? How open are the opportunity structures of participation offered by the political system? Thus, we argue that the relationships between personality traits and political protest are not universal, but instead depend on the political context in which an individual is situated.

By linking personality traits and political contexts in the explanation of protest participation, we move the established research agenda on personality and politics forward. Hitherto, the studies on personality and political protest have either concentrated on direct effects or scrutinized the role of mediators. While Gallego and Oberski (2012) show the mediating effects of political interest, efficacy and discussion, Brandstätter and Opp (2014) evaluate the mediating role of social incentives, such as political discontent and perceived influence. Meanwhile, studies focusing on the direct relationship between personality and protest participation present inconclusive findings that vary depending on the country of study (Ha et al., 2013; Mondak et al., 2010). Mondak et al. (2010) find in a comparative study of protest behavior in Uruguay and Venezuela that extraversion positively and agreeableness negatively affects protest participation in Venezuela, while these traits show no effect in Uruguay. Meanwhile, Ha and colleagues (2013) find a positive relationship between openness to experience and protest activities and a negative relationship between agreeableness and joining protests in South Korea. These inconclusive results constitute the puzzle we will address in the present article.

Generally, inconsistent empirical results can have either methodological or substantial reasons. From a methodological perspective, differences in the sampling method, data collection or measurement might lead to diverging empirical findings. With regard to personality

research, especially the use of short measures is disputed and hold responsible for inconsistencies (Credé et al., 2012). Apart from that, diverging results might also be caused by substantial factors. That means, contextual or situational differences lead to inconsistent results when a social phenomenon is studied in different countries or at different points in time. We take up this position and argue that one possible key to inconclusive results in the study of personality and politics is the consideration of contextual and situational factors. As Mondak et al. (2010, 91) emphasize, "the complexities of human psychology and of the social and political environments are such that heterogeneous effects should be the norm." Political and institutional settings constitute such contextual factors that are able to change the importance, meaning and purpose of participatory repertoires and consequently the effects of psychological dispositions. To illustrate this argument, we consider direct democracy as contextual factor, which itself is known to influence protest participation and which is supposed to alter the importance and meaning of protest as a form of political action (Kriesi and Wisler, 1996). While political protest serves as an important means of influencing politics in a cause-oriented way in a purely representative system, frequent ballot measures are assumed to compensate for this function in direct democratic contexts. Thus, the effects of an individual's predispositions on participation are expected to vary across different political and institutional contexts (Mondak et al., 2010, 91-92). More vividly: We expect open-minded persons, for instance, to be generally more likely to be engaged in political protest. An extensive use of ballot measures might, however, substitute for political protest and as a consequence reduce the hypothesized effect of openness to experience. To sum up, we argue that the expression of personality traits will vary dependent on the practice of direct democracy, which represents a situational context for protest participation.

In spite of Mondak's (2010, 19) remark that "the greatest contributions of research on personality will involve the identification of interactive relationships between personality traits and other sorts of predictor variables", only some notable exceptions have examined the interplay between personality traits and situational or contextual factors in shaping political attitudes and behavior (Ackermann and Ackermann, 2015; Ackermann and Freitag, 2015a; Ackermann et al., 2016; Dinesen et al., 2016; Fatke, 2016; Freitag and Ackermann, 2016; Gerber et al., 2010, 2012a; Mondak, 2010; Mondak et al., 2010). The present article contributes to this strand of research by scrutinizing the moderating role of the political context in the link between personality traits and protest behavior. Empirically, we conduct a subnational comparative analysis using the cantons of Switzerland as contextual entities. In general, protest is a relevant form of political participation in Switzerland which is not completely driven out by direct democracy (Fatke and Freitag, 2013). Still, the prevalence of political protest varies between the cantons. Similarly, the frequency of

ballot measures differs between the Swiss subnational entities. Thus, the case of Switzerland is perfectly suited to test our arguments. By combining survey data and contextual data on the usage of direct democracy, we fit hierarchical logistic regression models. Our results confirm that openness to experience and extraversion are positively linked to political protest participation. More importantly, we can show that the use of direct democracy in a canton significantly moderates the link between openness to experience and protest participation.

3.2 The Big Five Personality Traits and Political Protest

Political protest is understood as a cause-oriented form of political participation which "focus[es] attention upon specific issues and policy concerns" (Norris, 2007, 639). Like in other countries, the levels of mobilization, the issues and the actors of political protest have changed in Switzerland over time (Hutter, 2012). While the 1980s have been very contentious, protest activities reached another peek at the beginning of the 21st century (Hutter and Giugni, 2009). Issues of the 'New Social Movements', such as peace, environmental and gender issues, have still dominated political protest in Switzerland in the new century. Hutter and Giugni (2009, 447), however, also find that immigration-related topics have become frequent issues of protest since 2000. Furthermore, economic issues have reentered the protest agenda. Accordingly, 'New Social Movements' are very present in the organization of protest activities but the involvement of Unions and right-wing parties has slightly risen in the beginning of the 21st century (Hutter and Giugni, 2009). Beyond the mere description of the protest arena in terms of topics and actors, political protest is widely studied from different perspectives in the social sciences.[31] Among these, the role of psychological predispositions in the explanation of protest behavior has recently received increasing attention (Brandstätter and Opp, 2014; Gallego and Oberski, 2012; Ha et al., 2013; Mondak et al., 2010, 2011). We combine this approach with an institutional

[31] A very prominent macro-level approach is the political opportunity structures framework, which focuses on the role of institutional settings for protest behavior (Eisinger, 1973; Kitschelt, 1986; Meyer, 2004; Vrablikova, 2014). Fatke and Freitag (2013) as well as Kriesi and Wisler (1996) make use of this approach to study the effects of direct democracy on protest behavior and social movements. Other approaches explicitly focus on the individuals taking part in protest activities. An important example is the theory of collective action, which deals with the willingness of people to contribute to a public good (Olson, 1965; Opp, 1990). Meanwhile, the civic voluntarism model is concerned with the role of resources, motivation and network for political participation (Verba et al., 1995). Grievance theories dealing with deprivation and protest stand between resource-based and socio-psychological approaches (Gurr, 1970; Walker and Mann, 1987; and for a recent application Kern et al., 2015). Socio-psychological approaches are concerned with the link between emotions, values and attitudes and protest participation (Dalton et al., 2010; Rapp and Ackermann, 2016; Welzel and Deutsch, 2012; van Stekelenburg and Klandermans, 2013).

perspective, arguing that political contexts moderate the effects of personality. Personality is defined as a "dynamic system of psychological structures and processes that mediates the relationship between the individual and the environment and accounts for what a person is and may become" (Caprara and Vecchione, 2013, 24). Psychological research approaches personality from different perspectives. One of them is trait theory, which assumes personality traits to be the core component of personality (McCrae and Costa, 2008, 16ff.). Personality traits are partially rooted in genetic dispositions, relatively stable over the course of one's life, and understood as antecedents of values, attitudes and behavior (Bouchard, 2004; Krueger and Johnson, 2008; McCrae and Costa, 2008; Mondak, 2010; Roccas et al., 2002).[32] Based on lexical analyses, the Five-Factor Model has established itself as the standard model to capture and conceptualize personality traits (John et al., 2008). The Big Five personality traits - openness to experience, agreeableness, conscientiousness, extraversion, and emotional stability - have been found in different cultures, indicating that it is a universal model of personality (Schmitt et al., 2007).

As relatively stable psychological predispositions, the Big Five personality traits affect cognitive and behavioral patterns in all spheres of life. As no surprise, they also contribute to our understanding of individual political attitudes and behavior (see Gerber et al., 2011b, for an overview). Building on former research, we have first and foremost good reasons to expect direct effects of personality traits on protest participation. To begin with, we argue that individuals scoring high on openness to experience have a higher probability to take part in political protest. In particular, the facets openness to actions, ideas and values should drive this positive relationship.[33] Being critical thinkers, curious, nonconforming and having wide interests, open-minded citizens are keen to be exposed to new ideas (Gallego and Oberski, 2012; Gerber et al., 2011b,c; Ha et al., 2013). Political protest often tries to put exactly such new political ideas and topics on the agenda and should therefore attract open citizens. Furthermore, open-minded citizens are expected to favor unconventional and new ways to take part in politics (Mondak, 2010). Protest is one

[32] The origin of the Big Five personality traits is debated in psychology. Genetic factors are assumed to be responsible for at least 50 percent of the variation in the Big Five personality traits (Krueger and Johnson, 2008, 288ff.) and early childhood experiences are assumed to account for a large amount of the remaining variation (McCrae and Costa, 2008). Recent studies, however, emphasize that personality traits can gradually change over the lifespan (Specht et al., 2011, 2014a). These changes might be due to different factors, such as biological developments, environmental influences and role scripts.

[33] Each of the Big Five personality traits consists of six sub-dimensions, the so-called facets (Openness to Experience: openness in fantasy, openness in aesthetics, openness in feelings, openness to actions, openness to ideas, openness to values; Conscientiousness: competence, order, dutifulness, achievement striving, self-discipline, deliberation; Extraversion: warmth, gregariousness, assertiveness, activity, excitement seeking, positive emotions; Agreeableness: trust, straightforwardness, altruism, compliance, modesty, tender-mindedness; Neuroticism: anxiety, angry hostility, depression, self-consciousness, impulsiveness, vulnerability) (McCrae and Costa, 2003). The facets give a more fine-grained description of an individual's personality. Short measures, like the one used in this article, are unfortunately not able to represent each facet equally.

possibility to participate in an unconventional manner. Second, individuals scoring high on extraversion are also more likely to be involved in protest activities. They are outgoing, sociable, active and "eager to advocate for their causes" (Ha et al., 2013, 515). By taking part in political protest, they can combine what they enjoy about politics: coming into contact with others and expressing their opinion (Gallego and Oberski, 2012; Gerber et al., 2011c). It should be especially attractive to extraverts to choose this form of political participation, which can be characterized as loud and visible as well as social at the same time. For the traits agreeableness and neuroticism, we expect a negative relation to protest activities (Gallego and Oberski, 2012; Gerber et al., 2011c; Ha et al., 2013). Agreeable persons are trusting, cooperative and avoid conflicts. This should discourage them from protest activities which are often conflictive and confronting (Ulbig and Funk, 1999). Individuals with high scores on neuroticism are described as anxious, tense, insecure, and lack positive emotionality. Consequently, they are not keen on taking part in the political process, especially not if participation requires activity like protest does. Furthermore, persons scoring high on neuroticism will be too insecure to express their opinion in such a strong way. Finally, we have conflicting expectations for conscientiousness. This trait might either be irrelevant for political protest participation or even negatively linked to it. Conscientious citizens who are known to be dutiful, responsible, ambitious, and in need of structure, will participate in the political process if it is a civic duty to do so (Gallego and Oberski, 2012; Gerber et al., 2011c; Ha et al., 2013). Elections might be perceived as such a duty, but protest activities are not. Besides, especially the participation in demonstrations is time-intensive and immediate payoffs are sometimes hard to identify. Consequently, conscientious citizens will evaluate political protest as too time-consuming and inefficient. Thus, some studies even report a negative link between conscientiousness and protest participation (Mondak et al., 2010, 2011) while others find no effect (Brandstätter and Opp, 2014; Gallego and Oberski, 2012; Ha et al., 2013).

3.3 Bringing the Political Context in - The Role of Direct Democracy

Although direct effects of personality on protest behavior are plausible given the universality of the Five-Factor Model, inconclusive findings across different countries indicate that the political and institutional context is important. Mondak et al. (2010, 101-102), for instance, consider the role and nature of protest in a country to be relevant for the varying personality effects. They show that the effect of extraversion on protest is significant in Venezuela while it is not in Uruguay. In Venezuela, the authors explain, protest is more

commonly a group-based activity than in Uruguay. Therefore, extraverts are more likely to be attracted to protest in Venezuela. Furthermore, they find that agreeableness negatively affects protest participation in Venezuela, while the trait again shows no effect in Uruguay. Meanwhile, Ha and colleagues (2013) find a positive effect of openness to experience and a negative one of agreeableness on joining protests in South Korea. Ha et al. (2013, 517) explicitly refer to the role of context in shaping the effects of personality traits on political behavior. Against the background of a very contentious political environment during the time their survey was fielded, they expect a substantially negative effect of agreeableness. These empirical observations of heterogeneous personality effects are in line with theoretical considerations regarding the interaction between person and situation. Following a major theorem in psychology and political psychology, individual "behavior can be thought of as a function of the person and the situation" (Funder, 2008, 577, see also Lewin, 1951). Personality traits themselves are characterized by transsituational and transcontextual stability; their behavioral expression, however, can be affected by the context or situation in which a person is situated (McGraw, 2006; Winter, 2005).[34]

While Mondak et al. (2010) attribute differences in the effects of personality in South America to the nature of protest in the various countries and Ha et al. (2013) point to the political climate, we argue that direct democracy as political context acts as a moderator by changing the meaning and importance of protest. Direct democracy can be thought of as an ordered and institutionalized alternative to protest. Popular initiatives in particular are assumed to function as a catalyst of policy change (Freitag et al., 2003; Milic et al., 2014). They are institutionalized procedures that can pick up interests and claims of the people and that provide citizens and political entrepreneurs an opportunity to change the status quo on issues that they care deeply enough about for one reason or another (Epple-Gass, 1991).[35] In other words, direct democracy and in particular popular initiatives constitute an open political opportunity structure that enables citizens to directly articulate their interests, to put an issue on the political agenda and to promote policy change (Fatke and Freitag, 2013). In such an open system, ballot measures provide an in-

[34] We conceptualize the political context as the moderating factor that alters the relationships between the Big Five personality traits and protest behavior. Thereby, we follow the argument that the behavioral expression of personality traits varies over situations or contexts (Ha et al., 2013; Mondak et al., 2010). Alternatively, one could conceptualize the Big Five personality traits as moderators that alter the link between the political context and individual political behavior. These two alternative theoretical arguments would be tested empirically using exactly the same multiplicative interaction term. Thus, an interaction effect is symmetric by nature and the statistical model does not indicate the direction of the moderation (Berry et al., 2012). A thorough theoretical foundation is necessary to justify the direction of the interaction effect.

[35] Epple-Gass (1991) concludes that social movements in Switzerland frequently make use of this instrument in order to enforce their interests. Consequently, they are rather structurally conservative and less protest oriented.

stitutionalized way to influence the policy making process and are assumed to substitute for protest movements as a way to put forward new ideas (Eisinger, 1973; Fatke and Freitag, 2013; Kitschelt, 1986). We argue that this should especially hamper the positive effect of openness to experience on protest participation. A main motivation for open-minded citizens to participate in politics is to learn about new and innovative political ideas and to promote them in the political process (Mondak, 2010). Regular ballot measures offer them the opportunity to put forward and decide on new ideas in a direct and organized fashion. Consequently, protest becomes less important for open citizens in a context of direct democracy. Therefore, we expect that the relationship between openness to experience and protest participation will be negatively moderated by direct democracy.

Furthermore, we argue that a frequent use of ballot measures will negatively affect the relationship between conscientiousness and protest participation. Conscientious citizens are known to participate in politics if they perceive it as their civic duty (Mondak, 2010). Non-institutionalized forms of political participation, such as political protest, are rarely seen as a duty and norm to which one should adhere. Direct democracy, which offers an institutionalized way to participate in the legislative process, should strengthen this tendency. Within a direct democratic context, conscientious citizens will see it as their duty to go to the polls but not to the streets.

Beyond the immediate consequences of direct democracy for the structure of the political system as well as the policy outcomes, secondary effects of ballot measures, for instance educative effects, are widely discussed in the literature. In a nutshell, the argument on educative effects says that citizens are encouraged to participate in politics by their experiences with direct democracy (Smith and Tolbert, 2004).[36] We argue that - if these educative effects exist - they are most likely to affect the behavioral expression of extraversion. Within a direct democratic context, protest activities are an additional chance for extroverts to practice participation. Thus, direct democracy is supposed to strengthen the positive effect of extraversion on protest participation.

Finally, frequent ballot measures and, again, popular initiatives in particular, are not only an institutionalized way to put new policy ideas on the agenda or to educate citizens. They also have the potential to reveal conflicts, conflicting arguments and the power of as well as competition between different groups (Gamble, 1997). Thus, they disclose societal and political tensions and emphasize the conflictive nature of the political arena.

[36] The existence of educative effects of direct democracy is heavily debated. While some scholars argue that direct democracy offers positive side effects for political participation, party engagement or political knowledge (Smith and Tolbert, 2001, 2004; Tolbert et al., 2001, 2003; Tolbert and Smith, 2005), others question the existence of such universal spillover effects. Either they find no evidence at all for educative effects or just under certain circumstances (for instance Childers and Binder, 2012; Donovan et al., 2009; Dyck and Seabrook, 2010; Seabrook et al., 2015).

We argue that both agreeableness and neuroticism should make individuals more sensitive to this conflictive side of direct democracy. Agreeable persons are known to be conflict avoidant and will therefore withdraw from the political arena as soon as it becomes highly conflictive. Meanwhile, frequent ballot measures accompanied by conflictive campaigns increase insecurity and disorientation for citizens scoring high on neuroticism. Thus, direct democracy will strengthen the withdrawal of agreeable and neurotic citizens from the political arena and further hamper their participation in protest.

Table 3.1 summarizes our theoretical expectations. Beyond the direct and uniform effects of personality traits on political protest, we assume that direct democracy plays a crucial role as moderating factor. It constitutes the political context within which protest activities take place and is thereby supposed to alter the behavioral expression of personality traits.

Table 3.1: Theoretical Expectations

	Direct Effect on Political Protest	Moderating Effect of Direct Democracy
Openness to Experience	+	−
Conscientiousness	0/−	−
Extraversion	+	+
Agreeableness	−	−
Neuroticism	−	−

Source: Own illustration

3.4 Methods, Data and Measurement

In order to test the theoretical expectations empirically, we estimate hierarchical logistic regression models with random intercepts and random slopes as appropriate modeling strategy for hierarchically structured research questions and data (Steenbergen and Jones, 2002).[37] First and foremost, they take into account that observations are not independent from each other, but nested in a common context. Furthermore, they allow the estimation of effects on different levels of analysis and cross-level interactions between contextual and individual level variables. In our case, individuals are nested in the Swiss subnational entities, the 26 cantons. The cantons are embedded in a common political, administrative

[37] The models are fitted using the lme4-package in R. The code for the graphical illustration of the models is based on Gelman and Hill (2007). Furthermore, I am grateful to Matthias Fatke and Richard Traunmüller for sharing their code on postestimation routines.

and economic system, which makes them structurally similar in many ways and allows for systematic comparison (Linder, 2010; Vatter, 2014). Nevertheless, the usage of direct democratic rights as well as the level of political protest behavior vary significantly between the Swiss cantons. Against this backdrop, a subnational comparative approach promises relevant insights into our research question.

To create our data base, we combine macro-level data from various sources with the "Politics and Society in Switzerland 2012" data set. This nationwide survey contains information on political and civic attitudes, political behavior as well as on respondents' psychological dispositions. Based on a stratified random sample, computer assisted telephone interviews (CATI) have been conducted, yielding 1259 respondents, which corresponds to a response rate of 21.9 per cent (Longchamp et al., 2012, 10). As we are interested in the moderating effect of direct democracy on the link between personality traits and individual protest behavior, we restrict our sample to respondents who are entitled to take part in elections and popular votes in Switzerland (Swiss citizens). This reduced sample is comprised of 1145 valid cases.

The outcome variable, political protest, is measured by a dichotomous variable indicating if a respondent has taken part in at least one of the following protest actions within the past twelve months: participation in a demonstration, an illegal protest and/or in a political manifestation (1 = taken at least one action, 0 = taken no action). As an exploratory factor analysis has shown, these three items load on one latent factor.[38] Based on this result we interpret these actions as facets of political protest behavior and measure this behavior using one variable.

Our main explanatory variables, the Big Five personality traits, are captured by the Big-Five-Inventory-SOEP (BFI-S), which is a short version of the Big-Five-Inventory (BFI) originally developed for the German Socio-Economic Panel (G-SOEP) (Gerlitz and Schupp, 2005). It is comprised of 15 items indicating how strong a statement on characteristic and non-situation-specific behavior applies to the respondent. Answers are measured on an 11-point scale. By using a maximum-likelihood exploratory factor analysis with promax rotation, we are able to reveal the five factor structure which is supposed to lie behind the 15 items.[39] Based on these results, we construct an additive index (centered to

[38] Results of the exploratory factor analysis are available from the author on request.

[39] Results of the exploratory factor analysis are available from the author on request. A confirmatory factor analysis also reveals the factor structure and shows acceptable values for the most important measures of fit (RMSE = 0.08, SRMR = 0.06). The Cronbach's alpha scores for openness to experience (0.59), agreeableness (0.43), conscientiousness (0.55), extraversion (0.56), and neuroticism (0.57) are acceptable for short scale measures of the Big Five personality traits. The payoff of these short scales is that the - in our case three - items per trait have to cover a "substantial bandwidth" of various facets of one personality dimension. Therefore they are rather heterogeneous (John et al., 2008, 127).

its mean) for each of the personality traits. High values indicate a high expression of the respective personality trait while low values stand for a low expression of the trait. Figure A.7 in the Appendix shows the distribution of the Big Five personality traits in the Swiss cantons.

In order to capture direct democracy as moderating political context, we concentrate on the usage of direct democratic instruments. It captures the actual experiences citizens make with direct democracy in terms of how frequent they are asked to cast their vote at the polls. This "political reality" (Ladner and Brändle, 1999) is not correlated with structural variables, such as the language region or urbanization. Our indicator measures the average annual number of cantonal initiatives between 2003 and 2012 (Année Politique Suisse, 2011-2012; Schaub and Dlabac, 2012). Popular initiatives truly give agenda-setting power to the people and are more likely to act as an alternative to political protest, to educate citizens in terms of political engagement and to reveal societal conflicts than referenda. Thus, the number of initiatives corresponds to our theoretical arguments and is the appropriate measure of direct democracy in this article.

In order to avoid spurious correlations, potentially confounding factors are controlled for. On the macro level, we account for language region using the percentage of people speaking German in a canton. Moreover, we include the degree of urbanization as macro-level control variable. On the individual level, we control for sex (dichotomous variable), age (continuous variable), and education (categorical variable). Detailed information about the variables (their operationalization and data sources) as well as some descriptive statistics are given in Table A.7 in the Appendix.

3.5 Empirical Findings

In a first analytical step, we scrutinize the direct relationships between personality traits and political protest behavior (see Table 3.2, M1). As expected, openness to experience and extraversion are positively linked to political protest. Both relationships are in line with previous findings in the literature (Brandstätter and Opp, 2014; Gallego and Oberski, 2012; Ha et al., 2013; Mondak et al., 2010, 2011). Figure 3.1 shows the predicted probabilities to protest over the range of these two personality traits. For a man with secondary education and average values on all other variables, the probability to protest is about 14 percentage points higher if he scores highest on openness to experience compared to scoring lowest on the scale.[40] The probability to protest of a highly extroverted man with secondary

[40] This relationship might be enforced by the fact that protest is Switzerland is still dominated by left-wing topics and 'New Social Movements' (Hutter and Giugni, 2009). Individuals scoring high on openness

education (all other variables set to their mean) is about 20 percentage points higher than the probability of his highly introverted counterpart.

Apart from openness to experience and extraversion, no other personality trait is significantly related to protest participation in Switzerland. The coefficients show the expected direction (negative sign for conscientiousness, agreeableness and neuroticism) but they fail to reach statistical significance. With regard to conscientiousness we had ambiguous expectations and discussed the possibility that conscientiousness is not at all related to political protest. The non-findings for agreeableness and neuroticism are, however, against our theoretical expectations and contradict former findings in the literature (Brandstätter and Opp, 2014; Ha et al., 2013; Mondak et al., 2010). We expected these traits to be negatively linked to the participation in political protest. These divergent results might be caused by either substantial or methodological reasons. Referring to substantial reasons, our non-findings might be caused by peculiarities of the Swiss political system. It is characterized as the prototype of a consensus democracy which is highly inclusive and less competitive. Thus, Swiss politics may not be contentious enough to scare off agreeable and neurotic persons. Therefore, these traits do not play a role in explaining protest participation in Switzerland. Apart from that, methodological reasons might also play a role. We, for instance, use a short instrument to measure the Big Five personality traits that does not cover all facets of each trait. This might also be an explanation for the inconsistent findings (Credé et al., 2012).

Turning to the control variables, the empirical analysis reveals that men are more likely to participate in protest than women. An individual with tertiary education is more likely to protest than an individual with secondary education. There is, however, no difference between primary and secondary education. On the contextual level, a vivid usage of direct democracy is negatively linked to protest participation. This is in line with former findings in the literature (Fatke and Freitag, 2013). Furthermore, an increasing degree of urbanization decreases the likelihood to protest.

to experience have a higher probability to hold left-wing ideological orientations. Thus, we cannot rule out that the relationship is driven by the dominance of left-wing issues in protest activities.

Table 3.2: Personality Traits, Direct Democracy and Political Protest in Switzerland

	M1	M2	M3	M4	M5	M6	M7
Fixed Effects							
Openness to Experience	0.09^{+}	0.18^{**}	0.09^{+}	0.09^{+}	0.09^{+}	0.09^{+}	0.18^{**}
	(0.05)	(0.06)	(0.05)	(0.05)	(0.05)	(0.05)	(0.07)
Conscientiousness	−0.01	−0.01	0.02	−0.01	−0.01	−0.01	−0.01
	(0.06)	(0.06)	(0.08)	(0.06)	(0.06)	(0.06)	(0.08)
Extraversion	0.14^{**}	0.14^{**}	0.14^{**}	0.16^{*}	0.14^{**}	0.14^{**}	0.13^{+}
	(0.05)	(0.05)	(0.05)	(0.07)	(0.05)	(0.05)	(0.07)
Agreeableness	−0.01	−0.00	−0.00	−0.00	0.02	−0.00	0.01
	(0.06)	(0.06)	(0.06)	(0.06)	(0.08)	(0.06)	(0.06)
Neuroticism	−0.02	−0.02	−0.02	−0.02	−0.02	0.00	−0.01
	(0.05)	(0.05)	(0.05)	(0.05)	(0.05)	(0.06)	(0.06)
Sex (Ref. = female)	0.57^{***}	0.57^{***}	0.57^{***}	0.57^{***}	0.57^{***}	0.56^{***}	0.57^{***}
	(0.15)	(0.15)	(0.15)	(0.15)	(0.15)	(0.15)	(0.15)
Age	0.05	0.05	0.05	0.05	0.05	0.05	0.05
	(0.04)	(0.04)	(0.04)	(0.04)	(0.04)	(0.04)	(0.04)
Primary Education	−0.20	−0.23	−0.21	−0.20	−0.21	−0.21	−0.23
(Ref. = Secondary Education)	(0.28)	(0.28)	(0.29)	(0.28)	(0.28)	(0.28)	(0.28)
Tertiary Education	0.38^{*}	0.37^{*}	0.38^{*}	0.38^{*}	0.38^{*}	0.38^{*}	0.37^{*}
(Ref. = Secondary Education)	(0.16)	(0.16)	(0.16)	(0.16)	(0.16)	(0.16)	(0.16)
Language Region	−0.01	−0.00	−0.01	−0.01	−0.01	−0.01	−0.00
	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)
Urbanization	-0.08^{**}	-0.08^{**}	-0.08^{**}	-0.08^{**}	-0.08^{**}	-0.08^{**}	-0.08^{**}
	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)
Mean No. of Initiatives	-0.16^{*}	-0.16^{*}	-0.16^{*}	-0.16^{*}	-0.16^{*}	-0.17^{*}	-0.17^{*}
	(0.06)	(0.06)	(0.06)	(0.06)	(0.06)	(0.07)	(0.07)
* Openness to Experience		-0.09^{*}					-0.09^{*}
		(0.04)					(0.04)
* Conscientiousness			−0.03				−0.00
			(0.05)				(0.05)
* Extraversion				−0.02			0.01
				(0.04)			(0.04)
* Agreeableness					−0.02		−0.02
					(0.04)		(0.04)
* Neuroticism						−0.02	−0.00
						(0.04)	(0.04)

Constant	-1.34^{***}	-1.34^{***}	-1.35^{***}	-1.35^{***}	-1.34^{***}	-1.34^{***}	-1.33^{***}
	(0.14)	(0.14)	(0.14)	(0.14)	(0.14)	(0.14)	(0.14)
Random Effects							
σ^2 Constant	0.00	0.00	0.00	0.00	0.00	0.00	0.00
σ^2 Slope (Openness to Experience)		0.00					0.00
σ^2 Slope (Conscientiousness)			0.00				0.00
σ^2 Slope (Extraversion)				0.01			
σ^2 Slope (Agreeableness)					0.00		
σ^2 Slope (Neuroticism)						0.00	
BIC	1303.36	1319.38	1324.19	1324.15	1324.27	1324.10	1347.38
N (Individual)	1145	1145	1145	1145	1145	1145	1145
N (Context)	26	26	26	26	26	26	26

Note: Estimations based on the data set "Politics and Society in Switzerland 2012" and context data from various sources (cf. Table A.7 in the Appendix); variables centered to their mean; Hierarchical logistic regression models with RI and RS, standard errors in parentheses; $^{+}$ $p < 0.1$ * $p < 0.05$ ** $p < 0.01$ *** $p < 0.001$.

Figure 3.1: Personality Traits and Political Protest in Switzerland - Predicted Probabilities

Note: Black line = predicted probability to take part in protest calculated based on M1 in Table 3.2; grey, semi-transparent lines = 300 (out of 1000) Monte Carlo simulations of the respective predicted probability curve that illustrate the uncertainty of the estimation. Intercept is fixed at 1; sex is fixed at 1 (= male); education is fixed to secondary education; continuous covariates are fixed at 0 (= their mean).

Going beyond the direct effects of personality traits on protest behavior is the main contribution of this article. We expect that person and situation interact in shaping political protest participation. In particular, we argue that direct democracy will moderate the link between personality traits and individual protest participation. The overall political context gives meaning to individual participatory acts. Protest has a different meaning and importance depending on the alternatives to directly influence legislature and politics. The relationship between psychological predispositions and individual political behavior will vary contingent on this. In order to test this theoretical proposition, we apply a step-wise estimation strategy. First, we specify separate models including one interaction term in each model (see M2-M6 in Table 3.2). According to our expectation, the relationship between openness to experience and protest behavior is negatively moderated by the frequency of ballot measures (M2 in Table 3.2). The relationships of the remaining personality traits and political protest do not depend on the contextual degree of direct democracy. Second, we estimate a full model including all interaction terms to assess the robustness of the significant interaction term (M7 in Table 3.2). This final model reveals that the moderating effect of direct democracy on the link between openness to experience and protest participation is stable and robust. In order to grasp the substantial meaning of this interaction effect, we plot the predicted probabilities of taking part in protest for different levels of openness over the moderating variable, the mean number of initiatives in a canton (see Figure 3.2). It shows that an individual with a high level of openness to experience (one standard deviation above the mean) has a higher probability to protest than an individual scoring low on openness to experience (one standard deviation below the mean) in contexts with a very low average annual number of ballot measures. Thus, only in a context where direct democracy is seldom used, open-minded citizens are more likely to participate in protest activities compared to rather close-minded ones. If ballot measures are held on a regular basis, however, there is no difference in the likelihood to protest between open-minded and closed-minded citizens.[41] Thus, only in a context where direct democracy is seldom used, open-minded citizens are more likely to participate in protest activities compared to rather close-minded ones. This result is in line with our theoretical expectations. It suggests that substitution is taking place. For open citizens, frequent ballot measures offer the opportunity to deal with new topics and to put forward new ideas on a regular basis and through an institutionalized path. Thus, they concentrate on this institutionalized channel to bring about policy change. This detracts their

[41] In order to directly assess the difference in the probability to protest for citizens scoring high on openness to experience (one standard deviation above the mean) and citizens scoring low on openness to experience (one standard deviation below the mean), Figure A.5 in the Appendix illustrates the difference in the predicted probabilities. It shows that the difference in the probability is only distinguishable from zero in contexts where direct democracy is never or only seldom used.

attention from protest activities and the difference between very open and less open citizens regarding protest activities becomes insignificant. When ballot measures take place seldom, open citizens are however more likely to participate in protest activities in order to encounter and promote new and innovative political ideas.

Meanwhile, direct democracy is not able to moderate the effects of the remaining personality traits. The positive relationship between extraversion and political protest persists and is not significantly changed by the mean number of initiatives in a context. Conscientiousness, agreeableness and neuroticism are not related to political protest in Switzerland, independent of the usage of direct democracy. With regard to the non-findings for agreeableness and neuroticism, we hypothesized that the consensual Swiss democracy is not conflict-laden enough to scare off agreeable and neurotic persons. It seems that even a frequent usage of initiatives in the cantons does not cause enough controversies to do so.

3.6 Robustness Checks

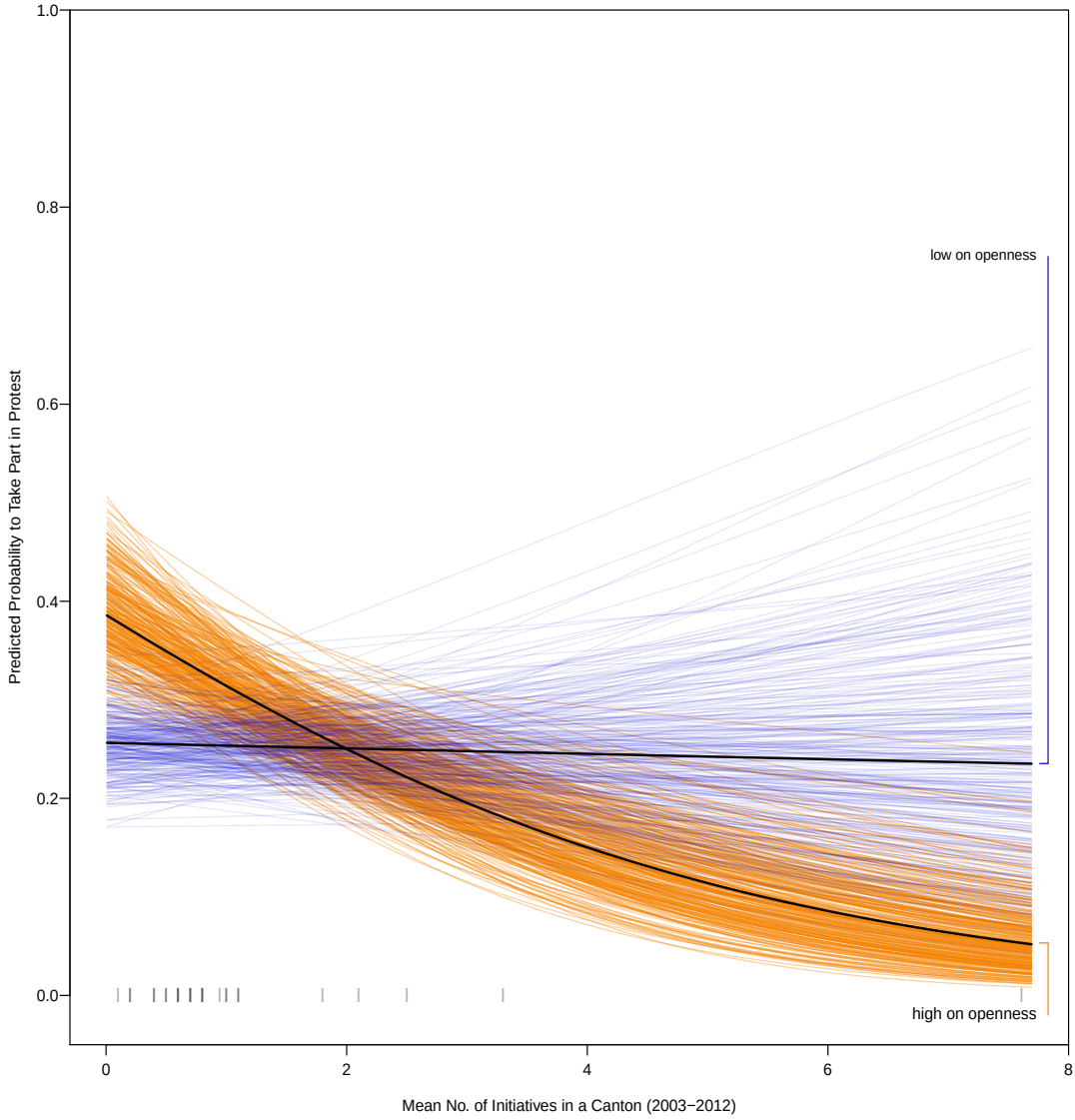
In order to further assess the robustness of the presented moderating effect, we conduct a number of checks. First, we apply a manual jackknifing procedure to rule out that our result is driven by influential cases. This means that we test the influence of single level-two cases by excluding single cantons when estimating the fully specified model (M7). The results indicate that the findings seem to be vulnerable to the exclusion of the case of canton Zurich (see Figure A.6 in the Appendix for the coefficients of the interaction term when a canton is excluded).[42] As van der Meer et al. (2010) explain, however, the exclusion of single contexts and all observations nested in these contexts might cause a loss of statistical power in multilevel analysis. Therefore they advise to include level-two unit dummies for potentially influential cases instead of excluding them from the estimation. Following this procedure, the presented interaction effect proves to be stable and robust (see Table A.8 in the Appendix, M8 for detailed results).

Second, we test whether our results differ when optional referenda are included in our measure of direct democracy. Just as initiatives, optional referenda are not initiated by formal institutions but by the people.[43] The difference is that they do not have the same agenda-setting power as initiatives because they just react on a decision of the parliament.

[42] The complete results of this manual jackknifing procedure are available from the author on request.

[43] An optional referendum can also be initiated by at least eight cantons (Kantonsreferendum). This possibility was, however, only used once in 2003 (Vatter, 2014). Thus, the large majority of optional referenda is not initiated by formal institutions.

Figure 3.2: Predicted Probabilities to Take Part in Protest for Different Levels of Openness to Experience over the Number of Initiatives in the Swiss Cantons



Note: Black lines = predicted probability to take part in protest calculated based on M7 in Table 3.2; colored, semi-transparent lines = 300 (out of 1000) Monte Carlo simulations of the respective predicted probability curve that illustrate the uncertainty of the estimation, vertical ticks above x-axis = distribution of the moderating variable. "High on openness" means one standard deviation above the mean value of openness to experience; "Low on openness" means one standard deviation below the mean value of openness to experience. Intercept is fixed at 1; sex is fixed at 1 (= male); education is fixed to secondary education; continuous covariates are fixed at 0 (= their mean).

Nevertheless, they might act as an alternative to protest. In line with this argument, the interaction effect of direct democracy on the link between openness to experience and political protest remains significant when optional referenda are taken into account (see Table A.8 in the Appendix, M9 for detailed results).

Third, we examine whether the moderating effect of ballot measures is indeed linear or whether it follows a more complex, non-linear logic. From a theoretical point of view it is reasonable to assume that initiatives have a diminishing marginal utility. That means, if only a few ballot measures take place in a canton, an additional popular vote has a higher impact than if a lot of them take place. In order to test for this logarithmic relationship, we estimate an alternative model using the logarithmic number of initiatives. The interaction with openness to experience is insignificant in this model specification (see Table A.8 in the Appendix, M10 for detailed results). This result suggests that the moderating effect of the number of initiatives follows a linear rather than a logarithmic logic.[44]

Fourth, we include additional interaction terms in order to test whether the moderating effect of direct democracy is robust. In a first step, we add interaction terms of the Big Five personality traits and urbanization (see Table A.9 in the Appendix, M11 for detailed results). Thereby, we test if the moderating effect is caused by urbanization which is another relevant contextual factor for protest behavior. Since direct democracy still significantly moderates the relationship between openness to experience and protest participation, this effect does not seem to be driven by urbanization. In a second step, we test for various interactions between individual characteristics, which potentially confound the relationship between personality and protest, and the number of initiatives (see Table A.9 in the Appendix, M12-14 for detailed results). Interacting sex, education and age with direct democracy does, however, not change our results.

Finally, we recode our outcome variable and estimate models for count data using the number of protest activities as outcome (see Table A.10 in the Appendix, M15-16 for detailed results). This change in the model specification does neither affect the direct effects of personality traits nor the interaction effect. In conclusion, our results prove to be valid and robust against a number of different model specifications.

[44] As an alternative test for non-linearity, we specified the number of ballot measures as categorical variable and tested for a cross-level interaction with openness to experience. This approach supports our finding of a linear moderating effect. Taking the lowest number of initiatives as baseline, the interaction effect becomes insignificant when the number of ballot measures rises. The complete results of this model are available from the author on request.

3.7 Conclusion

The present study scrutinizes the interplay between person and situation in shaping political protest participation. We conduct an empirical comparative subnational analysis of the 26 Swiss cantons and apply hierarchical models to test our theoretical expectations. In accordance with earlier studies (Ha et al., 2013; Mondak et al., 2010), we find positive links between openness to experience and protest and between extraversion and protest. More importantly, our results show that personality traits and the political context interact in shaping individual protest behavior. The mean annual number of cantonal initiatives moderates the effect of openness to experience on protest in a negative way. Theoretically, this might be explained by a substitution for political protest. Open citizens will encounter new political issues and a variety of political ideas through direct democracy if ballot measures are held frequently. This renders protest unnecessary as a means of learning about alternative political ideas and putting new issues on the agenda. If popular initiatives are rare events, however, open persons will have a higher propensity to protest. Meanwhile, the degree of extraversion positively affects the probability to protest, regardless of the political surroundings. A vivid direct democratic context is not able to further strengthen this relationship. The remaining personality traits, conscientiousness, agreeableness and neuroticism, are neither homogeneously nor heterogeneously linked to protest participation in Switzerland. With regard to conscientiousness, our theoretical expectation were ambiguous. For agreeableness and neuroticism we, however, expected a negative relationship to protest that should be strengthened by a frequent usage of direct democratic instruments. These relationships are supposed to be caused by conflict avoidance and insecurity. The non-findings in the present study might be due to substantial (e.g. idiosyncratic factors of the Swiss political system) or methodological reasons (e.g. measurement issues).

Bringing political contexts into the study of political psychology, our article demonstrates that it is fruitful to study differential effects of personality traits. It is unlikely that personality and situational factors only affect behavior independent from each other. Instead, person and situation interact in shaping behavior and attitudes (Funder, 2008; McGraw, 2006). We provide a framework to study this interaction and thereby contribute to the development of political psychology. Just as Hibbing et al. (2011, 620) state, "the question is no longer whether personality matters but how exactly it matters". The consideration of conditional effects of personality traits is one future pathway for the study of personality and politics (McGraw, 2006; Mondak, 2010). Personality effects might be conditional on a number of factors, be it institutions, structural contexts or the political situation. As one step on this research agenda, the present article shows that the political or institutional context can alter the meaning and importance of participatory repertoires and thereby

moderate the effects of psychological dispositions. Our results reveal that direct democracy operates as a moderator for the relationship between personality traits and political protest participation. Against the backdrop of the rise of direct democracy in Western democracies (the United Kingdom European Union membership referendum in 2016, the referendum in Ireland on same-sex marriage in 2015 and the Scottish independence referendum in 2014 can be taken as examples), the effects of this institution are of special interest to a wider public (Matsusaka, 2005).

In spite of these contributions of the article, its limitations have to be discussed and taken into account when reflecting on the results. First, this study is a first attempt to scrutinize systematically how political contexts, like direct democracy, moderate the effects of personality traits on political behavior. As such, the study is explorative and tries to point out the bigger picture. Further research is needed to consider details and complexities of the interaction between dispositions and political contexts in the explanation of protest. It could, for instance, be promising to study if the content of the initiatives matters for the moderation. Furthermore, the campaign and the result of the ballot measures might be crucial and more suitable to operationalize the mechanisms underlying some of our hypotheses, like the mobilizing and conflictive nature of initiatives. To sum up, the study has to be considered as a first step on a larger research agenda. Second, it might be worthwhile taking the nature and issue of protest into account when examining the link between personality and protest. The dominance of left-wing issues and actors in political protest in Switzerland might be a reason for the positive relationship between openness to experience and protest participation because open-minded persons are more likely to hold left-wing ideological orientations. Since protest participation is not further specified in our data, we are not able to disclose this mechanism empirically. Studies focusing on protest participants are better suited to present a psychological profile of people taking part in different kinds of protest. Third, we are not able to make any claims regarding the causality of the relationships presented in this article. Causal claims are only based on theoretical grounds and we are not able to back them empirically. Against the backdrop of findings in the field, the relationships have to be merely understood as correlations (Verhulst et al., 2012). Fourth, we cannot be sure if our findings can be generalized beyond the case of Switzerland. Rokkan's (1970) description of the Swiss cantons as a 'microcosm of Europe' given their cultural and linguistic diversity raises some hope regarding this issue. In order to gain more certainty, further case studies or even an international comparison would be necessary. For instance, the case of the USA providing a vivid direct democracy in some of the subnational entities would be suitable to replicate our study and to assess the generalizability of our findings. Furthermore, some international survey programs, like the latest wave of the World Values Survey (WVS), include measures of personality traits.

Researchers should evaluate the possibilities of cross-national comparisons using these data sets.

To sum up, our study constitutes a first step on a broader research agenda. It indicates that personality traits are relevant for an individual's participation in protest activities. Most importantly, however, it shows that the examination of person-situation interactions is a promising pathway in the study of personality and political behavior. Direct democracy as an institutional context is able to moderate the behavioral expression of personality traits. A frequent use of ballot measures seems to substitute protest participation for open-minded citizens. Thus, the gap in protest participation between open- and close-minded citizens is narrowed in the context of a vivid direct democracy. Further research including the consideration of other potentially moderating factors is necessary to gain a more fine-grained picture of the person-situation interaction in shaping political protest.

4 Personality Traits, Political Ideology and Direct Democracy as Informational Context

Abstract

Within the growing literature on the psychological underpinnings of politics, the relationship between personality traits and political ideology is widely studied. Political ideology is, however, an abstract and vague concept. Thus, at least part of the electorate is supposed to be uncertain about the meaning of left and right. Building on the work of Osborne and Sibley (2015), we argue that this uncertainty should affect the strength of personality effects. The relationship between the Big Five and ideology should be stronger if people are better informed and know which ideological position resonates their personality. We argue that a vivid direct democracy provides an informational context which increases political knowledge and, thereby, strengthens the relationships between the Big Five and ideology. Empirically we test this hypothesis using survey data from a random sample of eligible Swiss voters. Hierarchical regression models reveal that the link between neuroticism and political ideology is only significant in a direct democratic context. This finding especially proves to be robust for a subsample of highly educated individuals. This provides evidence for the role of direct democracy as informational context which offers cues regarding the meaning of ideology.

Note: This chapter is identical to a single-authored working paper, which I currently prepare for submission to a scientific journal. It is entitled "Bringing Information In - Personality and Ideology in the Context of Direct Democracy".

Acknowledgments: An earlier version of this chapter was presented at the Annual Conference of the European Political Science Association (EPSA) 2016 in Brussels, BE and at the $24^{r}d$ World Congress of the International Political Science Association (IPSA) in Poznan, PL. I am grateful to all participants in the panels and, especially, to Sonja Zmerli for their valuable comments and suggestions. Errors remain my own.

4.1 Introduction

The relationship between personality traits and political ideology is among the most studied topics in political psychology (Sibley et al., 2012). It was given a fresh boost since political scientists have shown a renewed interest in the psychological underpinnings of political attitudes and behavior (Gerber et al., 2011b; Mondak, 2010). A relationship between personality traits and political ideology, however, necessitates an individual's awareness of which ideology resonates one's psychological needs (Osborne and Sibley, 2015). In other words, citizens need to know what different ideologies mean in order to choose the one corresponding to their psychological dispositions. We argue that a vivid direct democracy is able to increase political knowledge and to make people aware of the meaning of different ideologies. Thus, individuals living in a direct democratic context should be more likely to choose an ideological position that reflects their personality structure.

Our approach is linked to two different strands of research. We develop further the literature on personality and ideology. Thereby, we follow the inspiring argument of Osborne and Sibley (2015) that civic training is necessary to distill the relationship between psychological dispositions and political positions. While Osborne and Sibley (2015) use education to measure civic training, we argue that a vivid direct democracy creates an information environment, which increases political knowledge. This argument links our paper to the literature on educative effects of direct democracy, the second strand of research we want to address (see Smith and Tolbert, 2004). It assumes that direct democracy has positive externalities in terms of political participation, political efficacy and political knowledge. We argue that referendum campaigns increase political knowledge and awareness and illustrate which concrete policy positions are associated with left and right ideologies. When ballot measures take place frequently, citizens have to deal with and decide on substantive issues on a regular basis. During the campaigns and by means of informational resources (e.g. official voting booklet of the government) citizens get a better understanding of what it means to be left or right in substantial terms. Consequently, individuals will be able to better evaluate which ideology resonates their personality. If this theoretical line of reasoning was supported by the empirical results, this would be evidence for the role of direct democracy as informational context, which empowers citizens to choose the ideology that is most likely to satisfy their psychological needs.

To test this argument empirically, we conduct a subnational comparative analysis using the cantons of Switzerland as contextual entities. Since the Swiss cantons are embedded in a common political and cultural context, on the one hand, and vary in the use of direct democratic instruments, on the other hand, this case is particularly suited to test the

argument. Moreover, this study is the first to examine the relationship between personality and ideology in the Swiss context. Thus, it also contributes to our knowledge on the psychological underpinnings of political attitudes in Switzerland. We combine survey data with contextual data on the usage of direct democracy in order to fit hierarchical linear regression models. We are able to replicate the established finding that conscientious persons hold right-wing ideological positions. More importantly, we can show that the use of direct democracy in a canton significantly moderates the link between neuroticism and political ideology in the expected direction. This interaction, however, is limited to highly educated citizens, as a subsample analysis shows.

The paper is structured as follows: In the next three sections, we discuss our theoretical framework by explaining the main concepts as well as the theoretical expectations regarding the relationships between personality, direct democracy, and political ideology. Thereafter, the data and the statistical methods are presented. We then present the results of the empirical analysis before concluding with a summary and discussion of the major findings.

4.2 Personality and Ideology - Only "Within the Limits of Civic Training"?

A large number of studies in both fields, political science and psychology, is concerned with the relationship between psychological dispositions and ideological positions. Through the establishment of the Five-Factor Model (also known as the Big Five) as gold standard to capture personality traits, this strand of research was given a fresh boost.[45] Studies on personality and ideology argue that "people adopt ideological belief systems [...] that are most likely to satisfy their psychological needs and motives" (Jost et al., 2003, 341). This arguments makes an important assumption which is barely discussed and questioned: Individuals have to be aware of which ideology resonates their personality.

[45] In psychology, different theoretical and empirical approaches to study personality exist. One of them is trait theory, which focuses on personality traits as the core component of personality (McCrae and Costa, 2008, 162 ff.). These traits have been found to be partly influenced by genetic dispositions, relatively stable over the course of an individual's life, and they are supposed to precede values, attitudes and behavior (Bouchard, 2004; Krueger and Johnson, 2008; McCrae and Costa, 2008; Mondak, 2010; Roccas et al., 2002). As a result of lexical analyses, the Five-Factor Model has become the standard model to capture personality traits (John et al., 2008). It assumes that inter-individual differences in personality are best described by five traits. These Big Five personality traits – openness to experience, agreeableness, conscientiousness, extraversion, and emotional stability – have been validated for different cultures and countries (Schmitt et al., 2007).

If we took this assumption for granted, what kind of direct relationships between the Big Five personality traits and political ideology would we expect? The most clear-cut expectations and consistent findings in the literature can be found for openness to experience and conscientiousness (Gerber et al., 2011b; Sibley et al., 2012). According to John et al. (2008, 120), openness to experience measures "the breadth, depth, originality, and complexity of an individual's mental and experiential life". Open-minded persons are creative, original, curious, interested and avid for learning. They are culturally interested, unconventional, tolerant and ready to revise their value and opinion system (McCrae and Costa, 2003). Left-wing ideologies resonate these characteristics in terms of tolerant and liberal orientations. Therefore, individuals scoring high on openness to experience are expected to hold a left-wing ideological orientation (Gerber et al., 2010; Jost, 2006; Jost et al., 2003; Sibley et al., 2012).

Conscientiousness captures how dutiful, responsible, orderly, productive, ambitious and efficient a person is. Individuals scoring high on conscientiousness are also in need of structure and obey to social norms and rules (McCrae and Costa, 2003). Empirical evidence suggests that right-wing or conservative orientations reflect this personality structure (Gerber et al., 2010; Jost, 2006; Jost et al., 2003; Sibley et al., 2012). Thus, individuals scoring high on conscientiousness are expected to place themselves on the right-wing of the ideological spectrum.

Extraversion characterizes individuals that have "an energetic approach toward the social and material world and includes traits such as sociability, activity, assertiveness, and positive emotionality" (John et al., 2008, 120). Extroverts are outgoing, sociable, lively and active. They are also described as being assertive and even socially dominant. Against this backdrop, the expectations regarding the link between extraversion and ideology are mixed. On the one hand, sociability and related characteristics hint to left-wing ideologies. On the other hand, tendencies toward social dominance are better resonated by right-wing ideologies. In accordance with that, only weak correlations between extraversion and political ideology are found (Gerber et al., 2010). They indicate that extraversion is related to social conservatism that guarantees to maintain the existing social order (Bakker, 2016; Carney et al., 2008).

Agreeableness compares "a prosocial and communal orientation toward others with antagonism and includes traits such as altruism, tender-mindedness, trust, and modesty" (John et al., 2008, 120). Thus, agreeableness describes how a person interacts with others. Individuals scoring high on agreeableness try to avoid conflicts, they are cooperative and friendly (McCrae and Costa, 2003). In general, left-wing political orientations resonate these characteristics. Part of the empirical evidence supports this argument (Gerber et al.,

2011b), especially in terms of economic and social security policies. There is, however, also evidence that agreeable persons hold conservative positions if traditional norms and values, and, thus, the existing societal consensus is at stake (Gerber et al., 2010). That is, while they tend to show left-wing economic positions, they are more likely to be conservative on a scale measuring the cultural dimension of ideology (Gerber et al., 2010).

Finally, neuroticism captures "negative emotionality such as feeling anxious, nervous, sad, and tense" (John et al., 2008, 120). Individuals scoring high on neuroticism are emotionally unstable. They are, however, not only worried about their own situation but also about the situation of others (McCrae and Costa, 2003). Against this background, they are expected to hold left-wing political orientations which are associated with an increase in social and economic security (Gerber et al., 2010, 2011b; Jost et al., 2003; Mondak, 2010).

The assumption that individuals are aware of which ideology resonates their personality is probably too strong and only met seldom. In social science surveys, ideology is usually measured by the left-right-scale in European countries and by the conservative-liberal-scale in the US-case. These scales are themselves problematic for different reasons. Their cross-country comparability is limited and even within one country, respondents attribute different meanings to the endpoints of the scale. This variation in the understanding of the scale can potentially lead to biased results because the attributions affect the self-positioning on the scale and are not independent from covariates of interest, like education (Bauer et al., 2016). Thus, it is already a strong assumption that respondents understand the left-right scale. The assumption made in the literature on personality and ideology, however, goes beyond that. It assumes that an individual is able to choose the ideological positions that is in line with one's personality structure. Osborne and Sibley (2015) argue that this is only possible "within the limits of civic training". That means only educated citizens are able to make this decisions and therefore, education is expected to moderate the link between personality traits and ideology.

4.3 Direct Democracy as Informational Context

We take the argument of Osborne and Sibley (2015) and adapt it with regard to the measurement of civic training and the theoretical expectation. Osborne and Sibley (2015) conceive civic training as educational level and argue that higher education will lead to a better understanding of politics in general, and the ideological scale in particular. From an institutionalist perspective, not only educational institutions but also political ones are able to create an environment in which civic training can take place. Proponents of the educative effects-argument assume that direct democracy is such an institutional setting

that is able to educate individuals in terms of political knowledge, political efficacy and political participation (Smith and Tolbert, 2004; Tolbert et al., 2001, 2003; Tolbert and Smith, 2005). In a direct democracy, citizens frequently have to take a position on a concrete policy issue which puts high demands on their level of information (Christin et al., 2002). Ideally, this should encourage them to become informed on that matter (Baglioni, 2007). Mendelsohn and Cutler (2000) find empirical support for this argument and show that citizens pay closer attention to the media throughout a referendum campaign and thereby become more informed. Meanwhile, the internet plays an important role in referendum campaigns. Evidence on electoral campaigns shows that online campaigns increase political knowledge substantially (Partheymüller and Faas, 2015). Beyond the media, Swiss citizens receive information on the ballot measure directly from the government via official voting booklets. It is prescripted by law that the information presented needs to be balanced regarding arguments in favor and against a proposition. For a referendum in Germany, Faas (2015) shows that such official voting booklets are able to increase political knowledge. Building on that, we argue that a vivid direct democracy strengthens political awareness and creates an environment in which citizens learn about politics, about policy positions and about abstract political ideologies. Referendum campaigns make left and right more tangible in terms of concrete policy positions. Moreover, citizens get used to follow political debates and to identify different standpoints. All in all, this should enable them to identify the ideological position that resonates their personality. Thus, we expect direct democracy to strengthen or bring to light the links between personality traits and political ideology in the first place.

Within the context of a vivid direct democracy, attentiveness to referendum campaigns and participation in ballot measures is, however, also not equally distributed across the electorate. Like in contexts where direct democracy is absent, high-status citizens are more likely to pay attention and to take part in direct democracy (Fatke, 2015). Long-term effects of increased political knowledge are particularly visible for those who participate in ballot measures (Smith, 2002). Thus, we argue that education might be an additional moderating factor. That means, direct democracy should especially work as an environment of information and civic training for highly educated individuals.

Osborne and Sibley (2015) expect to find the strongest moderating effect for openness to experience, a trait that is known to be linked to political interest and knowledge. We, however, argue that direct democracy should have the strongest educative moderating effect for individuals scoring high on traits that which are not or even negatively related to political interest and knowledge (Mondak and Halperin, 2008). They are assumed to benefit most from the informational environment direct democracy is supposed to create.

Thus, we expect that direct democracy will especially strengthen the relationships between extraversion, agreeableness and neuroticism on the one hand and political ideology on the other hand.

4.4 Methods, Data and Measurement

The empirical strategy to test our argument follows a stepwise procedure. In a first step, we examine the direct relationships between the Big Five personality traits and political ideology in Switzerland using hierarchical linear regression models with random intercepts and random slopes. Since our overall research design follows a multilevel logic and implies the use of nested data, the estimation of hierarchical models in appropriate (Steenbergen and Jones, 2002). It allows us to take the dependencies of observations nested in the same canton into account and to control for covariates on the context level. In a second step, we examine the ability of a vivid democracy to create an information environment by estimating hierarchical models with cross-level interactions. According to our theoretical argument, we expect a direct democratic context to strengthen the individual-level relationship between personality and ideology. Finally, in a third step, we fit separate models for different educational levels. Since there are not enough observations in the lowest category (primary education), individuals with primary and secondary education are grouped in one category. They are compared to individuals with tertiary education. Thereby, we test whether the relationships differ across educational strata.

In order to estimate these models, we use data from a nationwide survey ("Politics and Society in Switzerland 2012") that contains information on political and civic attitudes, political behavior, socio-demographics and, most importantly, respondents' psychological dispositions. It has been collected by means of computer assisted telephone interviews (CATI) based on a stratified random sample. In total, 1259 respondents have answered the survey, which corresponds to a response rate of 21.9 percent (Longchamp et al., 2012, 10). Since our main interest is in the moderating effect of direct democracy, we restrict our sample to respondents who are eligible to vote (Swiss citizens) and who are, thus, assumed to be more attentive to campaigns. We combine this individual-level survey data with contextual data.

The outcome variable, political ideology, is measured by a continuous variable indicating respondents' self-placement on the left-right scale (0 = left ideology; 10 = right ideology). Our main explanatory variables, the Big Five personality traits, are measured using the Big-Five-Inventory-SOEP (BFI-S), which is a short version of the Big-Five-Inventory (BFI). It has originally been developed for the German Socio-Economic Panel (G-SOEP)

(Gerlitz and Schupp, 2005). The BFI-S contains three item per trait making 15 items in total. Each item represents a statement on a characteristic and non-situation-specific behavior and respondents' are asked to indicate how strong this applies to the them on an 11-point scale. By estimating a maximum-likelihood exploratory factor analysis with promax rotation, we are able to validate the five factor structure for our sample.[46] Based on the results of the factor analysis, we construct five additive indices to measure the Big Five personality traits. High values represent high scores on the trait and low values represent low scores on the trait. Each trait index is centered to its mean. The moderating variable, i.e. the vividness of direct democracy, is captured by the average annual number of cantonal initiatives and optional referenda between 1980 and 2011 (Schaub and Dlabac, 2012).

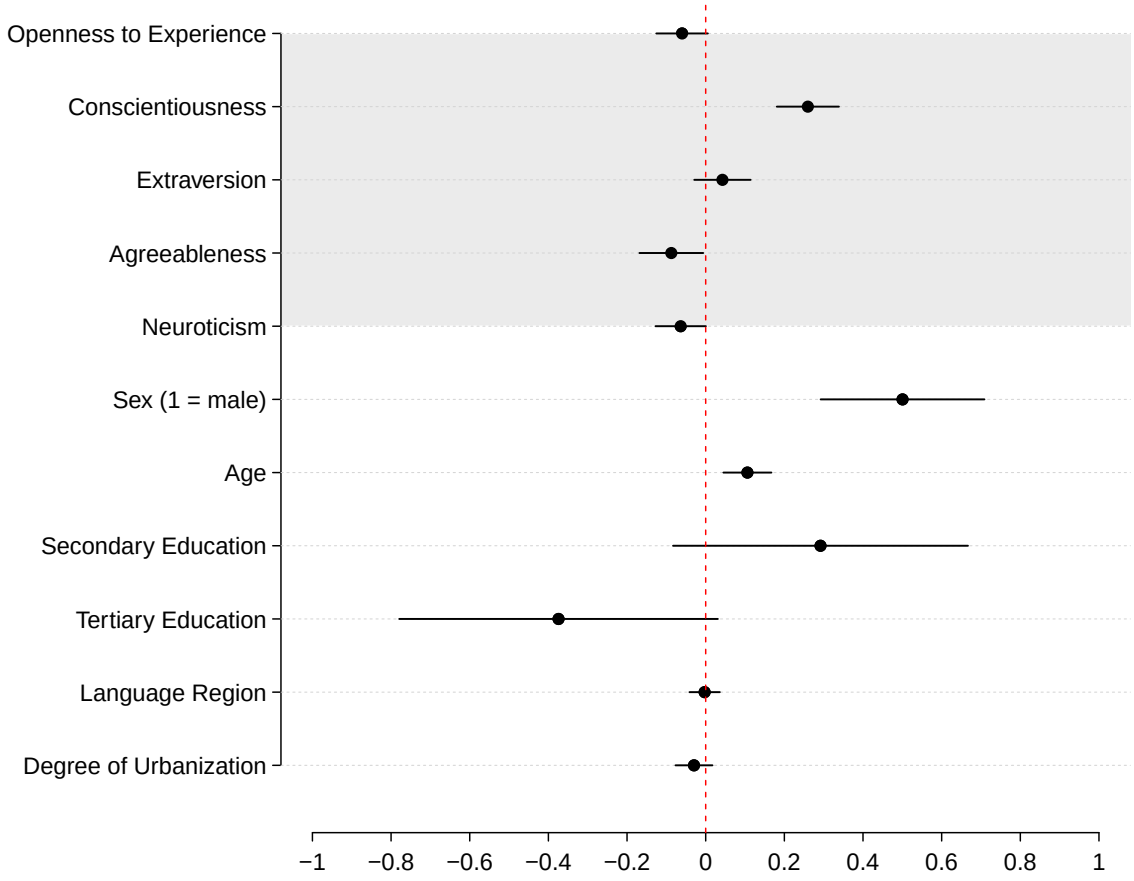
In order to account for factors that potentially confound the link between personality traits, direct democracy and political ideology, we include several control variables in our models. On the individual level, we control for sex, age, and education in our analyses. Sex is measured as a dichotomous variable, age as continuous, and education as a categorical one. On the macro level, we include language region as control variable measured by the percentage of people speaking German in a canton. Moreover, the degree of urbanization is accounted for. Detailed information about the exact measurement as well as the data sources of the variables, and some descriptive statistics can be found in Table A.11 in the Appendix.

4.5 Empirical Findings

In a first analytical step, we examine the direct relationships between the Big Five personality traits and political ideology in Switzerland. The findings are graphically illustrated in Figure 4.1 (for detailed results, see M1 in Table A.12). We can confirm the well-established finding that conscientiousness is linked to conservative or right-wing ideological positions. Furthermore, we find a weak but significant effect of agreeableness: agreeable persons are more likely to hold left-wing ideologies. Extraversion, neuroticism and openness to experience are, however, not significantly related to ideological self-placement in Switzerland. Especially, the non-finding for openness to experience is surprising because this is a well-established finding in the literature. One potential explanation might be the political constellation in Switzerland. In a political landscape that is dominated by a strong right-wing force, like the Swiss People's Party (SVP), positions in the center of the ideological

[46] Results of the exploratory factor analysis as well as results of further analyses on the dimensionality and structure of the Five-Factor Model (i.e. confirmatory factor analysis and Cronbach's alpha scores) are available from the authors on request.

Figure 4.1: Personality Traits and Ideology in Switzerland



Note: The plot is based on Table A.12 (M1) in the Appendix. It shows the regression coefficients (dots) and the 90% confidence interval (horizontal lines). The outcome variable "ideology" is coded as follows: 0 = left, 10 = right.

spectrum might also be attractive to open-minded persons. This could be one explanation for a less clear-cut link between openness to experience and ideology in Switzerland than in other countries.

In a second step, we test whether a vivid direct democracy is able to create an informational environment in which the effects of personality are strengthened or brought to light (see M2-M7 in Table A.12). In fact, direct democracy only moderates the link between neuroticism and political ideology in the expected direction. From a theoretical perspective, neuroticism is expected to be negatively related to ideology. As the findings show, this is only the case in the context of a vivid direct democracy (see M6 in Table A.12). Within this context, individuals scoring high on neuroticism learn that left-wing ideologies satisfy

their psychological needs in terms of social security and protection. In a fully controlled model, which includes all interaction effects, the interaction effect between neuroticism and direct democracy even falls short of significance (see M6 in Table A.12).

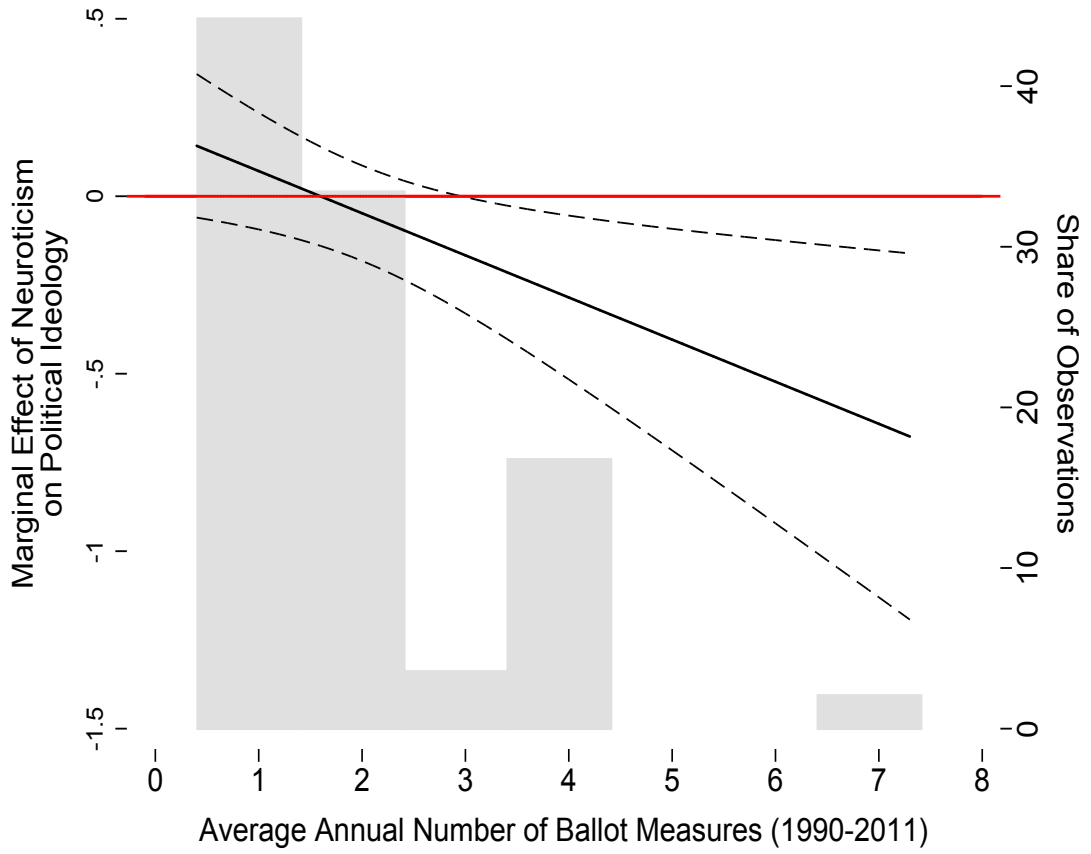
In our final analytical step, we examine whether the moderating effect of direct democracy only works within the 'limits of civic training'. That is, we test if it varies across different educational strata. Theoretically, it is reasonable to assume that only educated citizens will receive the information induced by direct democracy and will thereby learn, which ideological position resonates their personality. We examine this three-way interaction between personality, education and direct democracy by estimating separate models for two educational strata (primary/secondary education vs. tertiary education).[47] If only individuals with primary and secondary education are taken into account (see Table A.13 in the Appendix), the direct effect of conscientiousness is confirmed. The interaction between neuroticism and direct democracy can, however, not be found for the subsample of individual with primary and secondary education. This indicates that higher education seems to be a prerequisite to benefit from the informational context a vivid direct democracy creates.

This finding is fostered by the analysis for the subsample of individuals with tertiary education (see Table A.14 in the Appendix). Within this subsample, a negative direct effect of openness to experience and a positive effect of conscientiousness are found. Furthermore, direct democracy becomes effective as an informational context for highly educated citizens. In the separate models, the effects of openness to experience, extraversion and neuroticism are significantly moderated by the average annual number of cantonal ballot measures. In the fully controlled model, only the significant interaction of neuroticism and direct democracy persists (see M20 in Table A.14). Figure 4.2 graphically illustrates this result. It shows that the negative relationship between neuroticism and ideology, which is theoretically expected, is insignificant in contexts with a low frequency of ballot measures. Only in cantons, where on average more than three ballot measures take place per year, the expected relationship becomes significant. Against the background of our theoretical reasoning, we interpret this as a consequence of increasing political information and knowledge that enables individuals' to choose an ideological position that resonates their personality.

In order to further assess the robustness of the presented finding, we apply a manual jackknifing procedure to rule out that the moderating effect is driven by influential cases.

[47] Figure A.8 in the Appendix illustrates the distribution of the Big Five personality traits across the two educational strata. It shows that the traits are rather equally distributed. Thus, educational patterns in personality traits should not infer our results.

Figure 4.2: Personality Traits and Political Ideology within the Context of Direct Democracy (Subsample: Tertiary Education)



Note: The plot is based on Table A.14 (M20) in the Appendix. The graph shows the marginal effect of neuroticism on ideology (0 = left, 10 = right) depending on the average annual number of ballot measures in the canton. The analyzed subsample comprises of all observations with tertiary education.

Thus, we examine the impact single level-two cases (cantons) by excluding them one by one from the sample. Using this procedure, we reestimate Model M20 26 times. It reveals that the findings are vulnerable to the exclusion of the case of canton Zurich (see Figure A.9 in the Appendix for the coefficients of the interaction term when a canton is excluded).[48] Since the exclusion of single contexts comes with the exclusion of all observations nested in these contexts, statistical power might be lost (van der Meer et al., 2010). Therefore, it is reasonable to include level-two unit dummies for potentially influential cases instead of excluding them from the estimation. Following this advice by van der Meer et al. (2010), the presented interaction effect proves to be robust (see Table A.15 in the Appendix for detailed results).

4.6 Conclusion

Our study examines the link between personality traits and political ideology in Switzerland. We question the assumption typically made in this strand of research that individuals know which ideological position resonates theory psychological needs. Thereby, we follow the argument by Osborne and Sibley (2015) that civic training is a necessary prerequisite for this assumption to be met. We adapt their argument and expect direct democracy to create an environment of civic training and information. This should strengthen the relationships between personality traits and ideology. Moreover, we expect this moderating effect to be most relevant for those traits that are least related to political interest and knowledge. Finally, we expect the effects to be especially visible for highly educated persons that should benefit most from the informational environment created by direct democracy. Empirically, we test these expectations in a subnational comparison of the Swiss cantons using individual-level survey data and contextual data on the usage of direct democracy. Given the nested data structure, we fit hierarchical linear regression models. We are able to replicate the established finding that conscientious persons hold right-wing ideological positions. More importantly, we can show that the use of direct democracy in a canton significantly moderates the link between neuroticism and political ideology in the expected direction. These results become especially visible in a subsample of highly educated citizens.

What are the implications of these findings? We are able to show that direct democracy creates an informational environment that strengthens the relationship between neuroticism and political ideology. Splitting up the sample by educational levels shows that this effect originates from high educational strata. Thus, only highly educated citizens benefit

[48] The complete results of this manual jackknifing procedure are available from the author on request.

from the information induced by direct democracy. This supports the camp of skeptics against overall educative effects of direct democracy (Childers and Binder, 2012; Donovan et al., 2009; Dyck and Lascher, 2009; Dyck and Seabrook, 2010; Mendelsohn and Cutler, 2000; Seabrook et al., 2015). However, whether direct democracy is really able to create an informational context might not only depend on the frequency of ballot measures, but also on the concrete context of the vote. There is evidence that the strength and nature of campaign effects in Switzerland differ across votes Sciarini and Tresch (2011). Thus, further research should include a more nuanced measure of direct democracy. Furthermore, a next step on the research agenda could be an explicit test of the theoretical mechanisms proposed in this paper. We assume that increased political information and knowledge in direct democratic contexts causes the interaction effect. In order to test this mechanism questions capturing policy-related information and knowledge would be necessary. The standard questions on political knowledge might be too superficial for this. Moreover, it is unclear why direct democracy is not able to moderate the effects of extraversion and agreeableness. Two post-hoc explanations should be addressed by future analyses. First, the link between extraversion and ideological position might differ depending on the meaning of left and right people have in mind (cultural vs. economic issues). Thus, homogeneous effects might explain the overall null-finding for extraversion. Second, with regard to agreeableness it is possible that individuals do not at all receive information induced by direct democracy. Agreeable persons show high levels of conflict avoidance and, therefore, it is might be reasonable to assume that they do not pay attention to the political arena and completely withdraw from it. These two explanations, however, need to be verified by future studies. Another promising pathway for research on personality and ideology is the use of experimental designs. This would be a way to directly test whether the provision of information on the substantial meaning of left and right makes individuals' choose ideological positions that better resonate their personality.

Despite the discussed limitations, our study shows that it is necessary to conduct more fine-grained analyses in the field of personality and politics. Just as Hibbing et al. (2011, 620) state, "the question is no longer whether personality matters but how exactly it matters." Thus, future research should turn to the assumptions made in this literature and try to disentangle the mechanisms at work.

5 Personality Traits and Attitudes toward Equal Opportunities for Immigrants in the Context of Diversity

Abstract

The paper analyzes the link between personality traits and attitudes of Swiss citizens toward equal opportunities for immigrants. In particular, we examine the extent to which this relationship is moderated by the socio-structural context. We test the assumption that the direct links between personality traits and attitudes toward equal opportunities are strengthened by perceived ethnic diversity. Based on our empirical analyses, we are able to replicate central findings of the research on personality traits and attitudes toward immigrants for the Swiss context. While openness toward experience and agreeableness are positively related to a preference for equal opportunities, conscientiousness is negatively linked to these attitudes. Furthermore, our results reveal that the link between conscientiousness and attitudes toward equal opportunities is significantly moderated by the perceived share of foreigners in the neighborhood. This finding is especially relevant for future research on the effects of personality traits.

Note: This chapter is identical to an article, which I co-authored with Maya Ackermann. It was published as Ackermann and Ackermann (2015). First and foremost, my gratitude goes to my co-author Maya Ackermann.

Acknowledgments: An earlier version of the article was presented at the 72^{nd} Annual Conference of the Midwest Political Science Association (MPSA) 2014 in Chicago, US. We are grateful to the participants in the workshop and the three anonymous referees for their very helpful comments and suggestions. Also, we would like to thank Jennifer Shore for linguistic assistance in preparing the manuscript. Errors remain our own.

5.1 Introduction

Immigration and increasing diversity is one of the most important challenges for European societies these days. Since the second half of the 20^{th} century almost all West European countries have to cope with a new wave of increased migration (Koopmans et al., 2005). Not only is it relevant to study how policy-makers deal with this challenge, but also it is highly important to scrutinize societies' attitudes toward migration issues. In order to develop successful immigration policies, it is necessary to understand how the majority society thinks about migration issues, which factors influence these attitudes and especially under what circumstances people favor immigration and the equality of rights. No surprise, the study of public opinion toward migration issues is an important field in the social sciences (Hainmueller and Hopkins, 2014). While socio-economic and group-related explanations still dominate the debate, scholars have just recently shown a renewed interest in the psychological underpinnings of attitudes toward migration issues (cf. Dinesen et al., 2016; Freitag and Rapp, 2015; Gallego and Pardos-Prado, 2014; Vecchione et al., 2012). These studies focus on the role of personality traits conceptualized by the Five Factor Model ("Big Five").[49] Building on this strand of research, we examine the link between personality traits and attitudes toward equal opportunities for immigrants and the moderating role of perceived neighborhood diversity in Switzerland.

The contribution we make in this paper is threefold. First, we test the developed arguments regarding the relationship between the Big Five personality traits and attitudes toward immigrants for a different context. Gallego and Pardos-Prado (2014) have been the first to study this link comprehensively. Their paper, which examines the Dutch case, constitutes the "first step in this research agenda" (Gallego and Pardos-Prado, 2014, 81) and calls explicitly for replications in other countries. We follow this call by studying the Swiss case. Although our outcome variable measures only one aspect of attitudes toward immigrants, that is attitudes toward equal opportunities for immigrants, we provide further empirical evidence and help to evaluate former results.

For different reasons, and this is our second contribution, it is highly relevant to examine the formation of attitudes toward migration issues in Switzerland. Historically speaking,

[49] It is a "renewed interest" in the psychological basis of attitudes toward immigrants because social scientists have cared about them before (see e.g. Adorno et al., 1950; Altemeyer, 1981; Sidanius and Pratto, 1993). Within the last decades, the research field has experienced a revival which is closely connected to the establishment of the Five Factor Model. Some of the studies of this new wave focus on attitudes closely related to attitudes toward immigrants: Ekehammar et al. (2004) as well as Sibley and Duckitt (2008) study the effect of the Big Five on racial prejudice. Leeson and Heaven (1999) use the Big Five to explain attitudes such as racism. Flynn (2005) examines the effect of openness, one of the Big Five personality traits, on interracial attitudes.

Switzerland has experienced several waves of immigration and different policies to regulate it (Ruedin et al., 2015). Since 1980, immigration is steadily increasing; 23.8 percent of the population had a foreign citizenship in 2013 (Bundesamt für Statistik, 2014a,b). Compared to other developed countries, this is one of the highest rates (OECD, 2014). No surprise, migration issues are pivotal to politics and the society as a whole and have often been subject to popular votes. The latest example is the popular initiative in 2014 on the restriction of immigration which shows that this topic remains highly relevant.[50] In this vein, many scientists have searched for factors which could explain individual attitudes toward immigration or immigrants in Switzerland (Ackermann and Freitag, 2015b; Cattacin et al., 2006; Freitag and Rapp, 2013; Giugni and Morariu, 2010; Helbling, 2011; Pecoraro and Ruedin, 2016; Ruedin et al., 2015; Stolz, 1998, 2001; Vatter et al., 2014). None of these studies, however, scrutinized the link between personality traits and attitudes toward immigrants in Switzerland. A notable exception is a recent study of Freitag and Rapp (2015) that examines the role of personality traits for political tolerance. This outcome variable, however, differs significantly from ours because it explicitly focuses on the overcoming of anti-immigrant attitudes.

Third and most importantly, we go beyond the study of direct links between personality traits and attitudes toward immigrants. We scrutinize the role of perceived contextual diversity as a situational factor which might moderate the effect of the Big Five personality traits. This is the main contribution of our paper to the existing literature. There are good reasons to assume that the effects of personality on attitudes are contingent on the context the individuals live in. Nevertheless, only few studies have considered the interplay between personality and context in explaining political behavior and attitudes (Dinesen et al., 2016; Gerber et al., 2010, 2012a; Mondak et al., 2010; Schoen and Steinbrecher, 2013). We add to this and present a framework differing from the study by Dinesen et al. (2016) which also looks at attitudes toward immigrants. While they use cultural and economic threat conceptualized by the skill-level and the country of origin of the migrants as situational factor we examine the role of perceived contextual diversity. From other studies in the field, contextual diversity is known to be an important contextual factor (Ceobanu and Escandell, 2008; Markaki and Longhi, 2013; McLaren, 2003; Quillian, 1995; Scheepers et al., 2002; Schneider, 2008; Semyonov et al., 2006; Wagner et al., 2006). Furthermore, we argue that it is this perceived contextual diversity which alters the link between personality traits and attitudes toward immigrants. We assume that depending on the degree of diversity the effects of the Big Five personality traits might be more or less pronounced.

[50] The federal popular initiative "against mass immigration" was launched by the Swiss People's Party (SVP) and aims ostensibly at reducing immigration by means of quotas. In February 2014 the initiative was successfully accepted by 50.3 percent of the Swiss eligible voters.

Dinesen et al. (2016) interpret the interaction vice versa arguing that personality traits moderate the effect of threat on attitudes toward immigrants.[51]

We examine survey data containing information on more than 1100 Swiss citizens and test our argument by estimating hierarchical regression models with random intercepts, random slopes, and single-level interactions. In line with our hypotheses, the results show that openness to experience and agreeableness are positively linked with the support for equal opportunities for immigrants. In contrast, conscientiousness is negatively linked to the approval of equal opportunities. This effect however is not universal but dependent on the context. It is significantly moderated by self-reported ethnic diversity in the neighborhood: in homogeneous contexts a negative link between conscientiousness and the approval of equal opportunities can be found, whereas the effect is not distinguishable from zero in diverse contexts.

The paper is structured as follows: In the first section, we introduce the Five Factor Model as conceptualization of personality traits. Thereafter, we present our theoretical framework regarding the direct link between personality traits and attitudes toward equal opportunities for immigrants as well as the moderating effect of contextual diversity. In the following section, we elaborate on the data and the statistical methods. We then discuss the results of the empirical analysis before concluding with a summary and critical evaluation of the major findings.

5.2 The Five Factor Model of Personality

According to Caprara and Vecchione (2013, 24), "[personality] can be thought of as a dynamic system of psychological structures and processes that mediates the relationship between the individual and the environment and accounts for what a person is and may become". Within this broad definition of personality, traits are seen as a main component of psychological structures, especially for the explanation of political behavior and attitudes (Caprara and Vecchione, 2013, 26). Traits are defined as "relatively enduring patterns of thoughts, feelings, and actions" which characterize individuals, are measurable in a quantitative way and consistent over situations (McCrae and Costa, 2008, 160). Within the last decades, the Big Five have established themselves as a "general taxonomy of personality traits" (John et al., 2008). The five personality traits, openness to experience, conscientiousness, extraversion, agreeableness, and neuroticism, are considered to be the basic units of personality (Cottam et al., 2010; Winter, 2003). Their stability over different cultural

[51] Of course, interaction effects are symmetric by nature (Berry et al., 2012). Regarding the theoretical reasoning it is however important which factor is conceptualized as the moderating one.

and linguistic areas indicates "that they capture a human universal" (Gallego and Oberski, 2012, 427). About 50 percent of the variation in personality traits can be attributed to genetic effects while the remaining variance is due to non-shared environmental effects (Bouchard, 2004, 149; Krueger and Johnson, 2008, 280ff.). Therefore, personality traits might also change during the life course (Specht et al., 2011, 2014a). The stability of personality traits over situations has been subject to a considerable debate (Eysenck, 1944; Mischel, 1968). Meanwhile, the prevailing role of person and situation is acknowledged (Funder, 2008): Even though behavior might vary over situations, underlying traits might cause these behavioral patterns (Shoda et al., 1994). For instance, an extroverted person might behave differently in two situations but he or she will be more outgoing in each situation than an introverted person. We will dig deeper into this discussion when it comes to the role of contexts in our theoretical framework. Finally, personality traits should be distinguished from abstract values or general beliefs. Values and beliefs express "what people consider important" (Roccas et al., 2002, 790) and manifest themselves in object-specific attitudes. Values and beliefs are assumed to mediate the link between personality traits and attitudes (see Olver and Mooradian, 2003; Roccas et al., 2002).

5.3 Personality Traits and Attitudes toward Equal Opportunities for Immigrants

To begin with, we formulate our expectations regarding the direct link between the Big Five personality traits and attitudes toward equal opportunities for immigrants. The dimension of openness to experience describes the intellectual and aesthetic capacities of a person as well as his or her attraction to new experiences (Mondak, 2010, 48). People scoring high on openness to experience are assumed to be creative, curious, imaginative, culturally interested, original, nonconforming, and to value intellectual matters (McCrae and Costa, 2003; Mondak and Halperin, 2008). They prefer liberalism, diversity, alternative lifestyles, and are less prone to stereotypical thinking (Alford and Hibbing, 2007; Caprara et al., 1999; Carney et al., 2008; Cooper et al., 2013; Dinesen et al., 2016; Flynn, 2005; Gallego and Pardos-Prado, 2014; Mondak and Halperin, 2008; Schoen and Schumann, 2007; Sibley and Duckitt, 2008). Especially due to their liberal values, we expect open persons to be in favor of equal opportunities for immigrants.

H1: The higher a person's score of openness to experience, the more he/she is in favor of equal opportunities for immigrants.

High levels of conscientiousness characterize people who work efficiently and diligently, who are organized, productive, thorough, ambitious, dutiful, responsible, reliable, and who have a need for structure (Gerber et al., 2011a, 2012b; McCrae and Costa, 2003; Mondak, 2010; Mondak and Halperin, 2008). Conscientious individuals adhere to conservative and traditional values (Alford and Hibbing, 2007; Caprara et al., 1999; Carney et al., 2008; Cooper et al., 2013; Dinesen et al., 2016; Mondak, 2010; Mondak and Halperin, 2008; Schoen and Schumann, 2007). For a person scoring high on conscientiousness equal opportunities for immigrants might carry the danger of a destabilization of the existing social order and value system. Subsequently, we expect conscientiousness to be negatively linked to one's attitudes toward equal opportunities for immigrants.

H2: The higher a person's score of conscientiousness, the less he/she is in favor of equal opportunities for immigrants.

Agreeableness is a trait referring to the way a person interacts with others (Mondak, 2010). Agreeable persons are trustful, cooperative, warm, compassionate, and kind; they avoid conflicts and are eager to cooperate (Gerber et al., 2011a; McCrae and Costa, 2003). They hold liberal values, favor liberal policies, and reject prejudices (Carney et al., 2008; Dinesen et al., 2016; Gallego and Pardos-Prado, 2014; Schoen and Schumann, 2007; Sibley and Duckitt, 2008; Vecchione and Caprara, 2009). Especially due to their compassionate and warm nature agreeable persons should favor equal opportunities for immigrants.

H3: The higher a person's score of agreeableness, the more he/she is in favor of equal opportunities for immigrants.

Extroverted people are described as outgoing, talkative, and sociable (Mondak, 2010; Mondak and Halperin, 2008). Existing research provides us with few clues regarding the link between extraversion and attitudes toward immigrants (Dinesen et al., 2016; Gallego and Pardos-Prado, 2014; Sibley and Duckitt, 2008). We argue that due to their sociability, extroverted persons should have a positive attitude toward foreigners in their country and favor equal opportunities for immigrants.

H4: The higher a person's score of extraversion, the more he/she is in favor of equal opportunities for immigrants.

Individuals scoring high on neuroticism easily become anxious, nervous, or troubled (Mondak, 2010). Comparable to extraversion, the literature is ambiguous regarding the consequences of neuroticism on attitudes toward immigration (Dinesen et al., 2016; Gallego and Pardos-Prado, 2014; Sibley and Duckitt, 2008). On the other hand, research on tolerance found that neurotic persons are more likely to be intolerant toward foreigners because they see them as a threat (Marcus et al., 1995, 164f.). We therefore expect people scoring high on neuroticism to be skeptical of equal opportunities for immigrants.

H5: The higher a person?s score of neuroticism, the less he/she is in favor of equal opportunities for immigrants.

5.4 The Moderating Role of Contexts

As we have already mentioned, individual attitudes and behavior are supposed to be influenced by both, person and situation (Funder, 2008). Situations or contexts (which is the more common expression in political science research) are able to affect individual behavior by structuring the flow of information (Books and Prysby, 1991, 50). Books and Prysby (1991, 52) describe the emergence of context effects as follows: "Contextual effects occur when some aspects of the community in which a person lives systematically alters the flow and meaning of the information he receives, leading him to behave differently in that context than he would in another." This does not only hold for the community but also for other contexts, such as the neighborhood. In small-scale contexts like the neighborhood contextual effects are even more likely to emerge (Dinesen and Sønderskov, 2015). Practically, this means that a contextual factor, for instance the ethnic composition of the context, might affect the information people gain from observations or personal interactions. These contextually patterned pieces of information change the meaning of political issues, e.g. migration issues, and thereby influence people's attitudes and behavior: "Thus, otherwise very similar people in different contexts should be expected to behave differently, since the information base from which they work will be significantly divergent" (Books and Prysby, 1991, 63). By changing the meaning of a political issue contextual factors alter the link between personality traits and attitudes toward this very political issue (Gerber et al., 2010, 112). This corresponds to what Mondak (2010, 90) states, when he highlights the importance of context in personality research: "variation in people's psychological dispositions leads them to respond differently when exposed to common

environmental stimuli, and, correspondingly, [...] the expression of personality traits will vary by situation".[52]

Drawing on former research, ethnic diversity is supposed to be a relevant contextual factor with regard to attitudes toward immigrants (Ceobanu and Escandell, 2008; Markaki and Longhi, 2013; McLaren, 2003; Quillian, 1995; Scheepers et al., 2002; Schneider, 2008; Semyonov et al., 2006; Wagner et al., 2006). We argue that this contextual or situational factor is able to alter the expression of personality traits regarding attitudes toward equal opportunities for immigrants. More precisely, we assume that two individuals, who live in different neighborhoods, might have different attitudes toward immigrants although they have similar psychological dispositions.

Our main argument is that the links between personality traits and attitudes toward immigrants will be amplified by ethnic diversity in the neighborhood context. The context works as a catalyst for the effects of the Big Five personality traits. In order to develop a theoretical argumentation regarding the underlying mechanisms of this amplification, we build on socio-psychological inter-group theories. We are not going to test these inter-group theories comprehensively; rather we use them as support for our reasoning. Generally speaking, two theoretical mechanisms which might catalyze the personality effects can be distinguished. One mechanism is provided by contact theory, which has a positive outlook on ethnic diversity. It argues that ethnic diversity increases the probability of coming into contact with immigrants. This exposure to the values and lifestyles of the out-group might help to overcome existing prejudices and to develop positive attitudes toward immigrants and immigration (Allport, 1954; Pettigrew, 1998). We argue that the mechanism of the contact theory is especially relevant for people scoring high on openness to experience, agreeableness, and extraversion. Living in ethnically diverse neighborhoods, open persons will seek out contact with immigrants because they are keen to learn about their values, culture and lifestyle. Thereby the positive attitude of open persons toward equal opportunities for immigrants will be strengthened. Agreeable individuals who live in diverse neighborhoods will try to establish good relationships with their fellow residents. Through these encounters, ethnic diversity should foster their positive attitude toward equal opportunities for immigrants. Finally, people scoring high on extraversion who are sociable and outgoing should be more likely to be in contact with their neighbors than introverted persons. Thus, an ethnically diverse neighborhood should bring them into contact with people of different nationalities. Prejudices can thereby be reduced and positive relationships might be established which will lead to more positive attitudes toward equal

[52] McCrae and Costa (2008, 165) also emphasize the importance of external influence in their Five Factor Theory, saying that "[...] social and physical environment interacts with personality dispositions to shape characteristic adaptations [...]".

opportunities for immigrants. To sum up, we can formulate the following interaction hypotheses building on the logic of contact theory:

H6: The higher the perceived ethnic diversity in the neighborhood, the more positive is the link between openness to experience and attitudes in favor of equal opportunities for immigrants.

H7: The higher the perceived ethnic diversity in the neighborhood, the more positive is the link between agreeableness and attitudes in favor of equal opportunities for immigrants.

H8: The higher the perceived ethnic diversity in the neighborhood, the more positive is the link between extraversion and attitudes in favor of equal opportunities for immigrants.

Conflict theory provides a second theoretical mechanism to explain the contextual effect of diversity (Blumer, 1958). It argues that conflict occurs when members of the dominant group of a society (in-group) perceive immigrants (out-group) as a threat in economic, political, or cultural terms (Billiet et al., 2014; Jackson et al., 2001; Mayda, 2006; Sides and Citrin, 2007). Their fear of a loss of power or resources or of a destruction of values evokes or fosters anti-immigrant attitudes. This mechanism of conflict theory should especially apply to people scoring high on conscientiousness and neuroticism. Living in a diverse neighborhood, people are directly confronted with immigrants, their culture and values. This might strengthen the perception of conscientious persons that immigration constitutes a danger to the value system and the social order of the country. Thus, diversity is assumed to amplify the negative link between conscientiousness and attitudes toward immigrants. Neurotic individuals may also feel threatened by the presence of a large out-group, as conflict theory predicts, and therefore the negative link between neuroticism and positive attitudes toward immigrants should also be enforced by neighborhood diversity. In sum, building on the theoretical mechanisms of conflict theory we can formulate the following interaction hypothesis:

H9: The higher the perceived ethnic diversity in the neighborhood, the more negative is the link between conscientiousness and attitudes in favor of equal opportunities for immigrants.

H10: The higher the perceived ethnic diversity in the neighborhood, the more negative is the link between neuroticism and attitudes in favor of equal opportunities for immigrants.

5.5 Data and Method

In this paper, we take advantage of nationwide survey data ("Politics and Society in Switzerland 2012") that was collected in Switzerland in fall 2012 and contains information on respondents' political attitudes, political behavior, psychological dispositions, and socio-demographic background. A stratified sampling method based on the language regions was applied in order to obtain a representative sample of the Swiss population. Within each stratum, interviewees were randomly selected and questioned by means of computer assisted telephone interviews (CATI). The total response rate was 21.9 percent and the total number of observations was 1259 (Longchamp et al., 2012, 10). Since we treat attitudes toward immigrants, we focus solely on Swiss citizens (cf. Sarrasin et al., 2015). Due to this restriction the number of valid cases drops to 1157.

A survey item examining one's attitude toward the equality of opportunities between Swiss citizens and immigrants will serve as our dependent variable reported below. It is measured on an 11-point scale where 0 indicates a preference for better opportunities for Swiss citizens and 10 indicates a preference for equal opportunities for Swiss citizens and immigrants. We understand this item as one possible manifestation of attitudes toward immigrants (Pecoraro and Ruedin, 2016).[53] Higher scores on this scale are understood to reflect favorable attitudes toward immigrants.

Personality, which is our main explanatory variable, is measured by the Big Five personality traits. Each of the five personality dimensions is captured by three survey items. The respondents were asked to assess their own personality using short sentences with frequently used adjectives of human personality. They could rate their own personality on an 11-point scale ranging from 0 (statement is not applicable) to 10 (statement is completely applicable). This instrument is called the BFI-S and is a short version of the "Big Five Inventory" (BFI). Based on several pretests in the course of a German Socio-Economic Panel (SOEP), Gerlitz and Schupp (2005) are able to show that this is a valid short instrument to operationalize the Big Five personality traits in surveys. By conducting an exploratory factor analysis for all 15 items together ourselves, we too come to the same conclusion and are able to ascertain that the Five Factor structure also applies to Switzerland (for details

[53] A confirmatory factor analysis on the basis of the Swiss Electoral Study data 2011 (SELECTS 2011) has revealed that attitudes toward equal opportunities load on the same latent dimension of attitudes toward immigrants as perceived cultural, economic, and criminal threat induced by immigration and the opinion on the pollution of the environment and overcrowding of public space due to increasing immigration. The Root Mean Square Error of Approximation (RMSEA) comes to 0.033 and the Comparative Fit Index (CFI) is 0.995, which indicates that the estimated model provides a good model fit (Brown, 2006, 84f.). Hence, we can show that our dependent variable is clearly one possible manifestation of attitudes toward immigrants.

see Table A.16 in the Appendix).[54] The factor analysis provides factor scores for each of the five personality traits which we rescale to a range from 0 (trait is less pronounced) to 1 (trait is particularly pronounced).[55] These rescaled factor scores are used as explanatory variables in the regression analysis.[56]

In order to take account of the crucial role of the context we add perceived ethnic diversity in the neighborhood to our empirical analyses (see Baldassarri and Diani, 2007; Strabac, 2011). We measure ethnic diversity in the neighborhood by a categorical variable that refers to the self-reported percentage of people with a different nationality living in the neighborhood.[57] The variable ranges from 0 percent coded as 0 to 100 percent coded as 6. The most important advantage of measuring diversity in a small-scale context is that it is within this type of proximate setting where attitudes develop and behavior takes place. Small-scale contexts are thought to be the most relevant for shaping attitudes and behavior (Amir, 1969; Bakker and Dekker, 2012; Dinesen and Sønderskov, 2015). However, such a small-scale context also bears a high risk of self-selection. For example, open-minded people might be more likely to live in an ethnically diverse neighborhood because they are interested in getting to know new cultures and people. Furthermore, the self-reported diversity in the neighborhood might be overestimated and potentially correlated with other variables (Hooghe and de Vroome, 2015; Semyonov et al., 2004; Strabac, 2011). In sum, these pitfalls do not outbalance the advantage of closeness when considering a small-scale context.

As we have outlined above, the aim of this study is to investigate the relationship between personality traits and attitudes toward immigrants and how this is contingent on the context. We are therefore not interested in a comprehensive explanation of the foundations of

[54] As the data generally follow a normal distribution, we have applied maximum likelihood as a method of factor extraction. Since the survey items do not exclusively load on one factor, we use promax rotation to allow for correlation between the extracted factors (see Costello and Osborne, 2005). Analyses not documented here show the following Cronbach's alpha scores for openness to experience (0.59), agreeableness (0.43), conscientiousness (0.55), extraversion (0.56), and neuroticism (0.57). It has to be noted, that the three items per trait cover a "substantial bandwidth" of various facets of one personality dimension and therefore are rather heterogeneous (John et al., 2008, 127). Moreover, a confirmatory factor analysis confirms our results of a clear Five Factor structure and produces acceptable fit measures (RMSE = 0.08, SRMR = 0.06).

[55] Following Verhulst et al. (2012, 45), factor scores are thought to be less prone to measurement error and should therefore be preferred to constructing additive scales or using individual items as measurement for personality traits. Furthermore, rescaling the scores to a value range of 0 to 1 allows a more substantive interpretation of our results.

[56] In all our regression models the five traits are used simultaneously, as it is customary when using the Big Five personality traits as explanatory factors. The highest correlation between them is r = 0.67 (conscientiousness and agreeableness). Thus, multicollinearity is not presumed to be a problem.

[57] According to Schaeffer (2014, 35ff.) nationality might be seen as an ethnic category. In the European context most of the time the term *ethnic diversity* is used to describe a categorization based on nationality (Schaeffer, 2014, 51).

attitudes toward immigrants in general. Thus, we will only control for factors that potentially confound this very relationship (Jaccard and Jacoby, 2010, 141ff.). On the individual level we include sex, age, and education; on the cantonal level we control for language region and urbanization. Sex is measured as dichotomous variable, age as continuous, and education as categorical. Language region is measured as a dummy variable for German speaking cantons and urbanization is the percentage of people living in urban areas. For detailed explanations of the measurement and some descriptive statistics on the variables used in the models see Table A.17 in the Appendix.

Our empirical analyses follow a stepwise modeling strategy. First, we fit a simple hierarchical model with random intercepts to illustrate the direct link between personality traits and positive attitudes toward immigrants controlling for potential confounders.[58] In a second step, single-level interactions between perceived ethnic diversity and personality are reported in order to test our interaction hypotheses. To allow the models greater flexibility, we fit random slopes for each of the personality traits.

5.6 Empirical Findings

Figure 5.1 displays the regression coefficients of the Big Five personality factors on the attitude toward equal opportunities for Swiss citizens and immigrants (for detailed results of the regression analyses see Table A.18 in the Appendix). There is clear evidence of direct connections between personality and the granting of equal opportunities to immigrants. Three of the Big Five personality dimensions are correlated with a positive attitude toward immigrants when controlling for potential confounders. Individuals scoring high on openness indeed favor a country with equality of opportunity for all. Due to their open-minded and inquisitive nature, those people are interested in intercultural exchange and new experiences and therefore favor equal chances for Swiss and foreign residents. Moving from 0 to 1 on the scale of openness comes with a change of 1.31 points on an 11-point attitude scale controlling for the other four traits. Our findings on openness lend support to hypothesis H1 and correspond to the results of Dinesen et al. (2016) for the Danish case. Furthermore, agreeableness is significantly and positively linked to favorable attitudes toward immigrants. An increase from 0 to 1 on the scale of agreeableness corresponds to an increase of 1.61 points on the attitudes scale. This finding aligns with our theoretical expectation, as we assume equality and social inclusion to be fundamental principles

[58] Although we are interested in the individual level effects, we use multilevel models for these analyses. We thereby take into account that the individuals in our sample are nested within cantons and therefore are not independent. Furthermore, we have the opportunity to control for relevant contextual factors (language region and urbanization) that might blur the effect of personality on attitudes.

found with people scoring high on agreeableness. The positive link of agreeableness is in accordance with hypothesis H3 and with former studies for different countries (Dinesen et al., 2016; Gallego and Pardos-Prado, 2014). Moreover, and again consistent with our theoretical expectations, we find consciousness to be negatively related to the allocation of equal opportunities. Scoring highest on conscientiousness decreases the preference for equal opportunities by 5.08 points on an 11-point scale. This highly statistically significant relationship indicates that higher levels of consciousness are associated with conservatism and conformism and thus a preference for Swiss citizens with regard to opportunities. We argue that people scoring high on conscientiousness see immigration as a threat to traditional values, which is why they reject the idea of equal starting points for everyone in Switzerland. Again, this is consistent with hypothesis H2 and with former results for Denmark and the Netherlands (Dinesen et al., 2016; Gallego and Pardos-Prado, 2014). Neuroticism and extraversion appear to be distributed equally across the attitudinal spectrum. The negative effect of neuroticism falls just short of reaching statistical significance. Extraversion, on the other hand, is uncorrelated with attitudes toward immigrants. The missing link between extraversion and our dependent variable is in accordance with former findings regarding prejudice and attitudes toward immigrants (Dinesen et al., 2016; Gallego and Pardos-Prado, 2014; Sibley and Duckitt, 2008).[59]

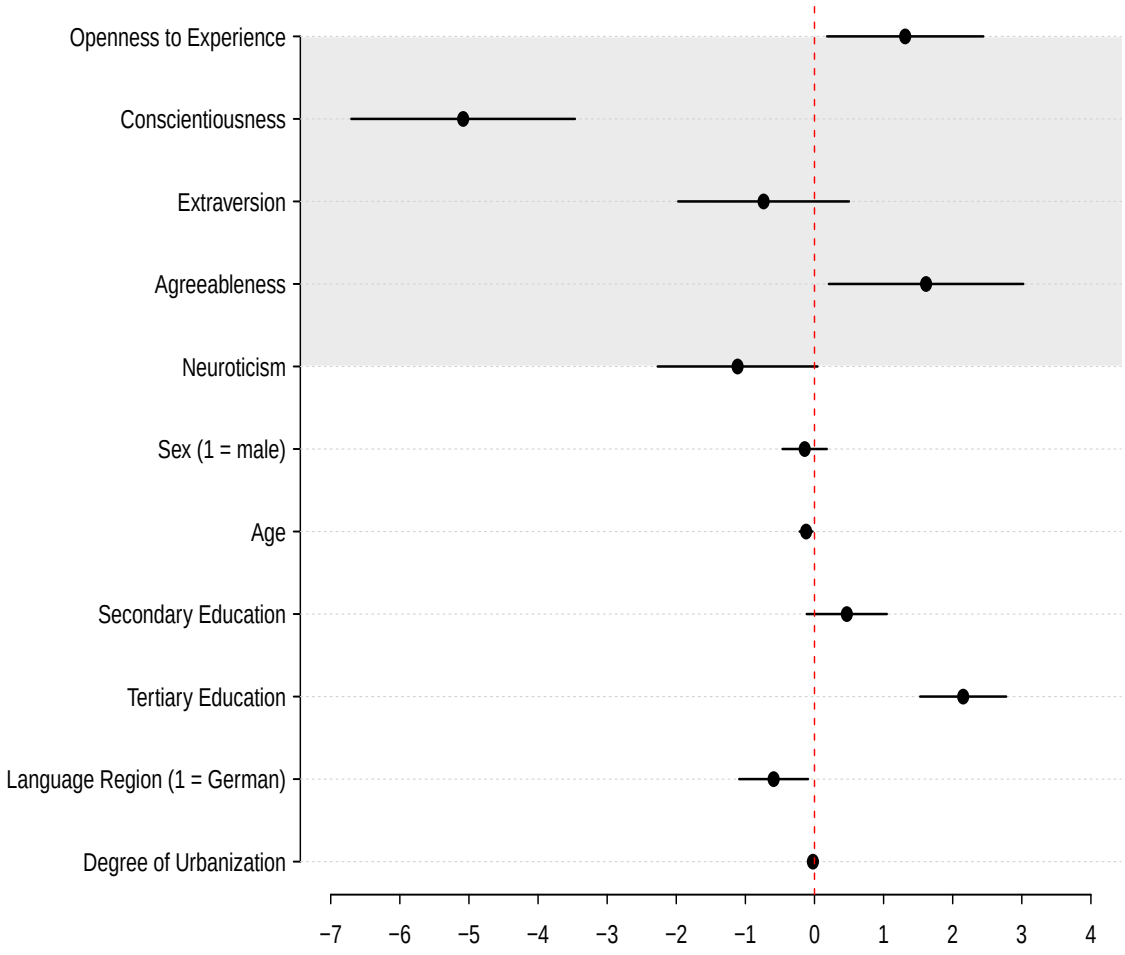
Overall, the results presented in Figure 5.1 are in accordance with previous research and follow an intuitive logic. An intellectual, open-minded, and trusting person has a more favorable view of immigrants and a conscientious, closed-minded, and easily frightened person is substantially less in favor of equal opportunities for everyone.[60] However, we go one step further and argue that there may be an interaction between the context and one's psychological disposition. According to our theoretical expectation, perceived ethnic diversity in the neighborhood is a context which might alter the effects of personality. That is, depending on the degree of diversity people are confronted with, the effect of their personality traits should develop differently.[61] Thus, different to the study of Dinesen et al. (2016) which looks at the moderating role of personality traits, we focus on the moderating

[59] Gallego and Pardos-Prado (2014) report a negative link between neuroticism and pro-immigrant attitudes whereas Dinesen et al. (2016) do not find this link in their fully specified model.

[60] One could argue that the influence of personality is strongly mediated by political ideology. However, further analyses reveal that ideology measured on a left-right scale only partially acts as a mediator variable: The effects of openness to experience, conscientiousness, and neuroticism remain - or in the case of neuroticism become - statistically significant (p-values: openness: 0.080, conscientiousness: 0.000, neuroticism: 0.037). The effect of agreeableness remains positive but falls short of statistical significance as soon as ideology is controlled for (p-value: 0.168). The results of these additional analyses are available from the authors upon request.

[61] Further analyses not reported in the paper show that the factor scores of the five personality traits are neither relevantly nor significantly correlated with the self-reported ethnic diversity in the neighborhood. Thus, we do not suspect any self-selection in certain neighborhoods based on personality traits.

Figure 5.1: Personality traits and attitudes toward equal opportunities for immigrants in Switzerland



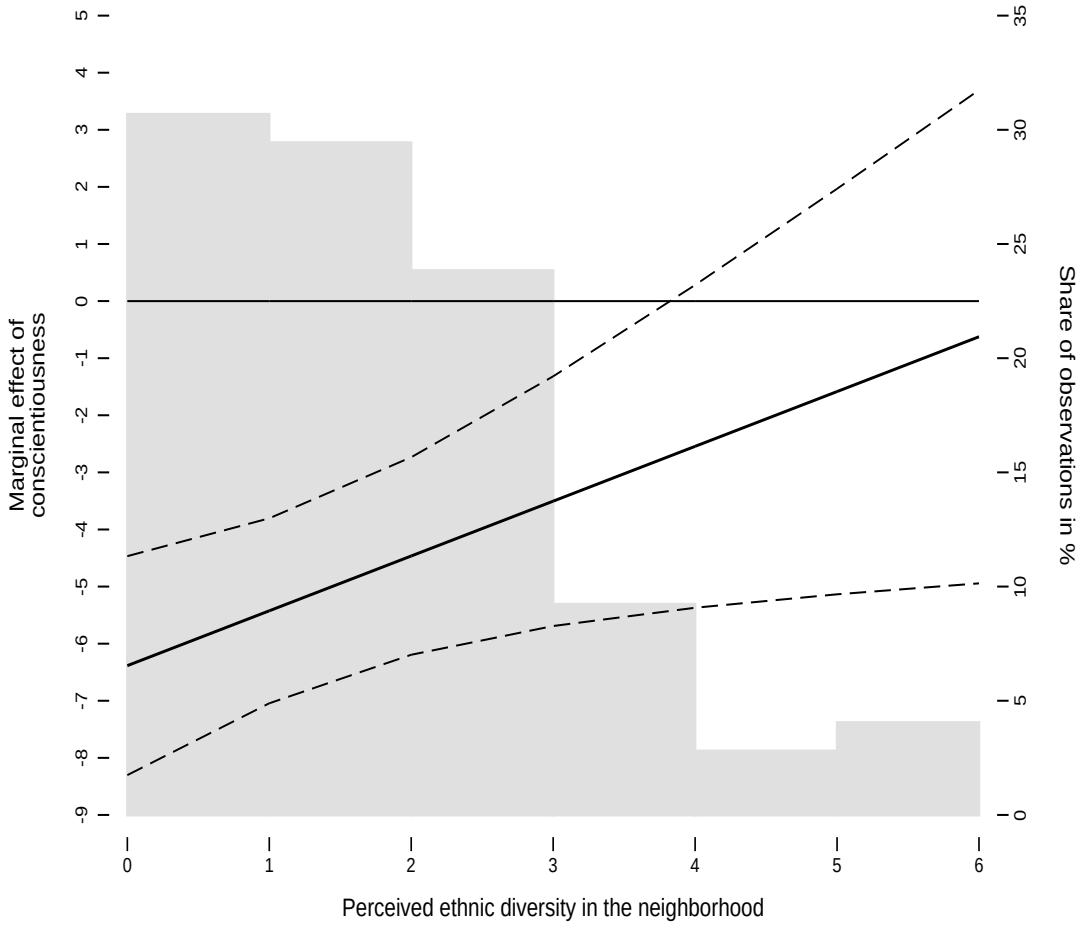
Note: The plot is based on Table A.18 in the Appendix. It shows the regression coefficients (dots) and the 90% confidence interval (horizontal lines).

influence of the context. This follows our line of argument that it is the context that channels the way how personality traits are expressed.

In order to test the moderating hypotheses empirically, we estimate hierarchical models including single-level interactions between the Big Five personality traits and the perceived ethnic diversity in the neighborhood. The results can be found in Table A.18 in the appendix. Figure 5.2 displays the graphical illustrations of the interaction effects between conscientiousness and self-reported ethnic diversity, which is the only significant interaction term. The graph illustrates how the relationship between conscientiousness and attitudes toward equal opportunities for immigrants changes depending on perceived ethnic diversity in the neighborhood. It shows that the interaction effect is significantly positive, while the direct effect of conscientiousness was significantly negative in our first model. Conditional on ethnic diversity, the marginal effect of conscientiousness is significantly negative when the estimated percentage of people with a different nationality in the neighborhood is 50 percent or below (categories 0 to 3). In neighborhoods where people estimate an existence of more than 50 percent non-Swiss the effect of conscientiousness falls short of statistical significance. Put differently, when people report more than a half of their neighbors to have a different nationality, the degree of conscientiousness is no longer linked to attitudes toward equal opportunities for immigrants.[62] Substantially, moving from the minimum of self-reported ethnic diversity to the maximum, the negative effect of conscientiousness is reduced from -6.3 to -0.65 on a scale from 0 to 10 for attitudes toward equality of opportunities. Thus, against our theoretical expectation formulated in hypothesis H9, the negative effect of conscientiousness is not strengthened by perceived ethnic diversity, but rather cancelled out. Only in homogeneous contexts the effect of conscientiousness is significantly negative. An explanation for this finding might be that in homogeneous contexts people do not receive any information that could possibly put their negative attitudes toward immigrants into perspective. Therefore, the negative effect of conscientiousness persists. Conscientious people living in diverse contexts, on the contrary, might see it as their duty to follow social norms of cultivating good relationships with their neighbors and may therefore interact with them on a regularly basis. In this way, they learn more about the immigrants and prejudices might be diminished. Thus, the mechanism suggested by contact theory comes into play. Moreover, it could be assumed that if people are exposed to diversity, they automatically receive more information about for-

[62] Furthermore, the histogram illustrates the frequency distribution of self-reported diversity in percentage. We see that around 60 percent of the people report no or only little ethnic diversity and only seven percent report a neighborhood with more than 50 percent immigrants. Thus, for the majority of the sample, namely for those people living in rather homogeneous neighborhoods, the link between conscientiousness and attitudes in favor of equal opportunities for immigrants is significantly negative.

Figure 5.2: Marginal effects of conscientiousness on the attitude toward equal opportunities for immigrants and the moderating contextual effect of perceived neighborhood diversity



Note: The plot is based on Model M2.2 in Table A.18 in the Appendix. The graph shows the effect of conscientiousness on the attitude toward equal opportunities for immigrants depending on self-reported ethnic diversity.

eigners living in the country. Subsequently, the effect of their conscientious predisposition weights less.

Taken together, the results show that people scoring high on conscientiousness are most likely to reject equal opportunities between Swiss and immigrants. Orderly, efficient, and systematic persons are more likely to argue for better opportunities for Swiss than their less conscientious counterparts. Interestingly, this relationship is however significantly moderated by perceived ethnic diversity in an individual's environment. In ethnically diverse contexts, highly conscientious people no longer differ from less conscientious people with regard to their attitudes toward the allocation of equal opportunities. The positive relationships between openness and agreeableness and attitudes in favor of equal opportunities for immigrants are however persistent across contexts with different degrees of ethnic diversity.

5.7 Conclusion

Investigating the psychological basis of attitudes toward equal opportunities for immigrants in Switzerland, the present paper contributes to the existing literature in three ways. First, we test established hypotheses regarding the direct link between the Big Five personality traits and attitudes toward immigrants for a new case. Second, using Switzerland as new case, we analyze a country where immigration issues are highly relevant and politicized. Third, and most importantly, we go beyond the study of direct relationships (see also Dinesen et al., 2016). We examine how the expression of personality traits might be channeled by the degree of ethnic diversity in the neighborhood.

The empirical analyses of Swiss survey data reveal several significant relationships between personality traits and attitudes toward immigrants. We find that people scoring high on openness to experience are consistently more likely to have a positive attitude toward equal opportunities for immigrants. On the contrary, conscientiousness is negatively correlated with positive attitudes toward immigrants. Furthermore, agreeableness is positively related to favorable attitudes toward equal opportunities for immigrants. These results lend support to former findings for different countries, such as the Netherlands (Gallego and Pardos-Prado, 2014) and Denmark (Dinesen et al., 2016). Moreover, we show that conscientiousness and perceived ethnic diversity in the context significantly and positively interact in the formation of attitudes toward immigrants in Switzerland. While the marginal effect of conscientiousness is significantly negative in homogeneous contexts, it becomes less negative and finally insignificant with increasing neighborhood diversity.

As they are described as dutiful, conscientious people might feel obliged to get in contact with their neighbors, thereby stereotypes and prejudice possibly decrease. Put into a broader context, diversity, as something often perceived as a challenge to modern societies, might actually help overcome negative attitudes, even when they have a deep-seeded psychological basis.

Besides the important contributions of the paper, its limitations should also be considered. First of all, our outcome variable only captures one aspect of attitudes toward immigrants, namely attitudes toward equal opportunities for immigrants. Thus, it is less encompassing than the variable used by Gallego and Pardos-Prado (2014) which includes different facets of these attitudes. Nevertheless, granting equal opportunities is a crucial aspect of attitudes toward immigrants in general. Even though the term opportunities might be economically connoted, it is not specified in the survey question and can also touch upon other spheres of life, such as educational and societal opportunities. Furthermore, our moderating variable is not an objective measure of diversity but represents the perceived ethnic diversity in the neighborhood. The main shortcoming of this measure is, as we have discussed before, that it might be biased due to other factors and probably overestimates diversity (Hooghe and de Vroome, 2015; Semyonov et al., 2004; Strabac, 2011). Moreover, using neighborhood as context entails the risk of self-selection. On the contrary, such a small-scale context offers a significant advantage because it captures the context which is especially relevant in shaping attitudes and behavior (Dinesen and Sønderskov, 2015). If we use objective measures of diversity for large scale contexts we can never be sure that an individual is really exposed to this diversity.

To conclude, our paper contributes to a research agenda which has just been established. In order to gain more certainty regarding the links between the Big Five personality traits and attitudes toward immigrants further studies examining different countries are necessary. Even more importantly future research in political psychology should concentrate on the interplay of personality traits and situational factors when it comes to the formation of political attitudes and political behavior. As Mondak (2010, 19) states "the greatest contributions of research on personality will involve identification of interactive relationship between personality traits and other sorts of predictor variables". Our study contributes to this research agenda and shows how a structural contextual factor, such as perceived ethnic diversity, might alter the link between personality traits and attitudes. Individuals hold certain predispositions in form of personality traits which cause regularities in their attitudes and behavioral patterns. Human beings are, however, social beings and as such, individuals do not develop an attitude or make any decision for action isolated from the context they find themselves in. Contexts and situations constitute the framework which

gives meaning to attitudes and behavior and thereby alters the way they are affected by dispositions. Therefore, personality researchers should feel encouraged to carefully think about the interaction between traits and any kind of contextual factors in shaping political attitudes and behavior.

6 Personality Traits and Attitudes toward an Open Society in the Context of Diversity

Abstract

The tension between openness and closedness is one of the most important cleavages in Swiss political debates. In the present article, we study the psychological foundations of attitudes regarding this issue. More precisely, we examine the link between personality and attitudes toward the degree of openness of Switzerland as a general stance toward the cultural, economic, and political alignment of the country. Personality is understood as a complex and multifaceted concept that forms the basis for consistent patterns of attitudes and behavior. We build on the Five Factor Theory to explain the link between personality traits, contextual factors, and political attitudes. Analyzing survey data from a random sample of Swiss citizens, we find clear evidence that personality traits affect political attitudes. Furthermore, we are able to demonstrate that the relationship between personality and attitudes toward the degree of openness of Switzerland is moderated by perceived ethnic diversity in the neighborhood.

Note: This chapter is identical to an article, which I co-authored with Maya Ackermann and Markus Freitag. It was published as Ackermann et al. (2016). First and foremost, my gratitude goes to my co-authors Maya Ackermann and Markus Freitag.

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6.1 Introduction

Over the last three decades, globalization and Europeanization have induced a trend for relatively closed political systems to open up and become more internationally integrated. Within most European countries, these transnational processes are accompanied by debates about the pros and cons of internationalization, referring to the weakening of the sovereign, autonomous nation-state and the creation of porous open borders. It is in this context that new right-wing populist parties, such as the United Kingdom Independence Party (UKIP), or the Party for Freedom (PVV) in the Netherlands are able to mobilize voters and fuel fears of foreign influence and sentiments against the opening of the country (Manatschal, 2015). Thus, citizens' attitudes on this question are crucial to electoral outcomes, policies and social peace. Scrutinizing the foundations of attitudes toward the degree of openness can help practitioners, researchers, and media commentators better understand the processes by which these effects result.

As a small country located in the heart of Europe, this holds especially for Switzerland, where more so than any other issue, the desired level of political, economic, and cultural openness has always held a central position in political debates (Bolliger, 2007; Bornschier, 2010; Brunner and Sciarini, 2002; Fischer et al., 2009; Freitag and Rapp, 2013; Katzenstein, 1985; Kriesi et al., 2005). Against this background, it is not startling that the cleavage of openness versus closedness became the most important line of conflict in the Swiss party system within the past years (Kriesi et al., 2006). This is well reflected by the rising number of ballot measures on immigration issues in the last decade.

To date, attitudes toward the openness of Switzerland are widely explained by socio-economic or political factors (Ackermann and Freitag, 2015b; Christin and Trechsel, 2002; Marquis and Sciarini, 1999; Sciarini and Tresch, 2009). It is here that this investigation finds its starting point: We are interested in the psychological basis of attitudes in general and how personality traits shape an individual's attitudes regarding the level of openness versus closedness of Switzerland in particular. In addition, we assume that ethnic diversity might be a relevant contextual factor that structures the influence of personality in the formation of attitudes toward the level of openness of the Swiss society.[63]

[63] We add another insight to the study of openness by evaluating the psychological basis of these attitudes. It is, however, by no means a new idea to bring predispositions and political attitudes together. Especially regarding the study of prejudice, there is a long tradition of considering its psychological foundations (Adorno et al., 1950; Altemeyer, 1981; Sibley and Duckitt, 2008; Sidanius and Pratto, 1993). More generally, Zaller (1992, 6) states that "every opinion is a marriage of information and predisposition" in his famous model on attitude formation.

We use the Five-Factor-Theory as a broad theoretical framework by arguing that openness judgments should be thought of as characteristic adaptations, which are the product of essential dispositional traits and environmental factors (McCrae and Costa, 2008). More precisely, we examine the relationships between dispositional personality traits (the Big Five) and attitudes toward openness and seek to demonstrate the importance of paying attention to individual dispositions, contexts, and their interactions. Political issues, for instance the degree of openness of a country, are thought to be stimuli to which people respond according to their personality. People understand these political stimuli differently depending on the context in which they live. Consequently, the link between personality traits and political attitudes toward these issues or stimuli will differ (Gerber et al., 2010, 112). As a highly visible facet of openness, the ethnical composition of the environment is assumed to be a contextual factor or situational trigger, which alters the meaning of openness and thus moderates the relationship between personality and attitudes toward openness.[64]

Empirically, we examine survey data containing information on more than 1100 Swiss citizens. We estimate hierarchical regression models with random intercepts and single-level interactions in order to test our arguments. As expected, the results show that personality traits affect attitudes toward the degree of openness of the country and demonstrate that the relationship between the Big Five traits and this policy attitude is significantly moderated by ethnic diversity in one's neighborhood.

The article is structured as follows: In the next section, we present our theoretical framework linking personality and political attitudes. In the third section, the data and the statistical methods are presented. Section four deals with the empirical results regarding the link between personality and attitudes toward the openness of Switzerland. The article concludes with a discussion of the major findings.

6.2 Attitudes toward the Openness of Switzerland and their Psychological Foundations

According to Koster (2008, 296), openness describes "[...] the extent to which [countries] take part in worldwide international flows and interactions [...]." These processes can have economic, social or cultural as well as political dimensions. Economic openness refers to international trade and the importance of it for the national economy, whereas social or

[64] Switzerland has experienced a substantial increase of the overall proportion of immigrants in the population in the last decades from a comparatively high percentage of 17.2 percent in 1970 to 22.5 percent in 2010 (a relative increase of about one third) (Brunner and Kuhn, 2014).

cultural openness covers global networking and especially international migration. Political openness describes the involvement of a country in international and supranational organizations, such as EU or NATO. Thus, openness is a rather broad concept, which includes at least three different facets.[65] While economic openness is a fairly uncontroversial issue in Switzerland, both the cultural and the political dimension are intensively debated. In the course of globalization, for example, the traditional class conflict has transformed into a question of openness versus tradition, which divides the winners and losers of globalization (Kriesi et al., 2006). By promoting an anti-European Union and anti-immigration ideological stance, the Swiss People's Party (SVP) has established itself as the strongest party in the Swiss political system and the most successful right-wing populist party in Europe. Furthermore, the importance of the question regarding the level of openness and closedness of the country is clearly underscored by popular votes dealing with this topic, such as the vote against "foreign infiltration and overpopulation" in the 1970s or the compulsory referendum on the accession to the European Economic Area (EEA) in 1992. Recent examples, like the ballot initiatives on the minaret ban (2009), the expulsion of criminal foreigners (2010 and 2016), and mass immigration (2014), show that the issue continues to be one of the most important topics in Swiss politics and reflects the traditional approach of Swiss immigration policies aimed at shielding "Swiss culture" from foreign influences (Manatschal, 2012).

While former approaches explaining the attitudes toward facets of openness such as the EU membership or immigration refer to socio-demographics, national identity, ideological orientation, political interest and knowledge, the economic situation, immigration rates or political polarization, we will emphasis the psychological basis of these attitudes. As a theoretical framework, we make use of the Five-Factor-Theory, which "[...] provides a framework in which to understand the development and operation of psychological mechanisms [...] and the behavior and experience of individual men and women" (McCrae and Costa, 2008, 176). As a comprehensive personality system, it includes basic tendencies and characteristic adaptations as key elements and describes how they are related. Char-

[65] Regrettably, although our data is rich regarding the Big Five traits in Switzerland, it does not include *specific* questions measuring attitudes toward the economic, political or cultural openness of the country. Therefore, to uncover the concrete meaning of our measurement of openness we refer to the "Measurement and Observation of Social Attitudes in Switzerland" (MOSAiCH) 2013 data set. While not containing items of personality, this survey provides the same question regarding the desired general level of openness of Switzerland as well as other questions regarding the desired development of immigration rates (cultural openness), the desired level of the import of goods and services (economic openness), and the attitudes toward the restraining power of international institutions for Swiss politics (political openness). Using factor analytic techniques (maximum likelihood is chosen as method of factor extraction) we find that these four items load on one factor and thus represent one latent concept, with immigration showing the highest factor loadings (detailed results are available on request). These findings support our view that the concept of openness is a rather broad one and comprises political, economic and cultural facets in equal measure.

acteristic adaptations are attitudes (such as the stance toward the degree of openness of Switzerland), which are affected by basic tendencies and external factors: "they are characteristic because they reflect the enduring psychological core of the individual, and they are adaptations because they help the individual fit into the ever-changing social environment" (McCrae and Costa, 2008, 164). Basic tendencies are understood as traits, which cannot be observed directly but inferred from behavior. Being the core components of one's personality, traits are found to be relatively stable over time and situations and to have a biological basis, as they are at least partly determined by one's genetic makeup (Bouchard, 2004, 149; Krueger and Johnson, 2008, 288ff.; McCrae and Costa, 2008, 162-164; Winter, 2003).[66] In psychology, five superior and abstract personality dimensions, the so-called Big Five, have established themselves as a "general taxonomy of personality traits" (John et al., 2008) to grasp the basic tendencies of a person.[67] This framework comprises five personality traits - openness to experience, agreeableness, conscientiousness, extraversion, and emotional stability - that emerge regardless of differences in cultures and languages, indicating "[...] they capture a human universal" (Gallego and Oberski, 2012, 427).

To begin, the dimension of openness to experience includes both the intellect and perceptiveness of a person, as well as the aesthetic capacities and intrinsic appeal to new experiences (Mondak et al., 2010, 48). People scoring high on openness to experience are creative, curious, imaginative, culturally interested, original, nonconformist, and value intellectual endeavors (McCrae and Costa, 2003; Mondak and Halperin, 2008). Thus, open-minded people are interested in new contacts and cultural experiences and therefore less prone to stereotypes and fear of cultural diversity (Ackermann and Ackermann, 2015; Dinesen et al., 2016; Gallego and Pardos-Prado, 2014; Sibley and Duckitt, 2008). Furthermore, research has shown that open-minded people are more likely to be ideologically in favor of diversity and alternative lifestyles (Alford and Hibbing, 2007; Caprara et al., 1999; Carney et al., 2008; Cooper et al., 2013; Mondak and Halperin, 2008; Schoen and Schumann, 2007). Subsequently, we formulate our first hypothesis:

H1: The higher an individual scores on openness to experience, the more he/she prefers an open Switzerland.

[66] Genetic influence is assumed to account for about 50 percent of the variation of the Big Five personality traits (Bouchard, 2004, 149; Krueger and Johnson, 2008, 288ff.).

[67] Nevertheless, the Big Five model is not undisputed. The main points of critique concern the theoretical basis of the model, the coverage of personality by the five factors and the number of factors (for a detailed discussion see Block (1995) or Boyle (2008)). In spite of this criticism, the Big Five model has established itself within personality psychology and related fields and offers a common frame of reference, which makes research findings comparable (John et al., 2008). Accordingly, we decided to use the Big Five in order to conceptualize personality traits in our theoretical model.

People scoring high on conscientiousness have a basic dispositional sense of order, reliability, and dependability. They are described as being efficient, organized, productive, thorough, ambitious, dutiful, responsible and reliable, and having a need for structure (Gerber et al., 2011a,b, 2012b; McCrae and Costa, 2003; Mondak, 2010; Mondak and Halperin, 2008). Furthermore, conscientiousness is related to industriousness, self-control, and traditionalism (Mondak et al., 2010, 53). Empirical analyses show that conscientiousness is linked to conservative political attitudes (Alford and Hibbing, 2007; Carney et al., 2008; Cooper et al., 2013; Mondak and Halperin, 2008; Schoen and Schumann, 2007). Conscientious people might see an open country and society that promotes international cooperation and migration as a threat to the Swiss culture and value system. We therefore formulate our second hypothesis as follows:

H2: The higher an individual scores on conscientiousness, the less he/she prefers an open Switzerland.

Much more than any other trait, agreeableness describes how a person behaves in interactions with others (Mondak, 2010). Agreeable persons are trustful, cooperative, warm, compassionate, and kind; they avoid conflicts and are eager to cooperate. They are interested in having good relationships with their fellow citizens (Gerber et al., 2011a; McCrae and Costa, 2003). Furthermore, as they are generally trustful, they should not be as skeptical about cooperation with other countries or international organizations, nor are they as likely to harbor resentment regarding immigration (Ackermann and Ackermann, 2015; Dinesen et al., 2016; Gallego and Pardos-Prado, 2014). Based on these observations, we arrive at the third hypothesis:

H3: The higher an individual scores on agreeableness, the more he/she prefers an open Switzerland.

Extroverted people are outgoing, talkative, and sociable (Mondak, 2010; Mondak and Halperin, 2008). Their sociability should be conducive to a positive attitude toward immigration. Furthermore, extroverted persons have strong opinions, which they do not hesitate to express (Marcus et al., 1995). Since they generally do not eschew conflict, they are less afraid of opening up the country to new cultural influences and perspectives.

H4: The higher an individual scores on extraversion, the more he/she prefers an open Switzerland.

Emotional stability indicates that people are calm, relaxed, satisfied with themselves, and generally do not worry (Mondak, 2010). Its counterpart is neuroticism: a trait referring to people who easily become anxious, nervous, or troubled. Neurotic persons are expected to be politically intolerant with regard to foreigners because they are afraid of new political groups and movements (Marcus et al., 1995, 164). Thus, emotionally stable persons should be more in favor of an open society and country in terms of immigration and international cooperation (Dinesen et al., 2016; Gallego and Pardos-Prado, 2014):

H5: The higher an individual scores on emotional stability, the more he/she prefers an open Switzerland.

6.3 Personality and Attitudes toward the Openness of Switzerland: Relationships and Differences across Perceived Ethnic Diversity

Our discussion so far has focused on the direct effects of dispositional variables (Big Five personality traits) only. It has to be noted, however, that the Five Factor Theory acknowledges that human beings are not isolated from the contexts surrounding them. In this vein, recent research by Ackermann and Ackermann (2015), Gerber et al. (2010) and Mondak et al. (2010) has shown that the effects of personality traits on political attitudes and behavior depend on the situation in which they occur. Hence, it will not suffice to solemnly analyze isolated effects of these factors to gain a comprehensive picture of how personal dispositions relate to attitudes toward openness. Although two individuals might have the same basic tendencies, the link between these dispositions and attitudes might depend on the region they live in, the place they work at or the people they frequently talk to. In other words, "[...] social and physical environment interacts with personality dispositions to shape characteristic adaptations [...]" (McCrae and Costa, 2008, 165). In this regard, environmental or contextual factors play an important moderating role in the formation of attitudes. Gerber and colleagues (2010, 112), who conceptualize political issues as stimuli to which individuals respond by the development of attitudes, argue that "[...] the meaning of these stimuli is shaped by environmental factors such as political

context. One important implication is that the link between personality and political attitudes may be subtle; if political stimuli are understood differently by different people, then the observed relationship between personality traits and political attitudes [...] should also vary."

Regarding attitudes toward the openness of the country, we argue that ethnic diversity is such a relevant contextual factor, which will adjust the effects of personality. Ethnic or cultural diversity goes together with changes in the existing social and economic order. Thus, diversity is a pivotal aspect of openness, which is most visible and tangible in people's everyday life. As such, contextual diversity brings the rather abstract political issue of openness to life. Both, positive as well as negative, consequences of opening up the country to foreign influences will become concrete. Thus, we argue that depending on the level of perceived contextual diversity, the way personality traits shape an individual's stance toward openness will vary.[68] For example, open individuals will appreciate higher diversity as a possibility to engage with individuals diverse from themselves. They are more willing to learn about otherness and to understand differences (Mondak, 2010). From their perspective, learning through contact opportunities with people from different cultures is a positive consequence of openness, which should further encourage them to support an open Swiss society.

H6: The higher the perceived contextual ethnic diversity, the more positive is the link between openness to experience and attitudes in favor of openness.

In contrast, we presume that conscientious individuals feel threatened by the immediate presence of a large share of immigrants, as the reasoning of inter-group conflict theory predicts (Blumer, 1958). Highly conscientious persons are predisposed to react skeptically toward enhanced ethnic and cultural diversity, as this may cause changes to the dominant social order and threaten their social status, which has been achieved through hard work and dutifulness. Against this backdrop, daily experiences with diversity in the neighborhood context, conflicts about lifestyles and the challenges of integration are supposed to

[68] We conceptualize the perceived contextual diversity as the moderating factor, which alters the relationship between personality traits and attitudes toward openness. Dinesen et al. (2016), for instance, conceptualize the interaction between personality and situation the other way around. They argue that personality traits moderate the effect of situational factors (skill-level and country of origin of immigrants) on attitudes toward immigrants. By nature, interaction effects are symmetric as they are statistically modelled using multiplicative terms (Berry et al., 2012). That is, the statistical model gives no hint on the direction of the moderation. Therefore, every interaction effect necessitates a thorough theoretical foundation to justify its direction.

strengthen their negative attitudes toward openness.

H7: The higher the perceived contextual ethnic diversity, the more negative is the link between conscientiousness and attitudes in favor of openness.

Emotionally stable persons, again, should feel much less threatened by a large out-group in the context than neurotic citizens. They are ready to cope with more competition on the labor market and foreign influences on their everyday life caused by diversity. Thus, ethnic diversity will further widen the gap between emotionally stable and neurotic citizens regarding their stance toward the openness of Switzerland.

H8: The higher the perceived contextual ethnic diversity, the more positive is the link between emotional stability and attitudes in favor of openness.

Individuals with high levels on the agreeableness trait, who are said to be altruistic, risk-averse, and generally favor social interactions, should react more positively to contextual diversity. They perceive competition as a zero-sum game as they generally are more integrative. Ultimately, this makes them less prone to realistic and symbolic threats caused by enhanced immigration. Accordingly, we expect that individuals who are more agreeable will be even more likely to support openness in situations of high ethnic and cultural diversity.

H9: The higher the perceived contextual ethnic diversity, the more positive is the link between agreeableness and attitudes in favor of openness.

Finally, high levels of extraversion are said to induce openness to social interactions, as individuals are more outgoing, talkative, and actively engaged in social life. The assumption is that highly extroverted individuals endorse a sense of community and togetherness and will therefore be more likely to accept social diversity. In this line, we predict that extroverted individuals will be even more likely to have a positive outlook on an open society in a diverse context.

H10: The higher the perceived contextual ethnic diversity, the more positive is the link between extraversion and attitudes in favor of openness.

6.4 Data and Method

To analyze our research questions concerning the relation between personality traits and political attitudes toward the level of openness of Switzerland, we use survey data on politics and society from Switzerland. This nationwide survey was collected in fall 2012 in all of the 26 Swiss cantons. It includes items on respondents' political behavior, political attitudes, psychological dispositions, and socio-demographic background. In order to draw a representative sample of the Swiss population, a stratified sampling method based on the three different language regions was employed. Within each language region, respondents were randomly chosen and interviewed in the respective language by means of computer assisted telephone interviews (CATI).[69] The total response rate came to 21.9 percent with a total number of observations of 1259 individuals (Longchamp et al., 2012, 10). As the focus of the study lies on attitudes toward openness in a political context, we concentrate on people who have the right to vote in Switzerland. This restriction leads to a drop in the number of valid observations to 1 156.

In order to measure our dependent variable, we refer to the self-reported attitude toward the level of openness of Switzerland. This attitude is measured on an 11-point scale, with 0 indicating a preference for closedness and 10 a preference for openness of the country. Personality is our main explanatory variable and is measured by the Big Five personality traits. We use the BFI-S, a short version of the "Big Five Inventory" (BFI) consisting of 15 items, which makes three items per trait dimension. By means of short sentences based on typical trait adjectives, respondents are asked for a self-assessment on a scale from 0 (is not applicable) to 10 (is completely applicable). To increase the reliability of our Big Five measurement, we estimate the dimensions by means of a maximum-likelihood exploratory factor analysis with a promax rotation that allows correlations between factors. The factor analysis was able to identify the latent dimensions underlying the Big Five personality traits (see Table A.20 in the Appendix).[70] On this basis, we predict factor

[69] Research on the cross-language use of Big Five batteries has found no translation effects across different language regions and cultures (John et al., 2008, 121).

[70] Analyses not documented here show the following Cronbach's alpha scores for openness to experience (0.59), agreeableness (0.43), conscientiousness (0.55), extraversion (0.56), and emotional stability (0.57). Moreover, a confirmatory factor analysis strengthens our results and shows acceptable fit measures (RMSE = 0.08, SRMR = 0.06). All analyses are available on request. The rather low Cronbach's alphas are in line with the relevant literature and cause no reason for concern, as the three items

scores and rescale them to a range from 0 (trait is less pronounced) to 1 (trait is particularly pronounced).[71] These rescaled factor scores are then used as explanatory variables in the regression analysis. Contextual ethnic diversity, which is the moderating variable, is measured with a categorical variable that refers to the self-reported percentage of people with a different nationality living in one's neighborhood (see Baldassarri and Diani, 2007; Strabac, 2011). Neighborhood, as a small-scale context, has the advantage of being particularly relevant for people's behaviors and attitudes and reflects the immediate day-to-day social context for experiences and social interaction (Amir, 1969; Bakker and Dekker, 2012; Dinesen and Sønderskov, 2015). Through neighborhood diversity, people are directly confronted with the consequences of an opening up of the country. The variable ranges from 0 percent (coded as 1) to 100 percent (coded as 7).

Since we are interested in the link between personality and political attitudes toward the degree of openness of Switzerland, we also control for factors that potentially confound this relationship.[72] Therefore, we include sex, age, and education on the individual level and language region and urbanization on the cantonal level in our analyses. Sex is measured as a dichotomous variable, age as continuous, and education as a categorical one. On the macro-level, language region is measured by the percentage of people speaking German in a canton and urbanization as the percentage of people living in urban areas. Both variables are relevant contextual factors affecting political and social behavior and attitudes in Switzerland, such as attitudes toward the openness of the country (Seitz, 2014). For detailed explanations of the measurement and some descriptive statistics on the variables used in the models, see Table A.21 in the Appendix.

In order to test our theoretical arguments empirically, we fit hierarchical models with random intercepts to show the effect of the Big Five personality traits on attitudes toward the openness of Switzerland.[73] Our modeling strategy is a stepwise approach starting with a model that only estimates additive effects (Model M1) and then adding interaction effects (Models M 2.1-2.5).

cover a "substantial bandwidth" of various facets of one personality dimension and therefore are rather heterogeneous (John et al., 2008, 127).

[71] According to Verhulst et al. (2012, 45), predicting factor scores should be preferred to constructing additive scales or using individual items as a measurement for personality traits. Factor scores are thought to be less prone to measurement error.

[72] Assuming that at least part of the variation in personality is determined by genetic disposition, only a few variables should confound the relationship, that is influence both the independent and the dependent variable (see Jaccard and Jacoby (2010, 141ff.) for a discussion of what relevant control variables should be like).

[73] Although we are interested in the individual level effects, we use multilevel models for these analyses. In doing so, we take into account that the individuals in our sample are nested within cantons and therefore are not independent. Furthermore, we have the opportunity to control for relevant contextual factors (language region and urbanization) that might blur the effect of personality on political attitudes and behavior.

6.5 Empirical Findings

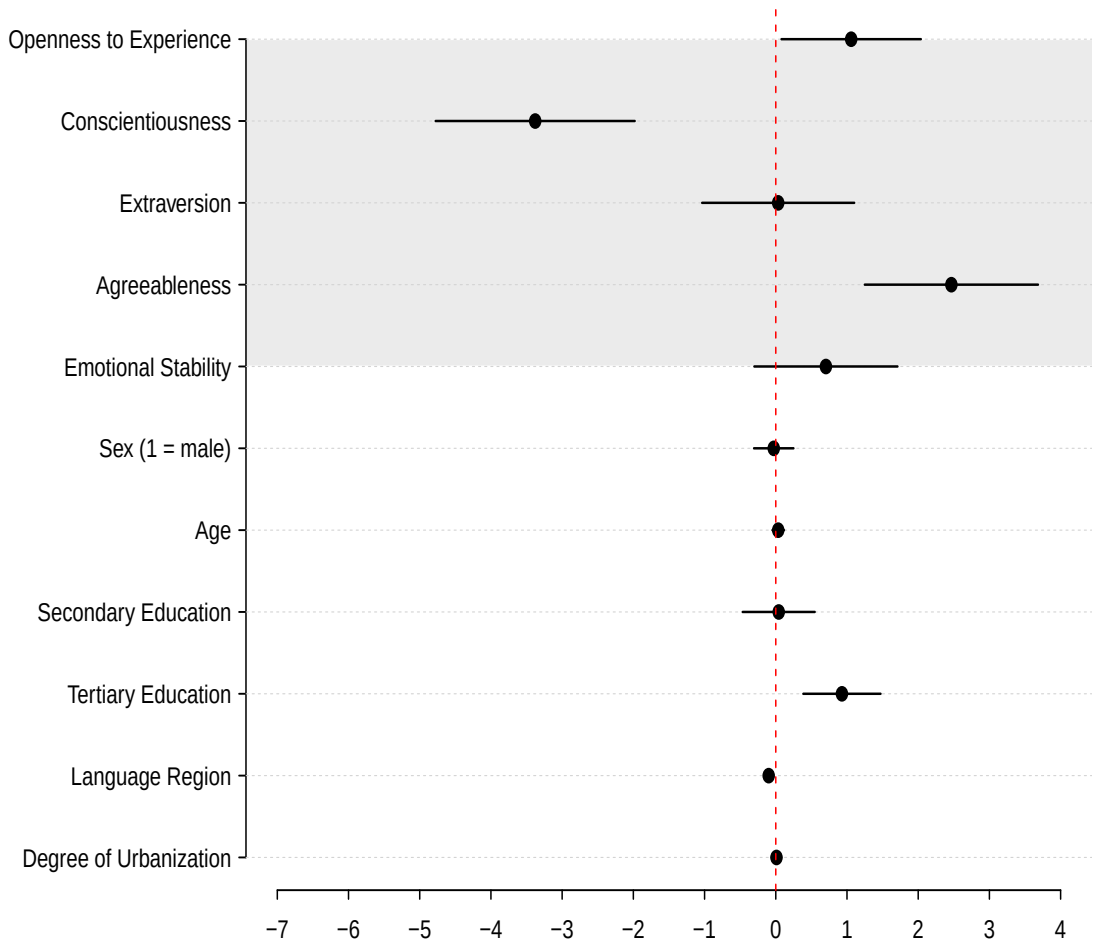
How do personality traits relate to attitudes toward openness in Switzerland? We ran several models to address our research question and to test our hypotheses. Figure 6.1 presents the regression coefficients of Model M1 (for detailed results of the regression analysis, see Table A.19 in the Appendix). According to the model, three of our theoretical expectations are confirmed by the empirical test. Open-minded people indeed have a higher probability of preferring an open country (H1). Opening up to immigrants and international cooperation provides them the chance to get to know new people and cultures and to gather various experiences. Furthermore, agreeable people are more likely to favor openness of Switzerland (H3). As argued above, they have a positive orientation toward immigration and international cooperation due to their trustful and social orientation toward others. Finally, conscientiousness is negatively related to the preference for an opening up of the country (H2). According to our theoretical expectation, individuals scoring high on conscientiousness tend to be more traditional and therefore to be more in favor of closedness.[74] However, we do not find a link between emotional stability and attitudes toward the openness of Switzerland (H5). Even though referendum campaigns in this field often try to instill fear, anxiety does not seem to play a role for these attitudes. Moreover, extraversion is not systematically related to attitudes toward the level of openness of Switzerland (H4). These results are in accordance with earlier findings regarding prejudice and attitudes toward immigrants (Ackermann and Ackermann, 2015; Dinesen et al., 2016; Gallego and Pardos-Prado, 2014; Sibley and Duckitt, 2008).[75]

In a next step, we test our argument regarding the moderating effect of the context by estimating single-level interaction effects between personality traits and perceived neighborhood diversity (for detailed results of the regression analysis, see Table A.19 in the Appendix). Models M 2.1 to M 2.5 reveal that the effects of agreeableness and conscientiousness on attitudes toward the degree of openness of Switzerland are significantly moderated by perceived neighborhood diversity (H7, H9). Figure 6.2 presents the graphical illustration of the significant interaction effects (cf. Berry et al., 2012). Regarding the effect of agreeableness, the top graph shows that the positive effect of this personality trait is strengthened by perceived ethnically diverse neighborhoods: The higher the apparent ethnic diversity in one's neighborhood, the stronger the attitude in favor of an open Switzerland. Agreeable people are described as integrative and altruistic. They are generally assumed to have a positive attitude toward people from other cultures and an

[74] Preferring closedness over openness is described as an attitude of traditionalism in Switzerland (Bolliger, 2007, 91).

[75] One could argue that the influence of personality is strongly mediated by political ideology. However, additional analyses expose ideology only as a partial mediator variable (see Table A.22 in the Appendix).

Figure 6.1: Personality traits and attitudes toward the degree of openness of Switzerland



Note: The plot is based on Table A.19 (Model M1) in the Appendix. It shows the regression coefficients (dots) and the 90% confidence interval (horizontal lines). An effect is significant if the confidence interval does not include zero (dashed vertical line).

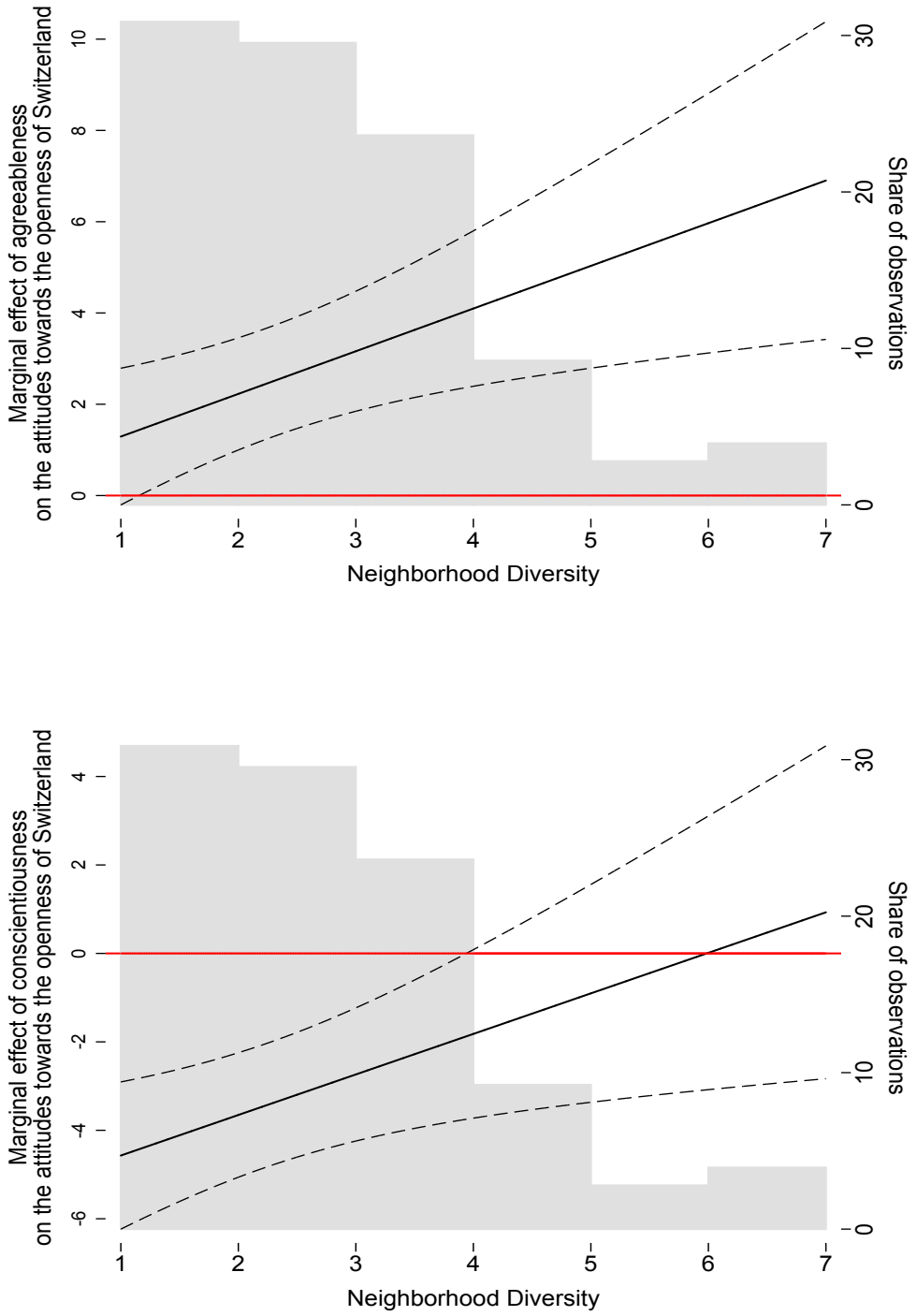
open society. Living in a diverse neighborhood and being in contact with people from other countries and cultures seems to confirm this positive attitude of integration. In the lower graph, we see how the marginal effect of conscientiousness on attitudes toward the degree of openness of Switzerland changes conditional on perceived ethnic diversity in the neighborhood. If the self-reported percentage of people with a different nationality in the neighborhood is 50 percent or lower (categories 1-4), the effect of conscientiousness on the attitude toward the desired degree of openness of Switzerland is significantly negative. As soon as the respondent reports 50 percent or more of the people living in the neighborhood to have a different nationality, the effect of conscientiousness becomes insignificant. Thus, against our theoretical expectation, the negative effect of conscientiousness is not strengthened by neighborhood diversity.

How to explain this finding? It is plausible to assume that conscientious people living in a diverse context feel the duty to get in contact with the people living in the same neighborhood and to help them to integrate in society, which, in the end, leads to a reduction in discrimination, fears, and prejudices. What is more, through these interactions they might conclude that Swiss culture is not in danger if it opens up to foreign countries and international cooperation. Therefore, conscientious people do not differ significantly from people who are less conscientious regarding their attitudes toward the degree of openness of the Swiss society when they live in diverse neighborhoods.[76] In sum, our findings underpin the theoretical argument previously made that the relationships between dispositional traits (that is, the Big Five) and opinions are moderated by contextual factors (Gerber et al., 2010, 128). In our particular case, ethnic diversity is a visible facet of an open society and thus affects how personality traits relate to attitudes toward openness of the country.[77]

[76] This result is in line with findings regarding the moderating impact of perceived ethnic diversity on the link between conscientiousness and attitudes toward immigrants (Ackermann and Ackermann, 2015).

[77] In order to evaluate the robustness of our results, we conduct a variety of sensitivity analyses. The results are available upon request. First, we measure the Big Five personality traits using additive indices instead of factor scores. The results do not differ substantially except for the interaction between diversity and agreeableness, which is no longer significant. This might be explained by the fact that factor scores are weighted according to the factor loadings, while additive indices are not weighted. Owing to the low internal consistency of the agreeableness items, these two measurement methods might lead to different results. Second, we used cantonal shares of immigrants as a contextual variable instead of perceived neighborhood diversity. By using this aggregate measure, the interaction effects with personality traits are no longer significant. This lends support to recent findings showing that small-scale contexts matter most for people's attitudes, because they capture the degree of diversity a person is really confronted with in daily life (Dinesen and Sønderskov, 2015).

Figure 6.2: Moderating contextual effects of neighborhood diversity



Note: The plot is based on Table A.19 (Models M 2.2 and M 2.4) in the Appendix. It shows the significant interaction effects, that is, the marginal effects conditional on neighborhood diversity.

6.6 Conclusion

In this article, we have examined the psychological basis of political attitudes toward the recently questioned level of openness of Switzerland. We thereby take up a well-known idea in social science that political attitudes have a psychological basis. The empirical analyses of a unique Swiss data set reveal several significant relationships between personality traits and attitudes toward openness. Using the Five-Factor-Theory as a broad theoretical framework, we find that people scoring high on openness to experience and on agreeableness are more likely to have a positive attitude toward the degree of openness of Switzerland. On the other side, conscientiousness is negatively correlated with the preference for an opening up of the country. Moreover, we show that the effects of conscientiousness and agreeableness on attitudes toward the degree of openness of Switzerland are significantly moderated by perceived neighborhood diversity. Both interaction effects are positive, which follows the mechanisms predicted by the contact theory (Allport, 1954; Pettigrew, 1998). Inter-ethnic contact seems to encourage agreeable people in their preference for an open country and seems to reduce the traditionalist attitudes of conscientious persons. To put it differently, the perceived problem seems to be part of the solution. A conscientious person might feel obliged to get into contact with people of a different nationality living in their neighborhood, subsequently becoming less opposed to an opening of the country.

Since "the greatest contributions of research on personality will involve identification of interactive relationship between personality traits and other sorts of predictor variables" (Mondak, 2010, 19), the article contributes to the literature in a theoretical and empirical manner. First and foremost, it provides further evidence that the effects of personality are contingent upon the environment. Contextual diversity gives different meanings to the issue of openness and thereby alters the impact of personality. In general, a person's behavior is never determined by individual factors alone. The context creates the framework in which behavior takes place and attitudes are formed. It is commonly accepted that the ways in which individuals behave socially and politically depends on both who they are and on the context, they are in. Future research should therefore focus more attention on these interactions. Moreover, the paper increases our understanding of the psychological basis of attitudes in general and of attitudes toward openness in particular. Beyond socio-economic and ideological factors, psychological predispositions are also able to explain people's stance toward political issues. Nevertheless, the question if we can conclude anything from these results beyond the case of Switzerland remains. In the eyes of the late Rokkan (1970) Switzerland is "a microcosm of Europe" in terms of cultural, linguistic, religious, and regional diversity, which is perfectly suited to scrutinize the dynamics

of European politics. This assessment rises at least some hope that conclusions based on empirical analyses in Switzerland are likely to hold for other European countries as well.

In spite of its important contributions, the article is subject to methodological and theoretical limits. First, with regard to our contextual factor, it is unclear how accurately the perceived diversity corresponds to the actual diversity. While there is evidence that perceived diversity is well predicted by statistical diversity (Koopmans and Schaeffer, 2016), other investigations at the country and community level show that people tend to overestimate diversity (Hooghe and de Vroome, 2015; Semyonov et al., 2004; Strabac, 2011). In particular, the literature on emotional innumeracy suggests that people who feel threatened by ethnic diversity tend to overestimate foreign population size (Herda, 2010). Using perceived diversity is, however, the only possibility to capture a small-scale context in our data set. Since these small-scale contexts are known to have a stronger effect on people's attitudes (Dinesen and Sønderskov, 2015), the advantage of proximity outbalances the shortcomings of our measure. Second, we do not test the mechanisms behind the interactions between personality traits and perceived diversity empirically. From a theoretical perspective, it is reasonable to argue that contact is the key to the positive moderator effect. It cannot, however, be asserted with absolute certainty.

To conclude, with our empirical findings we contribute to the existing literature by demonstrating the significant relationships between empirically measurable personality traits and political attitudes toward the desired level of openness of a country. We further show that situational factors interact with personality traits in shaping political attitudes. Although a step in the right direction, we need more investigations that empirically scrutinize the role of the Big Five personality traits in different environments with different aspects of political attitudes.

7 Conclusion

The concluding chapter will sum up the empirical studies included in this cumulative dissertation. Moreover, it will discuss the contributions and limitations of the applied research approach. Finally, future pathways for the study of personality and politics will be outlined.

7.1 Summary and Contribution

The present dissertation scrutinizes how personality traits and contextual factors interact in shaping political attitudes and behavior. It is embedded in a growing literature on personality and politics. By moving beyond the study of direct effects of personality traits, it makes an important contribution to the existing research from a theoretical and empirical perspective. Theoretically, it bridges the gap between different fields of research dealing with the question how personality traits, contextual factors and political outcome variables are related. In order to capture personality it follows trait theory and applies the established Five-Factor Model (FFM). The encompassing Five-Factor Theory (FFT) builds the basis for the theoretical reasoning. It is combined with approaches to situational factors in personality research and contextual theories from the study of political attitudes and behavior. Very generally, the baseline of the analytical framework is a fundamental of psychology research: Lewin's (1951) *Field Theory in Social Science*. He argues that individual "behavior (B) is a function (F) of the person (P) and of his environment (E), $B = F(P, E)$" (Lewin, 1951, 239). Thus, person and context should not be considered isolated from each other, but in combination. In his formula, the function needs to be specified in order to explain behavior and attitudes. Taking up his idea of an interdependence of person and environment, this dissertation argues that the effects of personality traits and contextual factors interact with each other. This line of reasoning is in accordance with interactionist approaches in personality psychology and also implicitly inherent to the FFT. Using the framework to study contextual effects by Books and Prysby (1988, 1991), this interaction is further specified. One line of reasoning is that people react differently to information and cues they receive from the context depending on their personality. Individuals are not 'blank slates' but see and perceive contextually patterned information through the lens of their personality. That is, personality traits are expected to moderate the effects of contextual factors. Conceptualizing the interaction the other way around,

contextually patterned information are able to alter the meaning of political stimuli (e.g. political issues, forms of political participation) and thereby, they can moderate personality effects as reactions to these stimuli. Individuals do not form attitudes or make behavioral decisions in a vacuum but they are influenced by the information they receive from their surroundings. These two lines of reasoning are substantiated and tested in five empirical studies. All of these studies analyze the case of Switzerland and thereby also add another case to the existing research on personality and politics. Methodologically, hierarchical regression models using survey and contextual data are estimated.

Three studies are concerned with the interaction between personality traits and direct democracy as an institutional context. The first one is motivated by inconclusive findings on the link between direct democracy and institutional trust. Against this background, the main argument is that this inconclusiveness can be partly ascribed to the diverse effects direct democracy has on individuals. In other words, personality traits are supposed to moderate how direct democracy is related to institutional trust. Hierarchical regression models reveal that extraversion and neuroticism decrease political trust, while the number of ballot measures is not directly associated with institutional trust. More importantly, agreeableness is found to negatively moderate the link between direct democracy and political trust. This suggest that frequent ballot measures signal political and societal conflicts that make agreeable persons withdraw from the political arena and less trusting in its actors and authorities. The second study argues that the link between psychological dispositions and political protest behavior is not universal, but rather depends on contextual factors. Political context factors are able to alter the meaning of participatory repertoires and, therefore, lead to differential effects of personality on participation. Direct democracy is supposed to constitute such a political context that can act as moderating factor with regard to protest participation. As the empirical analysis shows, openness to experience and extraversion increase the propensity to take part in protest activities in a direct manner. Most importantly, however, the link between openness to experience and protest participation is significantly moderated by direct democracy. This provides evidence for variance in the situational expression of personality traits. Finally, the third study deals with the widely studied relationship between personality traits and political ideology. Since left and right have ambiguous meanings, individuals are supposed to be uncertain about which ideology resonates their personality. Thus, the relationship between the Big Five and ideology should be stronger if people are better informed and less uncertain regarding the interpretation of ideology scales. Vivid direct democracy provides an informational context that is supposed to increase political knowledge and should, therefore, strengthen personality effects. Empirical results show that the link between neuroticism and political ideology is only significant in a direct democratic context. This finding especially proves to

be robust for a subsample of highly educated individuals. This provides evidence for the role of direct democracy as informational context which offers cues regarding the meaning of ideology.

The remaining two studies deal with the interaction between personality traits and ethnic diversity as a structural context. The first of these studies analyzes the link between personality traits and attitudes of Swiss citizens toward equal opportunities for immigrants. In particular, it examines the extent to which this relationship is moderated by the ethnic diversity. Theoretically, ethnic diversity is supposed to strengthen personality effects. Regarding the direct effects the study is able to replicate central findings of the existing research: openness to experience and agreeableness are related to a positive outlook on immigrants while conscientiousness is linked to a rather negative one. Most importantly, the results reveal that the link between conscientiousness and attitudes toward equal opportunities is significantly moderated by the perceived share of foreigners in the neighborhood. Thus, the negative effect is diminished by diversity in the context. The final study of this dissertation focuses on the tension between openness and closedness, which is one of the most important cleavages in Swiss political debates. Building on the Five Factor Theory, the role of psychological dispositions and contextual factors for a general stance toward the cultural, economic, and political alignment of Switzerland is scrutinized. Similar to the former study, open-minded and agreeable persons are in favor and conscientious persons are against an open country. The effects of agreeableness and conscientiousness are moderated by perceived ethnic diversity in the neighborhood.

All in all, the framework of this dissertation and the five empirical studies make two important contributions. *First*, the present dissertation adds new evidence to the study of personality and politics by analyzing the case of Switzerland. Most but not all of the existing findings regarding the direct link between personality and the political outcome variables under consideration have been confirmed. Divergent results might be caused by either substantial or methodological reasons. Referring to substantial reasons, non-findings might be caused by peculiarities of Switzerland as investigated case. In order to see whether country characteristics play a systematic role here, an cross-national comparative study needs to be conducted. Taking the analytical framework of this dissertation into account, it is very likely that contextual characteristics on the country level and personality traits interact in shaping political attitudes and behavior (see also Fatke, 2016; Oskarsson and Widmalm, 2014). Apart from that, methodological reasons might play a role. The existing research draws on different instruments to measure personality and this might also be an explanation for inconsistent findings (Crede et al., 2012). *Second*, the main contribution of this dissertation is the study of the interaction between person and situation in shaping po-

litical attitudes and behavior. Especially, the consideration of institutional and structural contexts brings a new element into the study of personality and politics. This stands out from the majority of studies in the research field that focus on direct relationships between personality traits and political attitudes or behavior. Against this backdrop, Hibbing et al. (2011, 620) state, "the question is no longer whether personality matters but how exactly it matters". The present dissertation addresses this issue. It develops an analytical framework to study the interaction of person and context and it presents empirical research on this interaction. Recapitulating the overall research question, the results confirm that personality traits interact with contextual factors in shaping political attitudes and behavior. The analytical framework provides theoretical mechanisms on how this interaction comes about.

7.2 Limitations

In spite of these important contributions, three main limitations or shortcomings of this dissertation need to be discussed. *First*, the generalizability of the present results is unclear due to the limitation of the studies to the case of Switzerland. To scrutinize the effects of direct democracy, the Swiss 'laboratory' offers the perfect conditions. While the Swiss cantons are embedded in a common institutional framework, they show a sufficient variety in the formal rules and usage of direct democracy. Similarly, Switzerland is suitable to study the role of ethnic diversity for political attitudes because it is a characteristic feature of Swiss society as a whole but still rather heterogeneously distributed across the country. Having these conditions and, especially, the cultural and linguistic diversity in mind, Rokkan (1970) once called Switzerland a 'microcosm of Europe' and advised scholars to study Switzerland in order to grasp dynamics in Europe. This rises some hope concerning the generalizability of the results presented in this dissertation but it is, of course, not sufficient. Thus, future research needs to take up this question by analyzing other countries, at best in comparative studies. New data sources, such as the latest wave of the World Values Survey, might speed up this endeavor.

Second, the given research design does not allow any conclusions regarding causality. Following the FFT, one can theoretically assume that personality traits precede political attitudes and behavior. Empirically, it can, however, not be ruled out that they have a common genetic basis. Verhulst et al. (2012) provide empirical evidence for a common genetic basis of personality traits and political attitudes and ideology.[78] Just as causality

[78] Just recently, Verhulst et al. (2012) were criticized for coding errors in their empirical analysis by Ludeke and Rasmussen (2016). The authors, however, persist that this criticism does not touch upon their finding regarding the confounding role of genes (Verhulst and Hatemi, 2016; Verhulst et al., 2016a).

cannot be established in the present research design, the assumed theoretical mechanisms behind the interaction effects cannot be tested explicitly. To illustrate this limitation, one can think of the main finding in Chapter 3: the positive relationship between openness to experience and protest participation is significantly moderated by direct democracy in a negative way. That is, in contexts of vivid direct democracy the propensities of open-minded and close-minded individuals to participate in political protest are no longer significantly different from each other. From a theoretical point of view, we assume that direct democratic procedures serve as institutionalized alternatives to protest and therefore offer open-minded individuals a more promising way to bring new ideas in the political process. This interpretation of the mechanism behind the observed conditional effect is, however, solely based on theoretical grounds and cannot be begged empirically using the present research design.

Finally, the empirical studies in this dissertation are based on survey data that are prone to certain errors. First, survey or item nonresponse might induce bias in the presented results when individuals with certain personality structures systematically refuse to take part in the survey or to answer certain questions. Klingler et al. (2016) find that individuals scoring high on neuroticism have a higher propensity for not providing answers on single items. Concerning survey nonresponse, Sassenroth (2013) empirically demonstrates the importance of personality traits. Second, social desirability in the response behavior might induce bias in the results and lead to a misspecification of relationships between personality traits and political outcomes (Ludeke et al., 2016). Third, Rammstedt et al. (2010) and Rammstedt and Kemper (2011) examine the issue of an acquiescence response bias in the measurement of the Big Five and conclude that it is not equally distributed across educational groups. Thus, acquiescence might induce another bias in the analysis of personality effects. Neither of these biases can be ruled out for the presented studies. Readers should be aware of the shortcomings of this study and keep them in mind while evaluating the findings.

7.3 Future Pathways for the Study of Personality and Politics

The discussed shortcomings of the present studies can guide future work in the field of personality and politics. More generally, political psychology as subfield of political science can make important contributions to the study of political behavior and attitudes in the 21^{st} century. Against the background of dealignment and increasing complexity of political issues, psychological approaches can enrich our understanding of information processing, political decision making and political action.

More precisely, the following pathways for future studies in personality and politics can be outlined. From a theoretical point of view, theories on the interaction of person and context should be further advanced. It should be clarified what kind of contexts are able to moderate personality effects and, in turn, how personality traits might moderate contextual effects on political behavior and attitudes. The contextual factors analyzed in this dissertation – direct democracy and ethnic diversity – are just two examples for institutional and structural contexts that might interact with personality in shpaping political behavior and attitudes. In this vein, it might also be interesting to think about ecological effects of personality traits, that is the potential effects of aggregate personality measures (for ecological effects of values, see, for example, Welzel and Deutsch (2012), and for aggregate effects of personality see, for instance, Mondak and Canache (2014)). At best, these questions should empirically be studied by conducting international comparisons. One needs to evaluate whether existing data sources, such as the latest wave of the World Values Survey can be used for such a cross-national comparison. Subnational comparisons might also be a valuable alternative, as the present dissertation shows. Moreover, replication studies are important in their own right to gain more certainty about the generalizability of the presented results. This is even more important due to the "replication crisis" currently discussed in psychology (Maxwell et al., 2015). Furthermore, it will be fruitful to link personality research to other topics in political psychology, such as emotions or information processing. The study by Nielsen (2016) is a hint in this direction and illustrates how personality research might be combined with experimental approaches. Furthermore, Klingler et al. (2016) discuss possible applications of personality research to understand cognitive constraint in decision making. Against the background of current discussions on personality-based micro-targeting in electoral campaigns, it would be interesting to test the claims in lab or field experiments.[79] Another path for future research concerns the measurement and conceptualization of personality. Beyond the usual self-rating questionnaire-based methods, new ways to measure the Big Five personality traits are discussed in the literature. In survey research, implicit measures of personality, such as Implicit Association Tests (IATs), are a promising pathway (Grumm and von Collani, 2007; Vecchione et al., 2014, 2016). Furthermore, the potential of Big Data, in terms of social media data and text-as-data, to measure the Big Five is demonstrated by recent psychometric studies (Golbeck et al., 2011; Kosinski et al., 2013; Park et al., 2015; Quercia et al., 2011; Ramey et al., 2016; Youyou et al., 2015). Especially relevant for political science, Ramey et al. (2016) show how parliamentary speeches can be used to measure the

[79] As explained in the introduction, the debate was initiated by an article by Grassegger and Krogerus (2016b) in the Swiss weekly journal *Das Magazin*. For an important clarification by the authors, see Grassegger and Krogerus (2016a), and for a thoughtful contribution to the debate, see Schloemann (2016).

personality of political elites. This new measure is supposed to generate new insights in legislative politics and the personality of political elites. Finally, political science research should be open for innovations from personality psychology. Moving beyond the study of single, isolated traits, the conceptualization of personality types is discussed in personality psychology. The literature suggests that based on the Big Five personality traits three personality types can be identified: the resilient, undercontrolled, and overcontrolled personality types (Alessandri et al., 2014; Specht et al., 2014b). Studying personality types instead of traits might be another interesting pathway for research on personality and politics.

Although an enormous rise in the publications on personality and politics has been possible to observe in the past years, there are still a number of white spots in the field. Scholars should make efforts to color them with theoretical and empirical contributions along the outlined pathways. Thereby, they should keep in mind that "[a]ll political behavior occurs in a specific context, at a specific time and place by particular individuals characterized by different backgrounds, preferences, and personalities" (McGraw, 2006, 150). Thus, future research should take the interaction of person and context serious and combine it with the innovative approaches presented above. This promises an even deeper understanding of how individuals form their attitudes and take behavioral decisions in the political arena.

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A Appendix

A.1 Appendix Chapter 1

Table A.1: Research on Personality and Politics 2006 - 2016 (Published Journal Articles Only)

Reference	**Dependent Variable**	**Mediation**	**Moderation**	**Additional Remarks**
Attitudes Toward the Political System/ Civic Attitudes				
Mondak and Halperin (2008)	Different forms of political attitudes, predispositions and behavior	–	–	
Cooper et al. (2013)	Different forms of political attitudes, predispositions and behavior	–	–	
Dinesen et al. (2014)	Citizenship norms	–	–	
Weinschenk (2014)	Sense of civic duty	–	–	
Mays (2015)	Stability of political predispositions	–	–	
Rasmussen (2015)	Political knowledge	–	X	Moderating effect of openness to experience on the link between education and political knowledge
Bakker and de Vreese (2016)	Attitudes toward the European Union	–	–	
Curtis (2016)	Identification with Europe	X	–	Mediating effects of risk aversion, knowledge and ideology
Freitag and Ackermann (2016)	Political trust	–	X	Moderating effect of personality traits on the link between direct democracy and political trust
Political Behavior				
Caprara et al. (2006)	Voting behavior in parliamentary elections	–	–	
Barbaranelli et al. (2007)	Voting behavior in presidential elections	–	–	
Schoen and Schumann (2007)	Voting behavior in parliamentary elections	X	–	Mediating effects of partisan attitudes
Mondak and Halperin (2008)	Different forms of political attitudes, predispositions and behavior	–	–	
Vecchione and Caprara (2009)	Political participation	X	–	Mediating effects of self-efficacy beliefs

Reference	Dependent Variable	Mediation	Moderation	Additional Remarks
Mondak et al. (2010)	Political participation/ engagement	X	X	Mediating effects of political knowledge and internal efficacy; moderating effects perceived importance of campaign activity and network size
Gerber et al. (2011a)	Consumption of political information	–	–	
Gerber et al. (2011c)	Political participation	–	–	
Hibbing et al. (2011)	Political discussion and political preferences	–	X	Moderating effects of discussant's preference
Mattila et al. (2011)	Turnout in parliamentary elections	–	X	Separate analyses for different age groups
Mondak et al. (2011)	Political participation	–	–	
Vecchione et al. (2011)	Voting behavior in parliamentary elections	–	–	
Dirilen-Gümüş et al. (2012)	Voting behavior in presidential elections	–	–	
Gallego and Oberski (2012)	Political participation	X	–	Mediating effects of civic duty, political interest, political efficacy, political discussion and identification with Europe
Gerber et al. (2012a)	Frequency of political discussions	–	X	Moderating effects of personality traits on the link between agreement and discussion
Steinbrecher and Schoen (2012)	Political participation	–	–	
Cooper et al. (2013)	Different forms of political attitudes, predispositions and behavior	–	–	
Gerber et al. (2013)	Turnout (intention)	–	X	Survey and field experiments (response to Get-Out-The-Vote (GOTV) appeals); moderating effects of personality traits
Ha et al. (2013)	Political participation	–	–	
Kim et al. (2013)	Political discussion and civic engagement	–	X	Moderating effects of personality traits on the

Reference	Dependent Variable	Mediation	Moderation	Additional Remarks
				link between social media use and political discussion and civic engagement
Quintelier and Theocharis (2013)	Online political engagement	–	–	
Schoen and Steinbrecher (2013)	Turnout in parliamentary elections	X	–	Mediating effects of civic duty, partisanship, political interest, internal and external efficacy
Brandstätter and Opp (2014)	Political protest	X	–	Mediating effects of protest incentives
Quintelier (2014)	Political consumerism	–	X	Moderating effects of political interest and environmental concern
Wang (2014)	Turnout in parliamentary elections	–	X	Moderating effects of gender
Weinschenk and Panagopoulos (2014)	Political participation (intention)	–	X	Survey experiment; moderating effects of negative political messages
Johann et al. (2015)	Political participation	X	–	Mediating effects of political involvement
Russo and Amnå (2015)	Online political participation	X	–	Mediating effects of internet use, political efficacy and political interest
Ackermann (2016)	Political protest	–	X	Moderating effects of direct democracy
Bakker et al. (2016a)	Electoral volatility	–	–	
Bakker et al. (2016b)	Voting for populist parties	–	–	
Lyons et al. (2016)	Political information-seeking behavior	–	X	Survey experiment; moderating effects of direct personality traits on the link between disagreement and information-seeking behavior
Russo and Amnå (2016)	Political participation	–	X	Moderating effects of personality traits on the

Reference	Dependent Variable	Mediation	Moderation	Additional Remarks
				link between political talk and political action
Wang (2016)	Voting behavior in parliamentary elections	X	–	Mediating effects of attitudinal factors
Dawkins (2017)	Political participation	–	X	Moderating effects of personality traits on the link between campaign exposure and political participation
Political Attitudes and Ideology				
Alford and Hibbing (2007)	Political ideology	–	–	
Schoen (2007)	Attitudes toward foreign policy issues	–	–	
Carney et al. (2008)	Political ideology	–	–	
Mondak and Halperin (2008)	Different forms of political attitudes, predispositions and behavior	–	–	
Caprara et al. (2009)	Political ideology	X	–	Mediating effects of personal values
Gerber et al. (2010)	Political attitudes toward different issues	–	X	Moderating effects of race
Verhulst et al. (2010)	Political ideology and political attitudes	–	–	Confounding effect of genetic factors; see Ludeke and Rasmussen (2016), Verhulst and Hatemi (2016) and Verhulst et al. (2016b) for a discussion on this paper
Gerber et al. (2012b)	Strength and direction of partisanship	X	–	Mediating effects of ideology and political attitudes
Pötzschke et al. (2012)	Attitudes toward foreign and security policies	X	–	Mediating effects of values
Vecchione et al. (2012)	Perceptions of the consequences of immigration	X	–	Mediating effects of personal values
Verhulst et al. (2012)	Political ideology	–	–	Confounding effect of genetic factors; see Ludeke and Rasmussen (2016) Verhulst and Hatemi (2016)

Reference	Dependent Variable	Mediation	Moderation	Additional Remarks
				and Verhulst et al. (2016a) for a discussion on this paper
Cooper et al. (2013)	Different forms of political attitudes, predispositions and behavior	–	–	
Gallego and Pardos-Prado (2014)	Attitudes toward immigrants	X	–	Mediating effects of socio-demographic and -economic factors, ideology and inter-group contact
Oskarsson and Widmalm (2014)	Political tolerance	–	X	Moderating effects of country context
Ackermann and Ackermann (2015)	Political attitudes toward equal opportunities for immigrants	–	X	Moderating effects of perceived ethnic diversity
Ackermann and Freitag (2015a)	Strength of partisanship	–	X	Moderating effects of direct democracy
Freitag and Rapp (2015)	Tolerance toward immigrants	X	–	Mediating effects of socio-demographic factors, ideology and network diversity
Bakker et al. (2015)	Direction, strength and change of partisanship	–	–	
Hatemi and Verhulst (2015)	Political attitudes and change in attitudes	–	–	Confounding effect of genetic factors; see Ludeke and Rasmussen (2016) and Verhulst and Hatemi (2016) for a related discussion
Mays (2015)	Stability of political predispositions	–	–	
de Neve (2015)	Political ideology	X	X	Moderated mediation effect of personality traits and childhood experience on political ideology
Osborne and Sibley (2015)	Political ideology	–	X	Moderating effects of education
Ackermann et al. (2016)	Attitudes toward the openness of Switzerland	–	X	Moderating effects of perceived ethnic diversity
Bakker (2016)	Economic ideology	–	X	Moderating effect of income

Reference	Dependent Variable	Mediation	Moderation	Additional Remarks
				on the link between personality traits and economic ideology
Bakker and de Vreese (2016)	Attitudes toward the European Union	–	–	
Barceló (2016)	Support for the secession of Catalonia	–	–	
Dinesen et al. (2016)	Attitudes toward immigration	–	X	Moderating effects of personality traits on the link between economic threat and attitudes toward immigration
Fatke (2016)	Political ideology and attitudes	–	X	Moderating effects of country context (level of democracy and development)
Nielsen (2016)	Attitudes toward the European Union	–	X	Survey experiment, moderating effects of personality traits on the link between emphasis frames and attitudes toward the EU

Note: Articles are sorted chronologically. Only articles that use the Five Factor Model and that are published in English or in German in scientific journals are included. The overview articles by Gerber et al. (2011b) and Schoen (2012) as well as the meta-analyses by Sibley and Duckitt (2008) and Sibley et al. (2012) are excluded from this literature review. Moreover, studies that do not focus on personality traits but just include them as control variables are not considered.

Figure A.1: BFI-S in the "Politics and Society in Switzerland" Data Set

J: PERSÖNLICHKEITSMERKMALE

	In der Folge mache ich ein paar Aussagen. Geben Sie zu diesen bitte jeweils an, wie sehr die Aussage auf Sie zutrifft oder nicht. 0 bedeutet sie trifft gar nicht zu, 10 bedeutet sie trifft vollkommen zu. Ich bin jemand, der… ***EDV: J1-J15 rotieren***														
J1	gründlich arbeitet.	0 ❑	1 ❑	2 ❑	3 ❑	4 ❑	5 ❑	6 ❑	7 ❑	8 ❑	9 ❑	10 ❑	98 Weiss nicht ❑	99 k.A.
J2	kommunikativ, gesprächig ist.	0 ❑	1 ❑	2 ❑	3 ❑	4 ❑	5 ❑	6 ❑	7 ❑	8 ❑	9 ❑	10 ❑	98 Weiss nicht ❑	99 k.A.
J3	manchmal etwas grob zu anderen ist.	0 ❑	1 ❑	2 ❑	3 ❑	4 ❑	5 ❑	6 ❑	7 ❑	8 ❑	9 ❑	10 ❑	98 Weiss nicht ❑	99 k.A.
J4	originell ist, neue Ideen einbringt.	0 ❑	1 ❑	2 ❑	3 ❑	4 ❑	5 ❑	6 ❑	7 ❑	8 ❑	9 ❑	10 ❑	98 Weiss nicht ❑	99 k.A.
J5	sich oft Sorgen macht.	0 ❑	1 ❑	2 ❑	3 ❑	4 ❑	5 ❑	6 ❑	7 ❑	8 ❑	9 ❑	10 ❑	98 Weiss nicht ❑	99 k.A.
J6	verzeihen kann.	0 ❑	1 ❑	2 ❑	3 ❑	4 ❑	5 ❑	6 ❑	7 ❑	8 ❑	9 ❑	10 ❑	98 Weiss nicht ❑	99 k.A.
J7	eher faul ist.	0 ❑	1 ❑	2 ❑	3 ❑	4 ❑	5 ❑	6 ❑	7 ❑	8 ❑	9 ❑	10 ❑	98 Weiss nicht ❑	99 k.A.
J8	aus sich herausgehen kann, gesellig ist.	0 ❑	1 ❑	2 ❑	3 ❑	4 ❑	5 ❑	6 ❑	7 ❑	8 ❑	9 ❑	10 ❑	98 Weiss nicht ❑	99 k.A.
J9	künstlerische Erfahrungen schätzt.	0 ❑	1 ❑	2 ❑	3 ❑	4 ❑	5 ❑	6 ❑	7 ❑	8 ❑	9 ❑	10 ❑	98 Weiss nicht ❑	99 k.A.
J10	leicht nervös wird.	0 ❑	1 ❑	2 ❑	3 ❑	4 ❑	5 ❑	6 ❑	7 ❑	8 ❑	9 ❑	10 ❑	98 Weiss nicht ❑	99 k.A.
J11	Aufgaben wirksam und effizient erledigt.	0 ❑	1 ❑	2 ❑	3 ❑	4 ❑	5 ❑	6 ❑	7 ❑	8 ❑	9 ❑	10 ❑	98 Weiss nicht ❑	99 k.A.
J12	zurückhaltend ist.	0 ❑	1 ❑	2 ❑	3 ❑	4 ❑	5 ❑	6 ❑	7 ❑	8 ❑	9 ❑	10 ❑	98 Weiss nicht ❑	99 k.A.
J13	rücksichtsvoll und freundlich mit anderen umgeht.	0 ❑	1 ❑	2 ❑	3 ❑	4 ❑	5 ❑	6 ❑	7 ❑	8 ❑	9 ❑	10 ❑	98 Weiss nicht ❑	99 k.A.
J14	eine lebhafte Phantasie, Vorstellungen hat.	0 ❑	1 ❑	2 ❑	3 ❑	4 ❑	5 ❑	6 ❑	7 ❑	8 ❑	9 ❑	10 ❑	98 Weiss nicht ❑	99 k.A.
J15	entspannt ist, mit Stress gut umgehen kann.	0 ❑	1 ❑	2 ❑	3 ❑	4 ❑	5 ❑	6 ❑	7 ❑	8 ❑	9 ❑	10 ❑	98 Weiss nicht ❑	99 k.A.

Note: Extract from the "Politics and Society in Switzerland" questionnaire showing the BFI-S instrument to measure the Big Five personality traits. The instrument is based on Gerlitz and Schupp (2005).

A.2 Appendix Chapter 2

Table A.2: Factor Structure of Big Five Personality Traits in Switzerland

I see myself as someone who...	Openness to Experience	Conscientiousness	Extraversion	Agreeableness	Neuroticism	Uniqueness (1-h^2)
is original, comes up with new ideas	0.57					0.60
values artistic, aesthetic experiences	0.43					0.81
has an active imagination	0.82					0.34
does a thorough job		0.61				0.52
does things efficiently		0.76				0.47
almost never tends to be lazy*		0.38				0.81
is outgoing, sociable			0.78			0.43
is not reserved*			0.36			0.77
is talkative			0.79			0.36
is almost never rude to others*				0.53		0.73
has a forgiving nature				0.31		0.80
is considerate and kind to almost everyone				0.64		0.45
does not remain calm in tense situations*					0.37	0.69
does worry a lot					0.74	0.51
does get nervous easily					0.56	0.65
Variance	1.65	1.92	2.09	1.53	1.27	
N			1117			

Note: Method: maximum likelihood, rotation: promax; only factor loadings > 0.3 are displayed; * item was inversed in the original data set; data: "Politics and Society in Switzerland 2012".

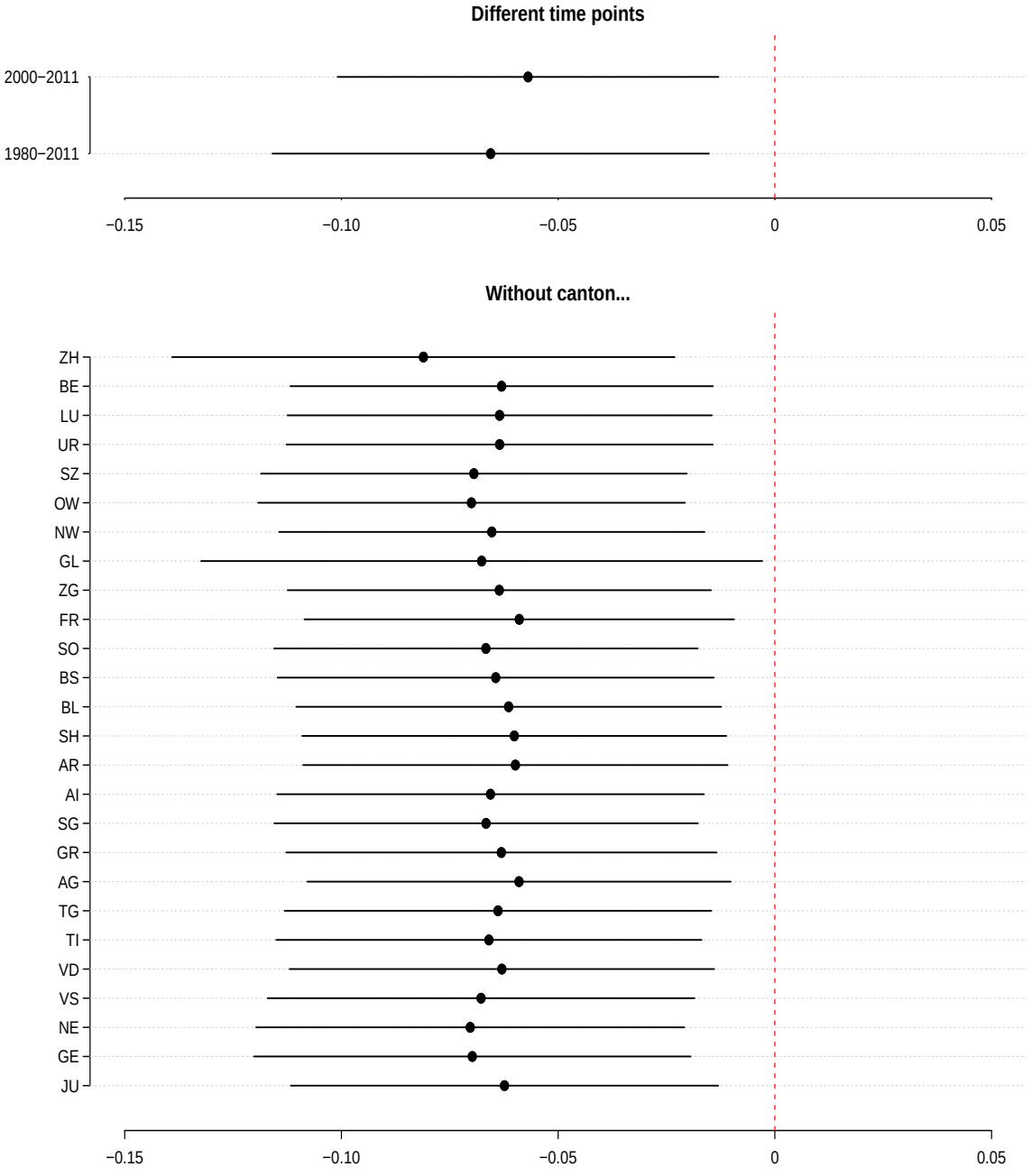
Table A.3: Variables, Operationalization, Descriptive Statistics and Source

Variable	Operationalization	$\bar{x}$	σ	min	max
Individual Level					
Trust in Cantonal Authorities	Continuous Variable "Please tell me on a score of 0-10 how much you trust the cantonal authorities." 0 = no trust at all; 10 = complete trust	6.17	1.85	0	10
Openness to Experience	Continuous Variable Additive index of items loading on the factor "openness to experience" (cf. Table A1); centered to the mean	0	1.63	−6.79	3.21
Conscientiousness	Continuous Variable Additive index of items loading on the factor "conscientiousness" (cf. Table A1); centered to the mean	0	1.39	−6.09	2.25
Extraversion	Continuous Variable Additive index of items loading on the factor "extraversion" (cf. Table A1); centered to the mean	0	1.54	−5.27	3.73
Agreeableness	Continuous Variable Additive index of items loading on the factor "agreeableness" (cf. Table A1); centered to the mean	0	1.36	−4.36	2.64
Neuroticism	Continuous Variable Additive index of items loading on the factor "neuroticism" (cf. Table A1); centered to the mean	0	1.70	−4.51	5.49
Sex	Dichotomous Variable Sex of respondent: 0 = female; 1 = male	0.49	–	0	1
Age	Continuous Variable Age of respondent: "May I ask you in which year you are born" Values rescaled by the factor 10 (e.g. 3 = 30 years)	4.94	1.72	1.80	9.60
Education	Categorical Variable "What is you highest level of education you have completed?" 0 = primary education; 1 = secondary education; 2 = tertiary education	1.18	0.57	0	2
Contextual Level					
Direct Democracy	Continuous Variable Average number of popular votes (initiatives and facultative referendums) in a canton, 1990-2011 *Source:* Schaub and Dlabac (2012)	1.74	1.57	0.41	7.37

Variable	Operationalization	$\bar{x}$	σ	min	max
Language Region	Continuous Variable Share of German speaking people in a canton in 2010 Values rescaled by the factor 10 (e.g. 3 = 30 percent German speaking people) *Source:* Official statistics	6.86	3.46	0.58	9.66
Share of Tertiary Education	Continuous Variable Share of people with tertiary education degree in a canton in 2012 *Source:* Official statistics	27.14	6.05	17.30	39.70
Median Income	Continuous Variable Median equivalised income in a canton in 2010 Values rescaled by the factor 1000 (e.g. 40 = 40 000 CHF) *Source:* Official statistics	41.51	3.23	36.10	49.50
Population	Continuous Variable Number of people living in the canton in 2012 Values rescaled by the factor 1000 (e.g. 500 = 500 000 people) *Source:* Official statistics	309.1	328.6	15.7	1408.2

Note: All individual variables are taken from the survey "Politics and Society in Switzerland 2012".

Figure A.2: Coefficient Plot of the Interaction Effect of Direct Democracy and Agreeableness on Trust in Local Authorities (Robustness Checks)



Note: The regression models on which this plot is based are available from the authors on request. The *upper graph* shows the regression coefficients of the interaction between direct democracy and agreeableness when different time points are used. The *lower graph* shows the regression coefficients of the interaction between direct democracy and agreeableness when a canton is left out (manual jackknifing).

Table A.4: Direct Democracy, Personality Traits and Trust in Cantonal Authorities in Switzerland (Robustness Check: Interaction with Age Group

Trust in cantonal authorities (interaction with age group)	M9	M10	M11	M12	M13	M14	M15
Fixed Effects							
Direct Democracy (DD)	0.01	0.01	−0.02	0.01	−0.00	0.02	−0.01
	(0.11)	(0.11)	(0.11)	(0.11)	(0.11)	(0.11)	(0.11)
Language Region	0.04	0.04	0.04	0.04	0.04	0.04	0.04
	(0.04)	(0.04)	(0.04)	(0.04)	(0.04)	(0.04)	(0.04)
Percentage of Tertiary Education	0.03	0.03	0.03	0.03	0.03	0.03	0.03
	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)
Median Income (in 1000 CHF)	−0.04	−0.04	−0.04	−0.04	−0.05	−0.04	−0.05
	(0.06)	(0.06)	(0.06)	(0.06)	(0.06)	(0.06)	(0.06)
Population (in 1000)	−0.00	−0.00	−0.00	−0.00	−0.00	−0.00	−0.00
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Openness to Experience	−0.02	−0.02	−0.02	−0.02	−0.02	−0.02	−0.03
	(0.04)	(0.06)	(0.04)	(0.04)	(0.04)	(0.04)	(0.07)
Conscientiousness	−0.05	−0.05	0.09	−0.05	−0.05	−0.05	0.03
	(0.04)	(0.04)	(0.08)	(0.04)	(0.04)	(0.04)	(0.08)
Extraversion	−0.09**	−0.09**	−0.09**	−0.07	−0.09**	−0.09**	−0.11*
	(0.04)	(0.04)	(0.04)	(0.06)	(0.04)	(0.04)	(0.06)
Agreeableness	0.06	0.06	0.07	0.06	0.23***	0.06	0.19***
	(0.04)	(0.04)	(0.04)	(0.04)	(0.07)	(0.04)	(0.07)
Neuroticism	−0.07**	−0.07**	−0.08**	−0.07**	−0.07**	−0.15**	−0.14**
	(0.03)	(0.04)	(0.03)	(0.04)	(0.03)	(0.06)	(0.06)
Sex (male = 1)	−0.01	−0.01	−0.02	−0.01	0.01	−0.01	−0.01
	(0.11)	(0.11)	(0.11)	(0.11)	(0.11)	(0.11)	(0.11)
Age group (>35 = 1)	−0.08	−0.07	−0.18	−0.07	−0.08	−0.08	−0.14
	(0.22)	(0.23)	(0.22)	(0.22)	(0.22)	(0.22)	(0.23)
No/primary Education	Ref. cat.	Ref. cat.	Ref. cat.	Ref. cat.	Ref. cat.	Ref. cat.	Ref. cat.
Secondary Education	0.10	0.10	0.11	0.10	0.12	0.09	0.11
	(0.21)	(0.21)	(0.21)	(0.21)	(0.21)	(0.21)	(0.21)
Tertiary Education	0.20	0.20	0.22	0.19	0.21	0.18	0.21
	(0.22)	(0.22)	(0.22)	(0.22)	(0.22)	(0.22)	(0.22)
DD*Age Group	−0.10	−0.11	−0.05	−0.10	−0.11	−0.11	−0.09
	(0.10)	(0.10)	(0.10)	(0.10)	(0.10)	(0.10)	(0.10)
DD*Openness to Experience		0.00					0.01
		(0.03)					(0.03)

DD*Conscientiousness			−0.08**				−0.04
			(0.03)				(0.04)
DD*Extraversion				−0.01			0.01
				(0.03)			(0.03)
DD*Agreeableness					−0.08***		−0.07**
					(0.03)		(0.03)
DD*Neuroticism						0.04	0.03
						(0.03)	(0.03)
Constant	7.09***	7.04***	7.21***	7.10***	7.09***	7.12***	7.13***
	(1.77)	(1.78)	(1.76)	(1.77)	(1.77)	(1.75)	(1.75)
Random Effects							
SD Slope (Openness to Experience)		0.07					0.07
SD Slope (Conscientiousness)			0.08				0.08
SD Slope (Extraversion)				0.05			0.00
SD Slope (Agreeableness)					0.00		0.00
SD Slope (Neuroticism)						0.09	0.09
SD Constant	0.46	0.46	0.46	0.46	0.46	0.46	0.45
SD Residual	1.80	1.79	1.79	1.80	1.79	1.79	1.78
AIC	4508	4517	4511	4517	4508	4508	4526
N	26	26	26	26	26	26	26
n	1094	1094	1094	1094	1094	1094	1094

Note: Estimations based on the data set "Politics and Society in Switzerland 2012" and context data from various sources (cf. Table A.3 in the Appendix); Multilevel linear regression models with random intercepts and slopes, standard errors in parentheses; * $p < 0.1$ ** $p < 0.05$ *** $p < 0.01$.

Table A.5: Direct Democracy, Personality Traits and Trust in Cantonal Authorities in Switzerland (Robustness Check: Interaction with Sex)

Trust in cantonal authorities (interaction with gender)	M16	M17	M18	M19	M20	M21	M22
Fixed Effects							
Direct Democracy (DD)	−0.00	−0.00	0.02	−0.00	−0.01	−0.01	0.01
	(0.09)	(0.09)	(0.09)	(0.09)	(0.09)	(0.09)	(0.09)
Language Region	0.04	0.04	0.04	0.04	0.04	0.04	0.04
	(0.04)	(0.04)	(0.04)	(0.04)	(0.04)	(0.04)	(0.04)
Percentage of Tertiary Education	0.03	0.03	0.03	0.03	0.03	0.03	0.03
	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)
Median Income (in 1000 CHF)	−0.04	−0.04	−0.04	−0.04	−0.04	−0.04	−0.04
	(0.06)	(0.06)	(0.06)	(0.06)	(0.06)	(0.06)	(0.06)
Population (in 1000)	−0.00	−0.00	−0.00	−0.00	−0.00	−0.00	−0.00
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Openness to Experience	−0.02	−0.01	−0.02	−0.02	−0.02	−0.02	−0.02
	(0.04)	(0.06)	(0.04)	(0.04)	(0.04)	(0.04)	(0.07)
Conscientiousness	−0.06	−0.06	0.09	−0.06	−0.05	−0.05	0.04
	(0.04)	(0.04)	(0.07)	(0.04)	(0.04)	(0.04)	(0.08)
Extraversion	−0.09**	−0.09**	−0.09**	−0.06	−0.09**	−0.09**	−0.10
	(0.04)	(0.04)	(0.04)	(0.06)	(0.04)	(0.04)	(0.06)
Agreeableness	0.07	0.07	0.07*	0.07	0.24***	0.07	0.20***
	(0.04)	(0.04)	(0.04)	(0.04)	(0.07)	(0.04)	(0.07)
Neuroticism	−0.08**	−0.08**	−0.08**	−0.08**	−0.07**	−0.14**	−0.13**
	(0.03)	(0.04)	(0.03)	(0.04)	(0.03)	(0.06)	(0.06)
Sex (male = 1)	0.20	0.19	0.24	0.20	0.25	0.17	0.24
	(0.19)	(0.19)	(0.19)	(0.19)	(0.19)	(0.19)	(0.19)
Age	−0.05	−0.05	−0.05	−0.05	−0.05	−0.05	−0.05
	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)
No/primary Education	Ref. cat.	Ref. cat.	Ref. cat.	Ref. cat.	Ref. cat.	Ref. cat.	Ref. cat.
Secondary Education	0.06	0.07	0.06	0.06	0.08	0.05	0.07
	(0.21)	(0.21)	(0.21)	(0.21)	(0.21)	(0.21)	(0.21)
Tertiary Education	0.15	0.15	0.16	0.14	0.16	0.13	0.15
	(0.22)	(0.22)	(0.22)	(0.22)	(0.22)	(0.22)	(0.22)
DD*Sex	−0.11	−0.11	−0.13*	−0.11	−0.13*	−0.09	−0.13
	(0.08)	(0.08)	(0.08)	(0.08)	(0.08)	(0.08)	(0.08)
DD*Openness to Experience		−0.01					0.00
		(0.03)					(0.03)

DD*Conscientiousness			-0.09^{**}				-0.05
			(0.03)				(0.04)
DD*Extraversion				-0.01			0.00
				(0.03)			(0.03)
DD*Agreeableness					-0.09^{***}		-0.07^{**}
					(0.03)		(0.03)
DD*Neuroticism						0.03	0.02
						(0.03)	(0.03)
Constant	7.13^{***}	7.11^{***}	7.15^{***}	7.15^{***}	7.11^{***}	7.18^{***}	7.13^{***}
	(1.77)	(1.77)	(1.75)	(1.76)	(1.76)	(1.75)	(1.75)
Random Effects							
SD Slope (Openness to Experience)		0.07					0.07
SD Slope (Conscientiousness)			0.08				0.08
SD Slope (Extraversion)				0.05			0.01
SD Slope (Agreeableness)					0.00		0.00
SD Slope (Neuroticism)						0.09	0.09
SD Constant	0.46	0.46	0.46	0.46	0.46	0.46	0.45
SD Residual	1.80	1.79	1.80	1.80	1.79	1.80	1.78
AIC	4512	4521	4514	4521	4511	4519	4543
N	26	26	26	26	26	26	26
n	1094	1094	1094	1094	1094	1094	1094

Note: Estimations based on the data set "Politics and Society in Switzerland 2012" and context data from various sources (cf. Table A.3 in the Appendix); Multilevel linear regression models with random intercepts and slopes, standard errors in parentheses; * $p < 0.1$ ** $p < 0.05$ *** $p < 0.01$.

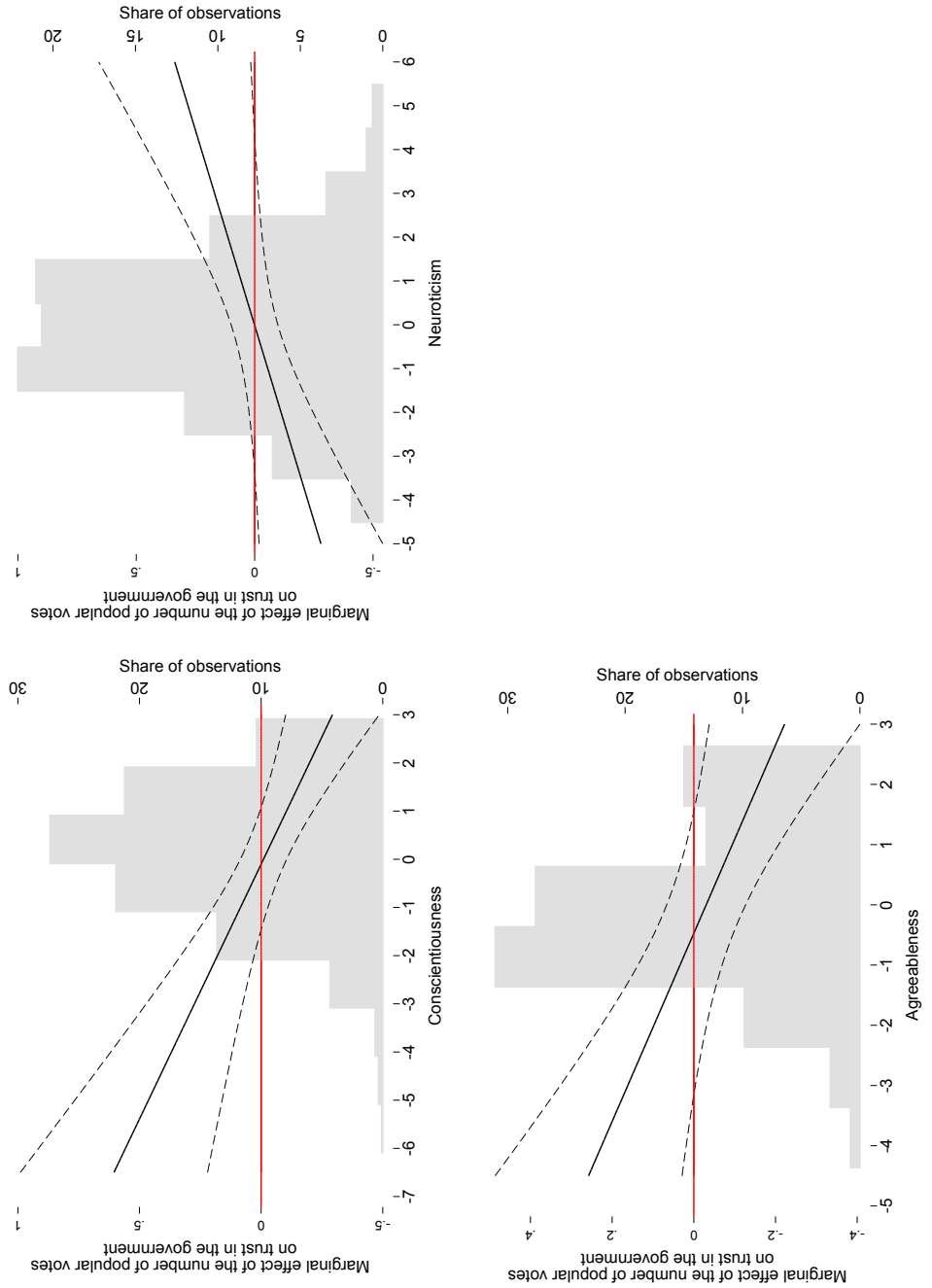
Table A.6: Direct Democracy, Personality Traits and Trust in the National Government in Switzerland

Trust in the national government	M23	M24	M25	M26	M27	M28	M29	M30
Fixed Effects								
Direct Democracy (DD)	−0.01	−0.02	−0.01	−0.01	−0.01	−0.03	−0.01	0.00
	(0.06)	(0.06)	(0.06)	(0.06)	(0.06)	(0.06)	(0.06)	(0.06)
Language Region	0.03	0.02	0.03	0.02	0.02	0.02	0.02	0.02
	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)
Percentage of Tertiary Education	0.02	0.01	0.02	0.01	0.01	0.02	0.01	0.02
	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)
Median Income (in 1000 CHF)	−0.05	−0.04	−0.04	−0.04	−0.04	−0.04	−0.04	−0.05
	(0.04)	(0.04)	(0.04)	(0.04)	(0.04)	(0.04)	(0.04)	(0.04)
Population (in 1000)	−0.00	−0.00	−0.00	−0.00	−0.00	−0.00	−0.00	−0.00
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Openness to Experience		−0.01	−0.10	−0.01	−0.01	−0.01	−0.01	−0.10
		(0.04)	(0.07)	(0.04)	(0.04)	(0.04)	(0.04)	(0.07)
Conscientiousness		−0.16***	−0.16***	0.01	−0.16***	−0.15***	−0.15***	−0.04
		(0.05)	(0.05)	(0.08)	(0.05)	(0.05)	(0.05)	(0.08)
Extraversion		−0.03	−0.02	−0.03	0.04	−0.03	−0.03	−0.03
		(0.04)	(0.04)	(0.04)	(0.09)	(0.04)	(0.04)	(0.09)
Agreeableness		0.07	0.07	0.07	0.07	0.20***	0.07	0.14*
		(0.04)	(0.04)	(0.04)	(0.04)	(0.07)	(0.04)	(0.07)
Neuroticism		−0.07*	−0.07*	−0.07*	−0.07**	−0.07*	−0.19***	−0.14***
		(0.04)	(0.04)	(0.04)	(0.04)	(0.04)	(0.07)	(0.07)
Sex (male = 1)		−0.04	−0.04	−0.04	−0.04	0.04	−0.04	−0.04
		(0.12)	(0.12)	(0.12)	(0.12)	(0.12)	(0.12)	(0.12)
Age (in 10 years)		−0.05	−0.05	−0.05	−0.05	−0.05	−0.05	−0.05
		(0.04)	(0.04)	(0.04)	(0.04)	(0.04)	(0.04)	(0.04)
No/primary Education		Ref. cat.	Ref. cat.	Ref. cat.	Ref. cat.	Ref. cat.	Ref. cat.	Ref. cat.
Secondary Education		0.49**	0.51**	0.50**	0.48**	0.51**	0.48**	0.50**
		(0.22)	(0.22)	(0.22)	(0.22)	(0.22)	(0.22)	(0.22)
Tertiary Education		0.95***	0.97***	0.97***	0.94***	0.97***	0.94***	0.96***
		(0.24)	(0.24)	(0.24)	(0.24)	(0.24)	(0.24)	(0.24)

DD*Openness to Experience			−0.05					−0.05*
			(0.03)					(0.03)
DD*Conscientiousness				−0.09***				−0.07*
				(0.03)				(0.04)
DD*Extraversion					−0.01			0.02
					(0.04)			(0.04)
DD*Agreeableness						−0.06***		−0.04
						(0.03)		(0.03)
DD*Neuroticism							0.05*	0.06*
							(0.03)	(0.03)
Constant	7.69***	7.07***	7.07***	7.13***	7.30***	7.06***	7.14***	7.35***
	(1.12)	(1.20)	(1.21)	(1.18)	(1.22)	(1.19)	(1.22)	(1.22)
Random Effects								
SD Slope (Openness to Experience)			0.07					0.05
SD Slope (Conscientiousness)				0.08				0.08
SD Slope (Extraversion)					0.18			0.16
SD Slope (Agreeableness)						0.00		0.00
SD Slope (Neuroticism)							0.12	0.10
SD Constant	0.16	0.20	0.20	0.19	0.21	0.19	0.21	0.21
SD Residual	1.99	1.97	1.96	1.96	1.95	1.91	1.95	1.93
AIC	4704	4717	4723	4718	4720	4721	4720	4741
N	26	26	26	26	26	26	26	26
n	1102	1102	1102	1102	1102	1102	1102	1102

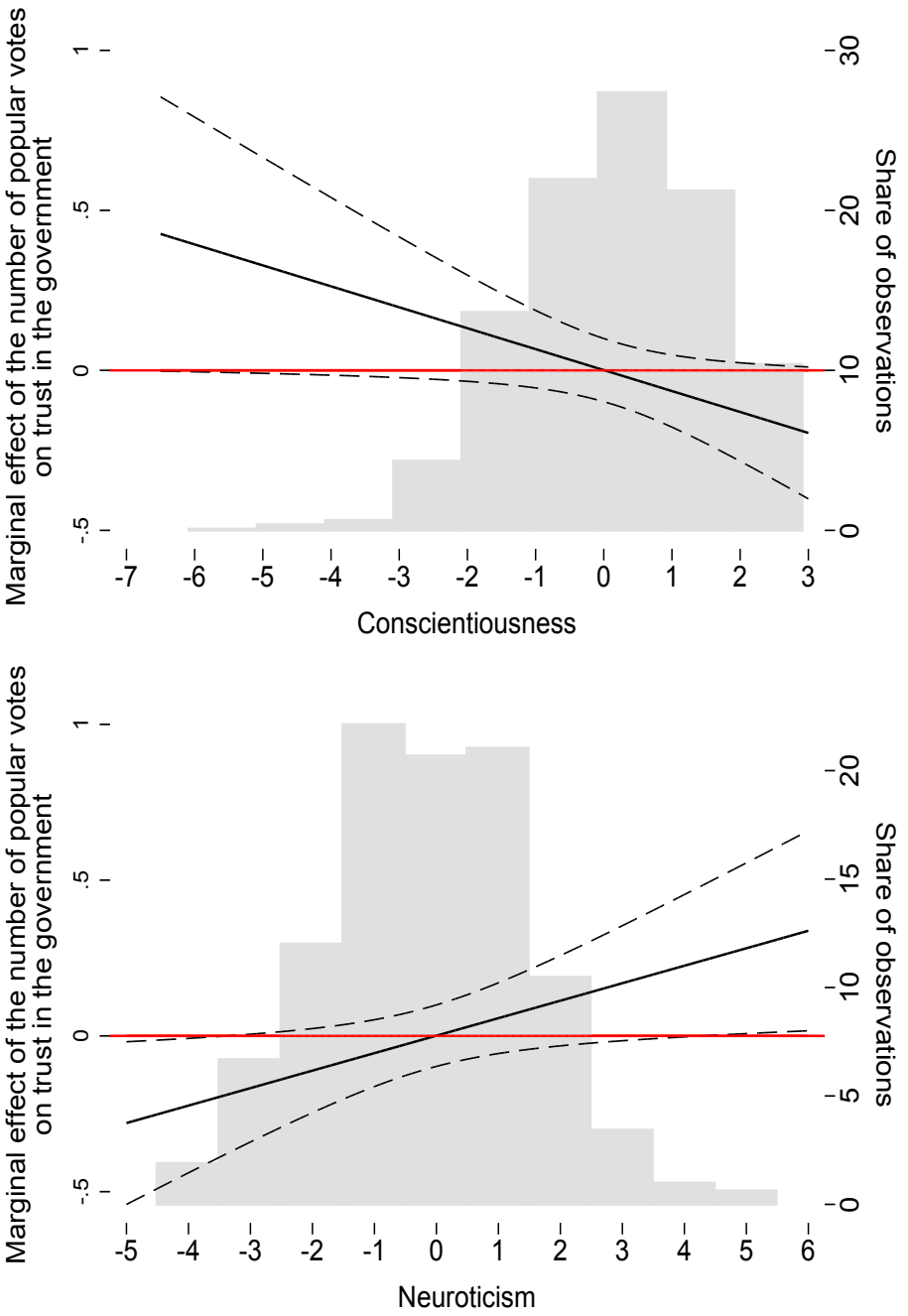
Note: Estimations based on the data set "Politics and Society in Switzerland 2012" and context data from various sources (cf. Table A.3 in the Appendix); Multilevel linear regression models with random intercepts and slopes, standard errors in parentheses; * $p < 0.1$ ** $p < 0.05$ *** $p < 0.01$.

Figure A.3: Moderating Effects of Personality on the Relation between Direct Democracy and Trust in the National Government, separate models (based on model 26, 28 and 29 in Table A.6)



Note: The plot is based on Table A.6 in the Appendix. The graphs show the effect of direct democracy on trust in the national government contingent on personality traits.

Figure A.4: Moderating Effects of Personality on the Relation between Direct Democracy and Trust in the National Government, full model (based on model 30 in Table A.6)



Note: The plot is based on Table A.6 in Appendix. The graphs show the effect of direct democracy on trust in the national government contingent on personality traits.

A.3 Appendix Chapter 3

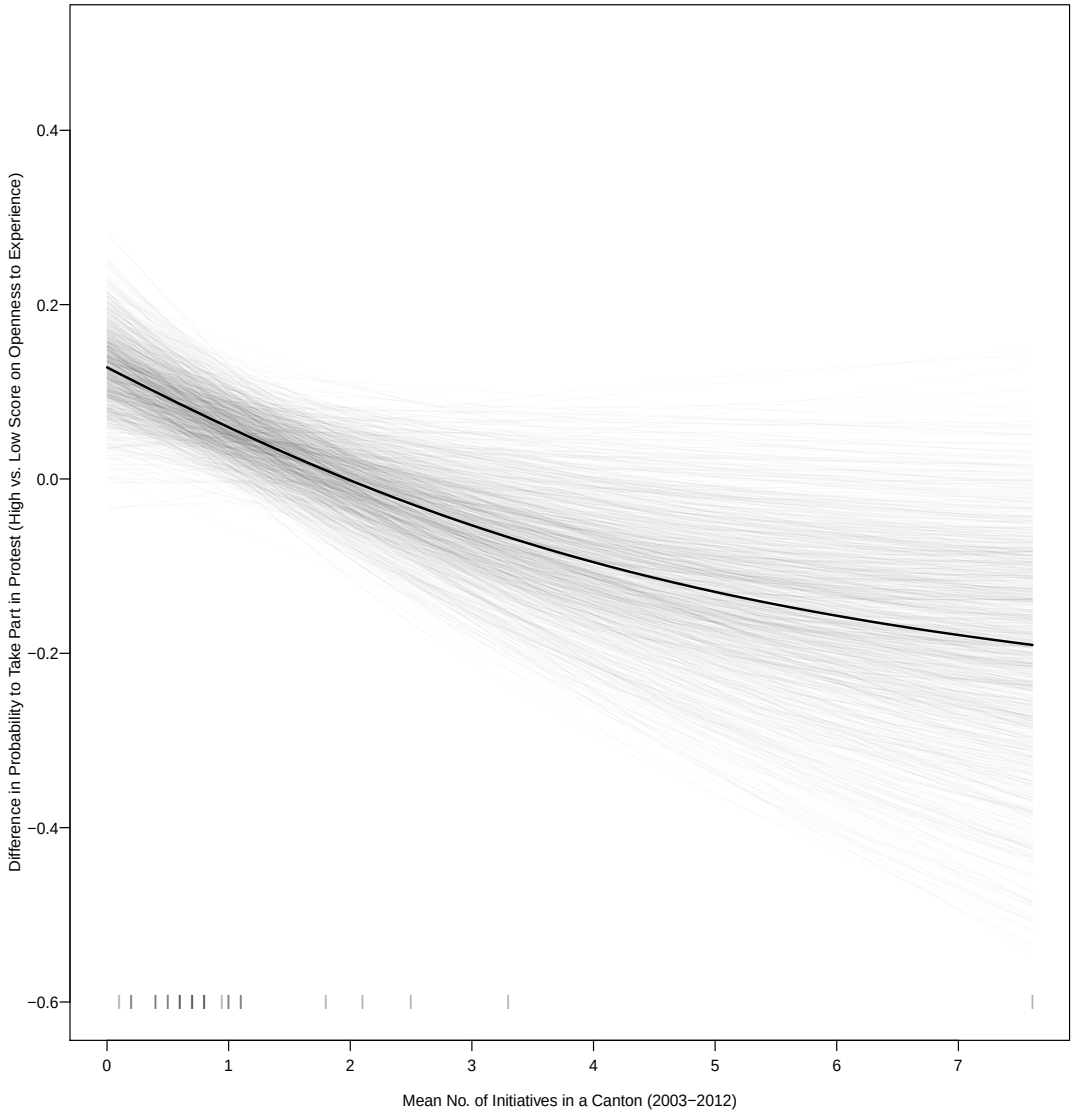
Table A.7: Variables, Operationalization and Descriptive Statistics

Variable	Operationalization	$\bar{x}$	σ	min	max
Individual Level					
Political Protest	Dichotomous Variable Generated by using the following dichotomous items: "Within the past twelve months, did you - take part in a demonstration - take part in an illegal protest - take part in a political manifestation" 1 = at least one action taken; 0 = no action taken	0.24	–	0	1
Openness to Experience	Continuous Variable (centered) Additive index consisting of the following continuous items (range: 0 - 10): "I see myself as someone who - is original, comes up with new ideas - values artistic, aesthetic experiences - has an active imagination"	0	1.63	−6.79	3.21
Conscientiousness	Continuous Variable (centered) Additive index consisting of the following continuous items (range: 0 - 10): "I see myself as someone who - does a thorough job - does things efficiently - almost never tends to be lazy"	0	1.39	−6.09	2.25
Extraversion	Continuous Variable (centered) Additive index consisting of the following continuous items (range: 0 - 10): "I see myself as someone who - is outgoing, sociable - is not reserved - is talkative"	0	1.54	−5.27	3.73
Agreeableness	Continuous Variable (centered) Additive index consisting of the following continuous items (range: 0 - 10): "I see myself as someone who - is almost never rude to others - has a forgiving nature - is considerate and kind to almost everyone"	0	1.36	−4.36	2.64
Neuroticism	Continuous Variable (centered)	0	1.70	−4.51	5.49

Variable	Operationalization	$\bar{x}$	σ	min	max
	Additive index consisting of the following continuous items (range: 0 - 10): "I see myself as someone who - does not remain calm in tense situations - does worry a lot - does get nervous easily"				
Sex	Dichotomous Variable Sex of respondent: 0 = female; 1 = male	0.49	–	0	1
Age	Continuous Variable (centered) Age of respondent: "May I ask you in which year you are born" Values rescaled by the factor 10 (e.g. 3 = 30 years) before centering	0	1.72	−3.19	4.61
Education	Categorical Variable "What is you highest level of education you have completed?"				
	(1) primary education	0.09	–	0	1
	(2) secondary education (Reference Category)	0.64	–	0	1
	(3) tertiary education	0.27	–	0	1
Contextual Level					
Mean No. of Initiatives	Continuous Variable Mean number of cantonal initiatives between 2003 and 2012 *Source:* Année Politique Suisse (2011-2012); Schaub and Dlabac (2012)	1.20	1.50	0.10	7.61
Language Region	Continuous Variable (centered) Share of German speaking people in a canton in 2010 Values rescaled by the factor 10 (e.g. 3 = 30 percent German speaking people) before centering *Source:* Official statistics	0.00	3.46	−6.28	2.80
Urbanization	Continuous Variable (centered) Share of inhabitants in urban areas within a canton in 2010 Values rescaled by the factor 10 (e.g. 3 = 30 percent inhabitants in urban areas) before centering *Source:* Official statistics	0.00	3.18	−6.08	3.92

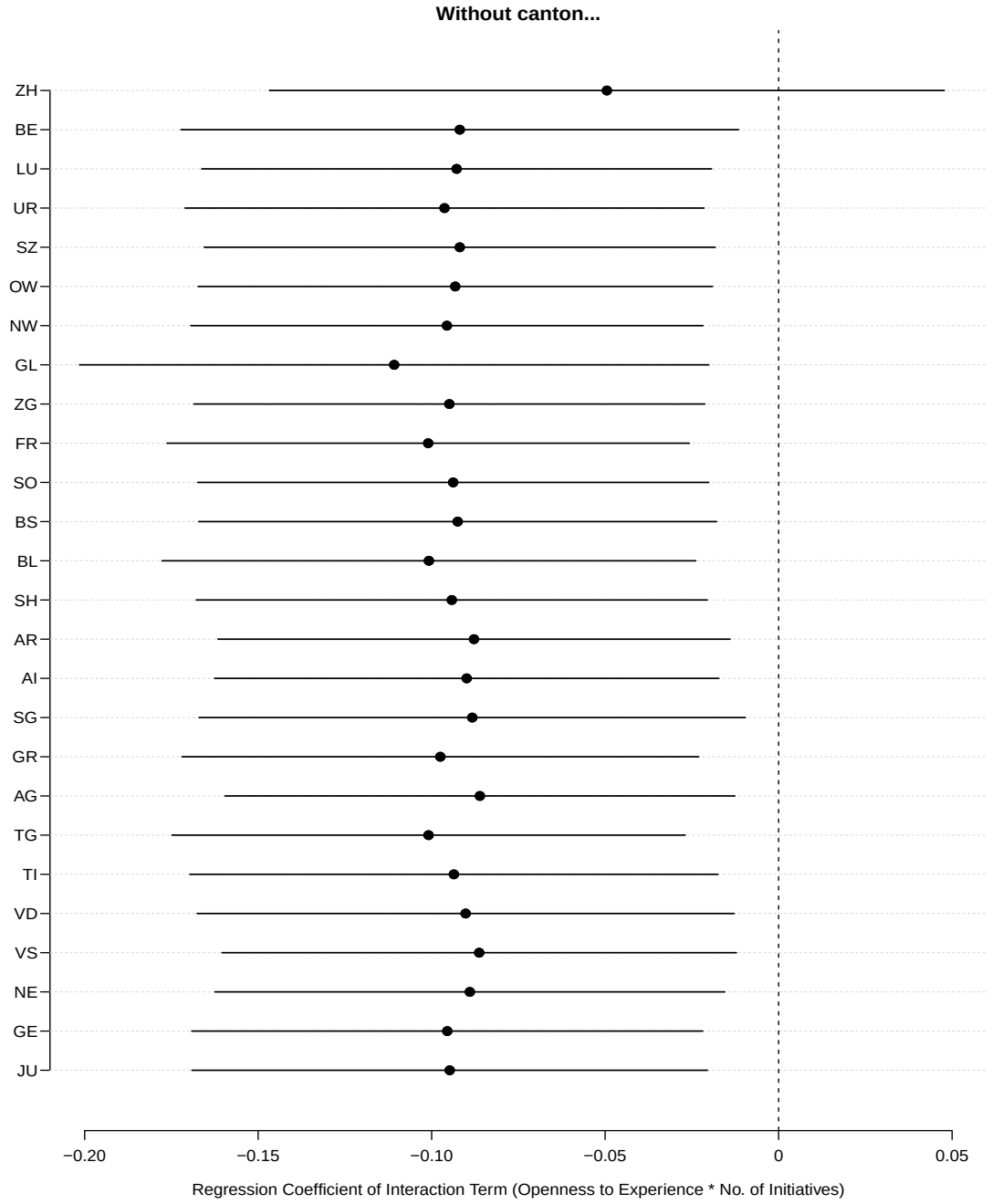
Note: All individual variables are taken from the survey "Politics and Society in Switzerland 2012".

Figure A.5: Moderating Effect of Direct Democracy on the Link between Openness to Experience and Political Protest - Difference in Predicted Probability



Note: Black line = difference in predicted probability to take part in protest calculated based on M7 in Table 3.2 (difference between a high score on openness to experience (= one standard deviation above the mean) and a low score on openness to experience (= one standard deviation below the mean); colored, semi-transparent lines = 1000 Monte Carlo simulations of the respective predicted probability curve that illustrate the uncertainty of the estimation; vertical ticks above x-axis = distribution of the moderating variable. Intercept is fixed at 1; sex is fixed at 1 (= male); education is fixed to secondary education; continuous covariates are fixed at 0 (= their mean).

Figure A.6: Coefficient Plot of the Interaction Effect of Direct Democracy and Openness to Experience on Political Protest (Robustness Check: Manual Jackknifing)



Note: The graph shows the regression coefficients of the interaction between the number of initiatives (2003-2012) and openness to experience when a canton is left out (manual jackknifing). The models are specified according to model M7 in Table 3.2. Complete results are available from the authors on request.

Table A.8: Personality Traits, Direct Democracy and Political Protest in Switzerland (Robustness-Check: Zurich-Dummy (M8), Inclusion of Optional Referenda (M9) and Logarithmic Transformation of the Number of Initiatives (M10))

	M8	M9	M10
Fixed Effects			
Openness to Experience	0.19^{**}	0.20^{**}	0.07
	(0.07)	(0.08)	(0.06)
Conscientiousness	−0.01	−0.01	−0.03
	(0.08)	(0.09)	(0.06)
Extraversion	0.13^{+}	0.06	0.14^{**}
	(0.07)	(0.08)	(0.05)
Agreeableness	0.02	0.00	0.00
	(0.08)	(0.09)	(0.06)
Neuroticism	−0.01	−0.01	−0.02
	(0.06)	(0.07)	(0.05)
Sex (Ref. = female)	0.57^{***}	0.57^{***}	0.56^{***}
	(0.15)	(0.15)	(0.15)
Age	0.05	0.05	0.05
	(0.04)	(0.04)	(0.04)
Primary Education (Ref. = Secondary Education)	−0.22	−0.21	−0.21
	(0.29)	(0.28)	(0.29)
Tertiary Education (Ref. = Secondary Education)	0.36^{*}	0.37^{*}	0.38^{*}
	(0.16)	(0.16)	(0.16)
Language Region	−0.01	−0.01	−0.01
	(0.02)	(0.02)	(0.02)
Urbanization	-0.09^{**}	-0.07^{*}	-0.05^{+}
	(0.03)	(0.03)	(0.03)
Zurich-Dummy	0.31		
	(0.34)		
Mean No. of Initiatives (M8) *	-0.20^{*}		
	(0.08)		
Mean No. of Initiatives and Optional Referenda (M9) *		-0.11^{*}	
		(0.05)	
Log(Mean No. of Initiatives) (M10) *			-0.27^{**}
			(0.10)
* Openness to Experience	-0.09^{*}	-0.06^{+}	−0.08
	(0.04)	(0.03)	(0.06)
* Conscientiousness	−0.00	−0.01	−0.06
	(0.06)	(0.04)	(0.07)
* Extraversion	0.00	0.04	0.03
	(0.05)	(0.03)	(0.06)
* Agreeableness	−0.02	−0.00	0.02
	(0.04)	(0.03)	(0.07)
* Neuroticism	−0.00	−0.01	0.00
	(0.04)	(0.03)	(0.05)
Constant	1.32^{***}	-1.29^{***}	-1.60^{***}
	(0.14)	(0.15)	(0.13)
Random Effects			
σ^2 Constant	0.00	0.00	0.00
σ^2 Slope (Openness to Experience)	0.00	0.00	0.00
BIC	1353.58	1349.61	1346.88
N (Individual)	1145	1145	1145
N (Context)	26	26	26

Note: Estimations based on the data set "Politics and Society in Switzerland 2012" and context data from various sources (cf. Table A.7 in the Appendix); variables centered to their mean;

Hierarchical logistic regression models with RI and RS, standard errors in parentheses;
$^{+}$ $p < 0.1$ * $p < 0.05$ ** $p < 0.01$ *** $p < 0.001$.

Table A.9: Personality Traits, Direct Democracy and Political Protest in Switzerland (Robustness-Check: Additional Interactions)

	M11	M12	M13	M14
Fixed Effects				
Openness to Experience	0.17^{**}	0.19^{**}	0.18^{*}	0.20^{**}
	(0.07)	(0.07)	(0.07)	(0.07)
Conscientiousness	0.00	−0.01	−0.02	−0.01
	(0.08)	(0.08)	(0.08)	(0.08)
Extraversion	0.13^{+}	0.13^{+}	0.14^{+}	0.13^{+}
	(0.07)	(0.07)	(0.07)	(0.07)
Agreeableness	0.02	0.01	0.02	0.01
	(0.08)	(0.08)	(0.08)	(0.08)
Neuroticism	−0.02	−0.02	−0.02	−0.02
	(0.06)	(0.06)	(0.06)	(0.06)
Sex (Ref. = female)	0.58^{***}	0.53^{***}	0.57^{***}	0.57^{***}
	(0.15)	(0.21)	(0.15)	(0.15)
Age	0.05	0.05	0.08	0.05
	(0.04)	(0.04)	(0.06)	(0.04)
Primary Education	−0.21	−0.24	−0.24	−0.13
(Ref. = Secondary Education)	(0.29)	(0.28)	(0.28)	(0.40)
Tertiary Education	0.37^{*}	0.37^{*}	0.36^{*}	0.23
(Ref. = Secondary Education)	(0.16)	(0.16)	(0.16)	(0.23)
Language Region	−0.00	−0.00	−0.00	−0.01
	(0.02)	(0.02)	(0.02)	(0.02)
Mean No. of Initiatives	-0.17^{*}	-0.19^{+}	-0.17^{*}	-0.19^{*}
	(0.07)	(0.11)	(0.07)	(0.08)
* Openness to Experience	-0.08^{+}	-0.09^{*}	-0.08^{+}	-0.10^{*}
	(0.05)	(0.05)	(0.05)	(0.05)
* Conscientiousness	−0.02	0.00	0.01	−0.01
	(0.06)	(0.06)	(0.06)	(0.06)
* Extraversion	−0.01	0.01	0.00	0.01
	(0.05)	(0.05)	(0.05)	(0.05)
* Agreeableness	−0.01	−0.01	−0.02	−0.01
	(0.04)	(0.04)	(0.04)	(0.04)
* Neuroticism	−0.01	0.00	0.00	0.00
	(0.04)	(0.04)	(0.04)	(0.04)
* Sex		0.04		
		(0.14)		
* Age			−0.03	
			(0.04)	
* Primary Education				−0.12
				(0.32)
* Tertiary Education				0.12
				(0.14)
Urbanization	-0.07^{*}	-0.08^{*}	-0.07^{*}	-0.08^{**}
	(0.03)	(0.03)	(0.03)	(0.03)
* Openness to Experience	−0.01			
	(0.02)			
* Conscientiousness	0.04			
	(0.02)			

* Extraversion	0.03			
	(0.02)			
* Agreeableness	−0.02			
	(0.02)			
* Neuroticism	0.01			
	(0.02)			
Constant	1.34^{***}	-1.31^{***}	-1.32^{***}	-1.31^{***}
	(0.14)	(0.17)	(0.14)	(0.15)
Random Effects				
σ^2 Constant	0.00	0.00	0.00	0.00
σ^2 Slope (Openness to Experience)	0.00	0.00	0.00	0.00
BIC	1377.04	1354.33	1353.86	1360.57
N (Individual)	1145	1145	1145	1145
N (Context)	26	26	26	26

Note: Estimations based on the data set "Politics and Society in Switzerland 2012" and context data from various sources (cf. Table A.7 in the Appendix); variables centered to their mean; Hierarchical logistic regression models with RI and RS, standard errors in parentheses; $^{+}$ p < 0.1 * p < 0.05 ** p < 0.01 *** p < 0.001.

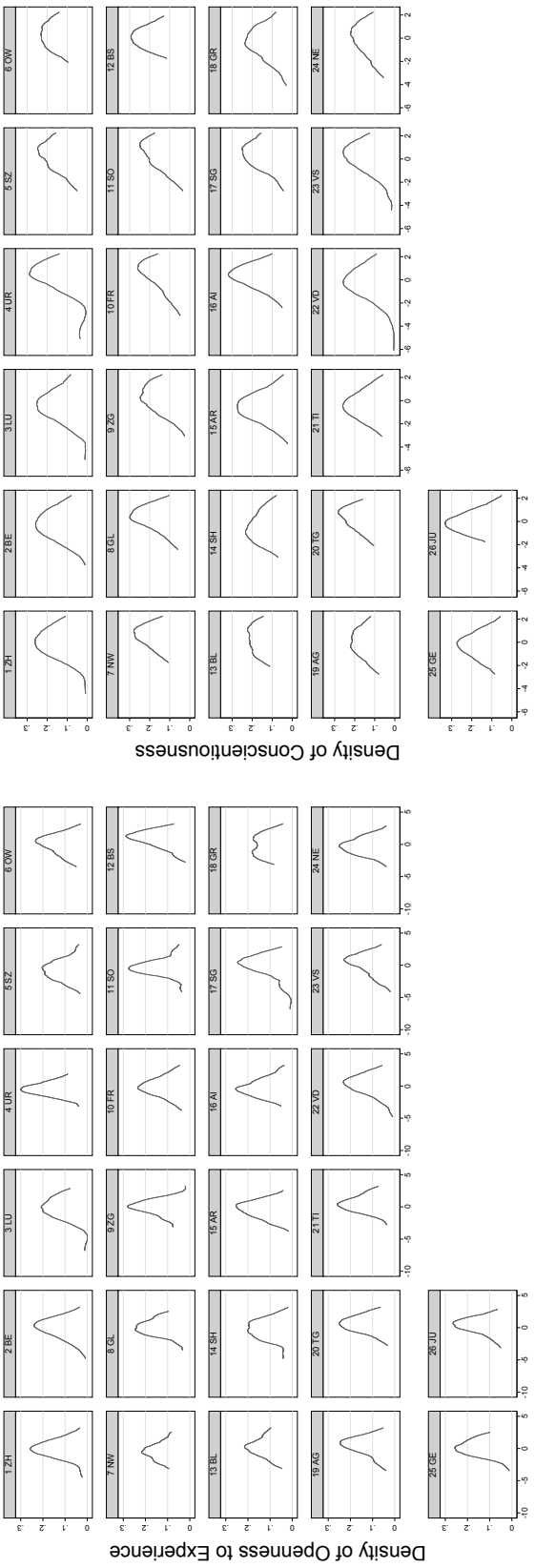
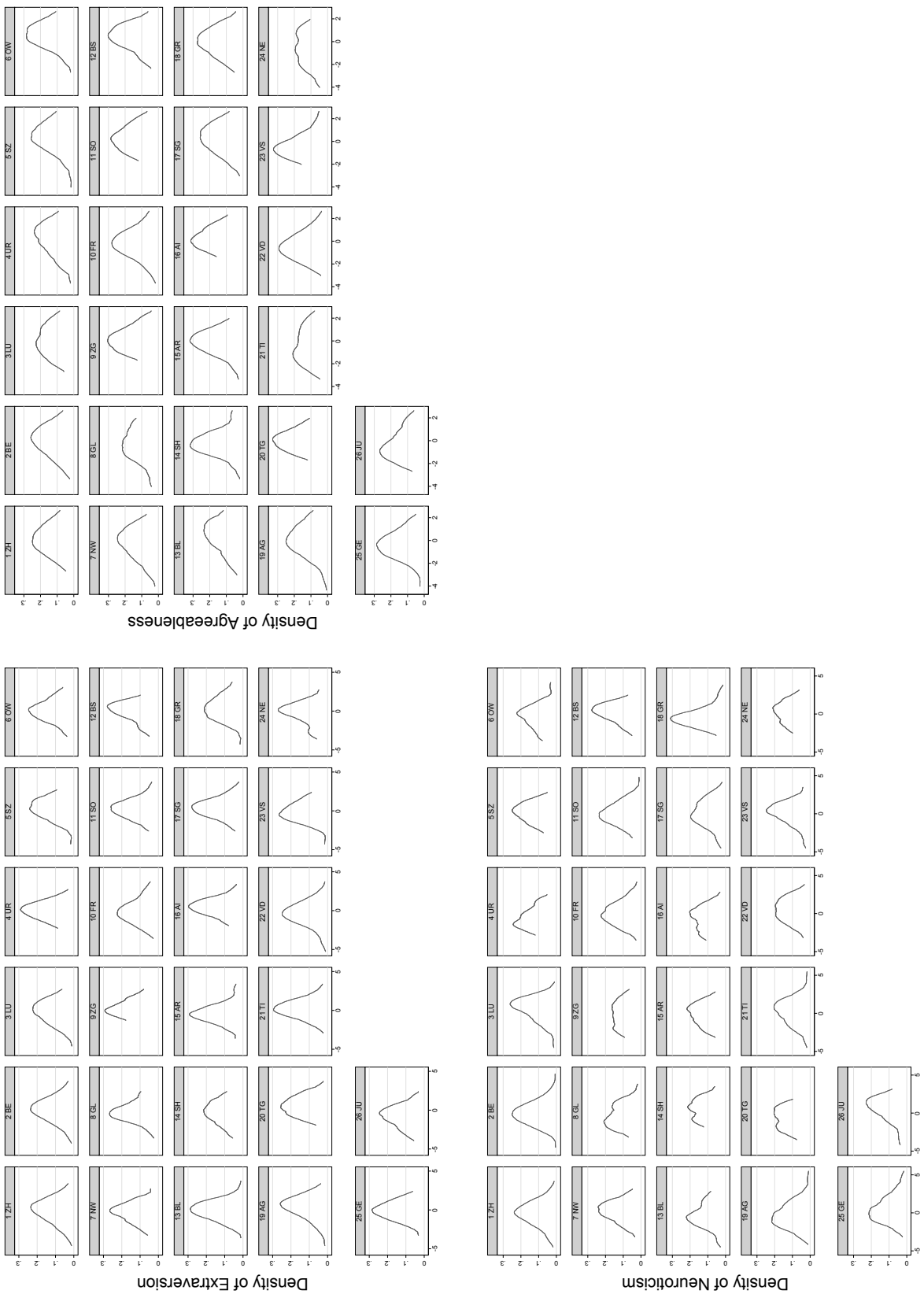


Figure A.7: Distribution of the Big Five Personality Traits per canton



Note: own illustration; data: "Politics and Society in Switzerland 2012".

Table A.10: Personality Traits, Direct Democracy and Political Protest in Switzerland (Robustness-Check: Protest as Count Variable)

	M15	M16
Fixed Effects		
Openness to Experience	0.08*	0.15**
	(0.04)	(0.05)
Conscientiousness	−0.03	−0.03
	(0.04)	(0.06)
Extraversion	0.09*	0.08
	(0.04)	(0.06)
Agreeableness	−0.02	0.00
	(0.05)	(0.06)
Neuroticism	−0.01	0.00
	(0.04)	(0.05)
Sex (Ref. = female)	0.35**	0.35**
	(0.12)	(0.12)
Age	0.02	0.02
	(0.03)	(0.03)
Primary Education (Ref. = Secondary Education)	−0.15	−0.17
	(0.24)	(0.24)
Tertiary Education (Ref. = Secondary Education)	0.40**	0.39**
	(0.12)	(0.12)
Language Region	−0.01	−0.01
	(0.02)	(0.02)
Urbanization	−0.06*	−0.05*
	(0.02)	(0.02)
Mean No. of Initiatives	−0.13*	−0.14*
	(0.05)	(0.06)
* Openness to Experience		−0.07+
		(0.04)
* Conscientiousness		−0.00
		(0.05)
* Extraversion		0.01
		(0.04)
* Agreeableness		−0.02
		(0.04)
* Neuroticism		−0.01
		(0.03)
Constant	1.46***	−1.45***
	(0.12)	(0.12)
Random Effects		
σ^2 Constant	0.00	0.00
σ^2 Slope (Openness to Experience)		0.00
BIC	1530.23	1575.50
N (Individual)	1145	1145
N (Context)	26	26

Note: Estimations based on the data set "Politics and Society in Switzerland 2012" and context data from various sources (cf. Table A.7 in the Appendix); variables centered to their mean; Hierarchical logistic regression models with RI and RS, standard errors in parentheses;
+ $p < 0.1$ * $p < 0.05$ ** $p < 0.01$ *** $p < 0.001$.

A.4 Appendix Chapter 4

Table A.11: Variables, Operationalization and Descriptive Statistics

Variable	Operationalization	$\bar{x}$	σ	min	max
Individual Level					
Ideology	Continuous Variable "In politics people sometimes talk of 'left', 'middle' and 'right' to characterize political opinions. Where would you place yourself on this scale, where 0 means the very left and 10 means the very right?"	4.86	2.08	0	10
Openness to Experience	Continuous Variable (centered) Additive index consisting of the following continuous items (range: 0 - 10): "I see myself as someone who - is original, comes up with new ideas - values artistic, aesthetic experiences - has an active imagination"	0	1.63	−6.78	3.22
Conscientiousness	Continuous Variable (centered) Additive index consisting of the following continuous items (range: 0 - 10): "I see myself as someone who - does a thorough job - does things efficiently - almost never tends to be lazy"	0	1.40	−6.07	2.26
Extraversion	Continuous Variable (centered) Additive index consisting of the following continuous items (range: 0 - 10): "I see myself as someone who - is outgoing, sociable - is not reserved - is talkative"	0	1.54	−5.25	3.75
Agreeableness	Continuous Variable (centered) Additive index consisting of the following continuous items (range: 0 - 10): "I see myself as someone who - is almost never rude to others - has a forgiving nature - is considerate and kind to almost everyone"	0	1.35	−4.33	2.67
Neuroticism	Continuous Variable (centered) Additive index consisting of the following continuous items (range: 0 - 10): "I see myself as someone who - does not remain calm in tense situations	0	1.68	−4.50	5.50

Variable	Operationalization	$\bar{x}$	σ	min	max
	- does worry a lot - does get nervous easily"				
Sex	Dichotomous Variable Sex of respondent: 0 = female; 1 = male	0.49	–	0	1
Age	Continuous Variable (centered) Age of respondent: "May I ask you in which year you are born" Values rescaled by the factor 10 (e.g. 3 = 30 years) before centering	0	1.73	−3.18	4.22
Education	Categorical Variable "What is you highest level of education you have completed?"				
	(1) primary education	0.09	–	0	1
	(2) secondary education (Reference Category)	0.64	–	0	1
	(3) tertiary education	0.28	–	0	1
Contextual Level					
Mean No. of Initiatives	Continuous Variable Mean number of cantonal initiatives between 1990 and 2011 *Source:* Année Politique Suisse (2011-2012); Schaub and Dlabac (2012)	1.74	1.57	0.41	7.37
Language Region	Continuous Variable (centered) Share of German speaking people in a canton in 2010 Values rescaled by the factor 10 (e.g. 3 = 30 percent German speaking people) before centering *Source:* Official statistics	0.00	3.46	−6.28	2.80
Urbanization	Continuous Variable (centered) Share of inhabitants in urban areas within a canton in 2010 Values rescaled by the factor 10 (e.g. 3 = 30 percent inhabitants in urban areas) before centering *Source:* Official statistics	0.00	3.18	−6.08	3.92

Note: All individual variables are taken from the survey "Politics and Society in Switzerland 2012".

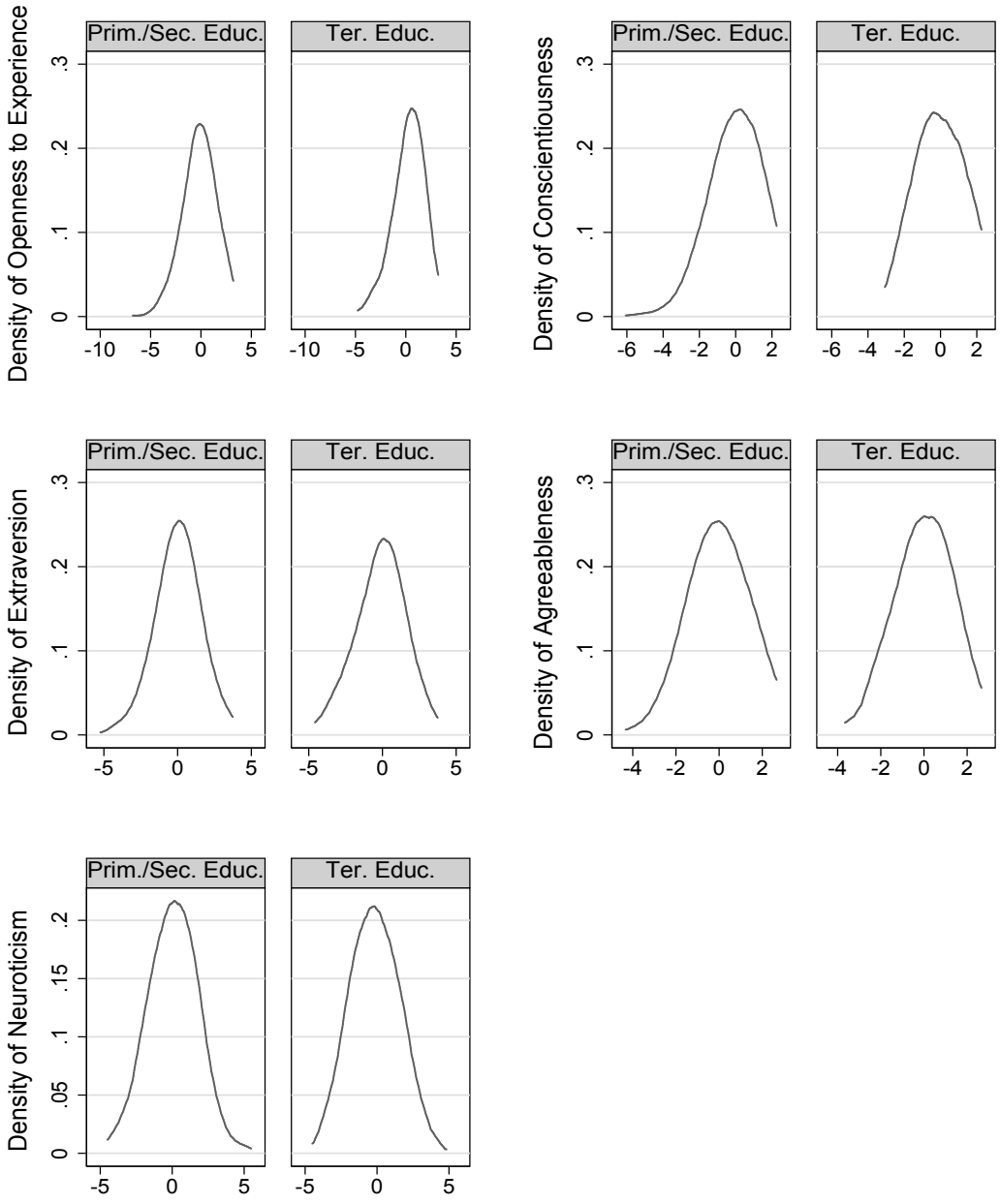
Table A.12: Personality Traits, Direct Democracy and Political Ideology (0 = left, 10 = right) in Switzerland

	M1	M2	M3	M4	M5	M6	M7
Fixed Effects							
Openness to Experience	−0.06	0.00	−0.06	−0.06	−0.06	−0.05	0.00
	(0.04)	(0.07)	(0.04)	(0.04)	(0.04)	(0.04)	(0.07)
Conscientiousness	0.26***	0.26***	0.18**	0.26***	0.26***	0.26***	0.19**
	(0.05)	(0.05)	(0.09)	(0.05)	(0.05)	(0.05)	(0.08)
Extraversion	0.04	0.04	0.04	0.03	0.04	0.05	0.05
	(0.04)	(0.04)	(0.04)	(0.07)	(0.04)	(0.04)	(0.07)
Agreeableness	−0.09*	−0.09*	−0.09*	−0.09*	−0.12	−0.09*	−0.09
	(0.05)	(0.05)	(0.05)	(0.05)	(0.08)	(0.05)	(0.08)
Neuroticism	−0.06	−0.06	−0.07*	−0.06	−0.06*	0.02	0.01
	(0.04)	(0.04)	(0.04)	(0.04)	(0.04)	(0.06)	(0.06)
Sex (Ref. = female)	0.50***	0.51***	0.50***	0.50***	0.50***	0.50***	0.50***
	(0.13)	(0.13)	(0.13)	(0.13)	(0.13)	(0.13)	(0.13)
Age	0.11***	0.11***	0.10***	0.11***	0.11***	0.11***	0.11***
	(0.04)	(0.04)	(0.04)	(0.04)	(0.04)	(0.04)	(0.04)
Secondary Education (Ref. = Primary Education)	0.29	0.31	0.28	0.31	0.30	0.32	0.31
	(0.23)	(0.23)	(0.23)	(0.23)	(0.23)	(0.23)	(0.23)
Tertiary Education (Ref. = Primary Education)	−0.37	−0.37	−0.39	−0.36	−0.37	−0.36	−0.37
	(0.25)	(0.25)	(0.25)	(0.25)	(0.25)	(0.25)	(0.25)
Direct Democracy		−0.06	−0.07	−0.06	−0.06	−0.07	−0.07
		(0.06)	(0.06)	(0.06)	(0.06)	(0.06)	(0.06)
* Openness to Experience		−0.03					−0.03
		(0.03)					(0.03)
* Conscientiousness			0.04				0.04
			(0.04)				(0.04)
* Extraversion				0.01			0.00
				(0.03)			(0.03)
* Agreeableness					0.02		0.00
					(0.03)		(0.03)
* Neuroticism						−0.04*	−0.04
						(0.03)	(0.03)
Language Region	−0.00	0.00	0.00	0.00	0.00	0.00	0.00
	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)
Urbanization	−0.03	−0.02	−0.02	−0.02	−0.02	−0.02	−0.02
	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)

Constant	4.54***	4.64***	4.67***	4.63***	4.64***	4.65***	4.66***
	(0.23)	(0.24)	(0.25)	(0.25)	(0.25)	(0.25)	(0.25)
Random Effects							
SD Constant	0.22	0.22	0.23	0.23	0.24	0.24	0.23
SD Slope (Openness to Experience)		0.00					
SD Slope (Conscientiousness)			0.14				
SD Slope (Extraversion)				0.08			
SD Slope (Agreeableness)					0.00		
SD Slope (Neuroticism)						0.00	0.00
SD Residual	1.99	1.99	1.98	1.99	1.99	1.99	1.99
BIC	4645.76	4673.29	4671.34	4674.41	4674.29	4671.80	4718.24
N (Individual)	1068	1068	1068	1068	1068	1068	1068
N (Context)	26	26	26	26	26	26	26

Note: Estimations based on the data set "Politics and Society in Switzerland 2012" and context data from various sources (cf. Table A.11 in the Appendix); Hierarchical linear regression models with RI and RS, standard errors in parentheses; * $p < 0.1$ ** $p < 0.05$ *** $p < 0.01$.

Figure A.8: Distribution of the Big Five Personality Traits by Educational Level)



Note: own illustration; data: "Politics and Society in Switzerland 2012".

Table A.13: Personality Traits, Direct Democracy and Political Ideology (0 = left, 10 = right) in Switzerland (Subsample: Primary/ Secondary Education)

	M8	M9	M10	M11	M12	M13
Openness to Experience	−0.02	0.01	−0.02	−0.02	−0.01	−0.01
	(0.05)	(0.08)	(0.05)	(0.05)	(0.05)	(0.05)
Conscientiousness	0.23***	0.23***	0.13	0.24***	0.23***	0.23***
	(0.06)	(0.06)	(0.11)	(0.06)	(0.06)	(0.06)
Extraversion	0.05	0.05	0.05	−0.03	0.05	0.05
	(0.05)	(0.05)	(0.05)	(0.09)	(0.05)	(0.05)
Agreeableness	−0.09	−0.09	−0.08	−0.09	−0.14	−0.09
	(0.06)	(0.06)	(0.06)	(0.06)	(0.09)	(0.06)
Neuroticism	−0.06	−0.06	−0.06	−0.06	−0.06	−0.03
	(0.05)	(0.05)	(0.05)	(0.05)	(0.05)	(0.08)
Sex (Ref. = female)	0.44***	0.44***	0.45***	0.43***	0.44***	0.43***
	(0.15)	(0.15)	(0.15)	(0.15)	(0.15)	(0.15)
Age	0.07*	0.07*	0.06	0.07*	0.07*	0.07*
	(0.04)	(0.04)	(0.04)	(0.04)	(0.04)	(0.04)
Direct Democracy		−0.03	−0.04	−0.03	−0.03	−0.04
		(0.05)	(0.05)	(0.05)	(0.05)	(0.06)
* Openness to Experience		−0.01				
		(0.03)				
* Conscientiousness			0.04			
			(0.05)			
* Extraversion				0.04		
				(0.04)		
* Agreeableness					0.03	
					(0.03)	
* Neuroticism						−0.02
						(0.03)
Language Region	0.02	0.02	0.02	0.02	0.02	0.02
	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)
Urbanization	−0.04	−0.04	−0.03	−0.04	−0.04	−0.04
	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)
Constant	4.84***	4.90***	4.92***	4.90***	4.90***	4.91***
	(0.11)	(0.14)	(0.14)	(0.14)	(0.14)	(0.15)
Random Effects						
SD Constant	0.00	0.07	0.00	0.08	0.08	0.09
SD Slope (Openness to Experience)		0.00				

SD Slope (Conscientiousness)			0.19			
SD Slope (Extraversion)				0.10		
SD Slope (Agreeableness)					0.00	
SD Slope (Neuroticism)						0.08
SD Residual	2.04	2.04	2.02	2.03	2.04	2.04
BIC	3403.33	3431.78	3420.43	3430.73	3431.29	3431.74
N (Individual)	772	772	772	772	772	772
N (Context)	26	26	26	26	26	26

Note: Estimations based on the data set "Politics and Society in Switzerland 2012" and context data from various sources (cf. Table A.11 in the Appendix); Subsample: all observations with primary/ secondary education; Hierarchical linear regression models with RI and RS, standard errors in parentheses; * p < 0.1 ** p < 0.05 *** p < 0.01.

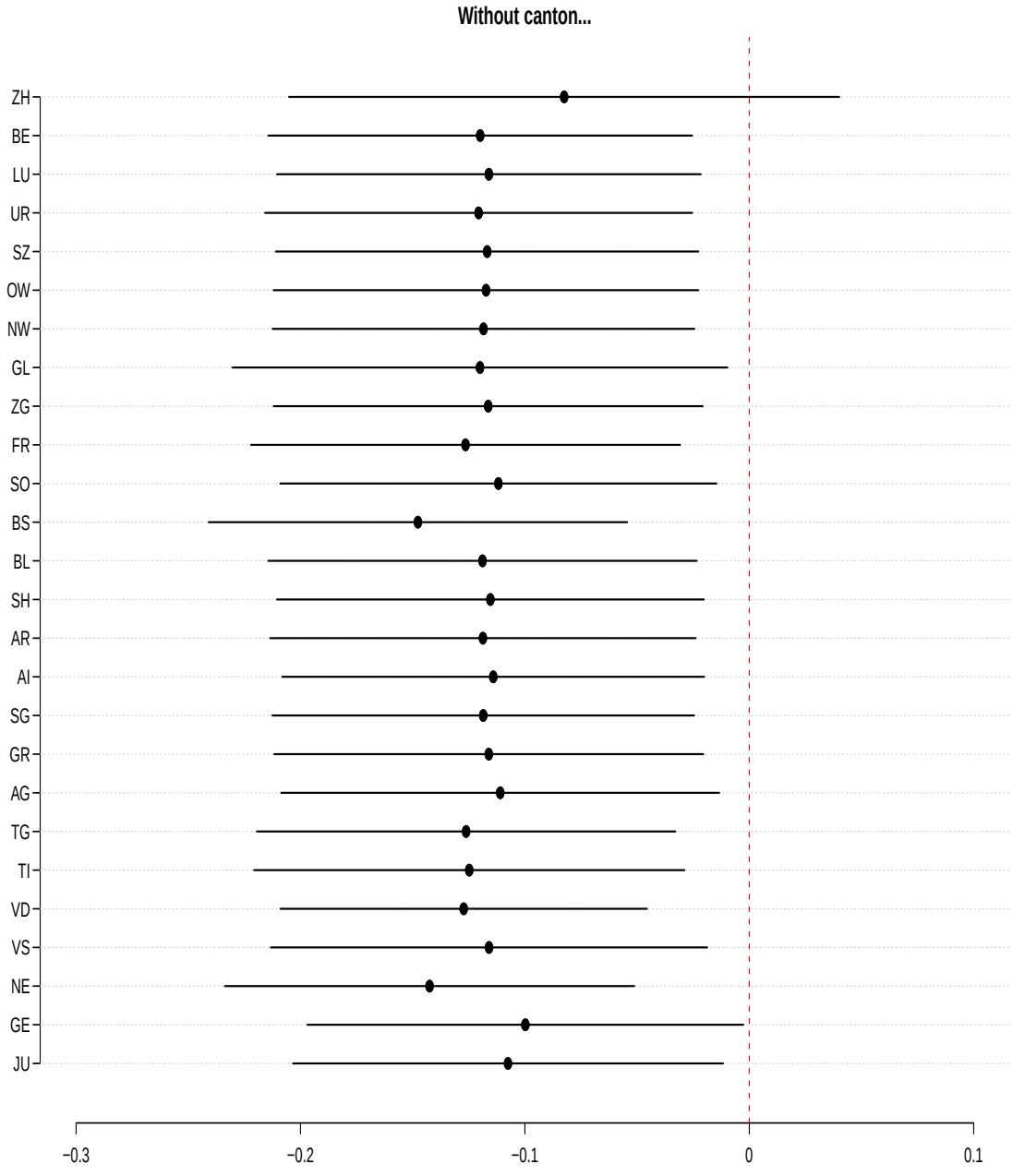
Table A.14: Personality Traits, Direct Democracy and Political Ideology (0 = left, 10 = right) in Switzerland (Subsample: Tertiary Education)

	M14	M15	M16	M17	M18	M19	M20
Openness to Experience	−0.18**	0.01	−0.18**	−0.18**	−0.19**	−0.17**	−0.09
	(0.08)	(0.13)	(0.08)	(0.08)	(0.08)	(0.08)	(0.14)
Conscientiousness	0.32***	0.32***	0.36**	0.33***	0.31***	0.32***	0.35**
	(0.09)	(0.09)	(0.15)	(0.09)	(0.09)	(0.09)	(0.15)
Extraversion	0.09	0.07	0.08	0.27**	0.07	0.09	0.27*
	(0.07)	(0.07)	(0.08)	(0.14)	(0.07)	(0.07)	(0.14)
Agreeableness	−0.10	−0.11	−0.11	−0.12	0.06	−0.09	0.04
	(0.10)	(0.10)	(0.10)	(0.10)	(0.21)	(0.10)	(0.17)
Neuroticism	−0.07	−0.07	−0.07	−0.06	−0.07	0.15	0.19
	(0.07)	(0.07)	(0.07)	(0.07)	(0.07)	(0.14)	(0.14)
Sex (Ref. = female)	0.60***	0.58**	0.62***	0.59**	0.62***	0.63***	0.61***
	(0.23)	(0.23)	(0.24)	(0.23)	(0.23)	(0.23)	(0.23)
Age	0.23***	0.23***	0.23***	0.23***	0.24***	0.23***	0.23***
	(0.07)	(0.07)	(0.07)	(0.07)	(0.07)	(0.07)	(0.07)
Direct Democracy		−0.12	−0.14	−0.15	−0.15	−0.19**	−0.22**
		(0.09)	(0.09)	(0.09)	(0.10)	(0.10)	(0.10)
* Openness to Experience		−0.09*					−0.04
		(0.05)					(0.05)
* Conscientiousness			−0.02				−0.01
			(0.07)				(0.07)
* Extraversion				−0.10*			−0.09
				(0.06)			(0.06)
* Agreeableness					−0.08		−0.07
					(0.09)		(0.07)
* Neuroticism						−0.11**	−0.12**
						(0.06)	(0.06)
Language Region	−0.05	−0.04	−0.04	−0.04	−0.04	−0.02	−0.02
	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)
Urbanization	0.03	0.07	0.07	0.08	0.08	0.07	0.10*
	(0.05)	(0.06)	(0.06)	(0.06)	(0.06)	(0.05)	(0.06)
Constant	4.03***	4.24***	4.26***	4.30***	4.26***	4.34***	4.38***
	(0.18)	(0.24)	(0.24)	(0.24)	(0.24)	(0.24)	(0.24)
Random Effects							
SD Constant	0.00	0.00	0.00	0.00	0.00	0.09	0.00
SD Slope (Openness to Experience)		0.00					0.00

SD Slope (Conscientiousness)			0.00				
SD Slope (Extraversion)				0.10			0.11
SD Slope (Agreeableness)					0.31		
SD Slope (Neuroticism)						0.14	0.15
SD Residual	1.88	1.87	1.88	1.87	1.85	1.85	1.84
BIC	1305.91	1307.65	1310.10	1324.60	1324.59	1316.08	1336.71
N (Individual)	296	296	296	296	296	296	296
N (Context)	26	26	26	26	26	26	26

Note: Estimations based on the data set "Politics and Society in Switzerland 2012" and context data from various sources (cf. Table A.11 in the Appendix); Subsample: all observations with tertiary education; Hierarchical linear regression models with RI and RS, standard errors in parentheses; * $p < 0.1$ ** $p < 0.05$ *** $p < 0.01$.

Figure A.9: Coefficient Plot of the Interaction Effect of Neuroticism and Direct Democracy on Ideology (Robustness Checks)



Note: The regression models on which this plot is based are available from the authors on request. The *upper graph* shows the regression coefficients of the interaction between neuroticism and direct democracy when different time points are used to measure direct democracy. The *lower graph* shows the regression coefficients of the interaction between neuroticism and direct democracy when a canton is left out (manual jackknifing).

Table A.15: Personality Traits, Direct Democracy and Political Ideology (0 = left, 10 = right) in Switzerland (Subsample: Tertiary Education) - Robustness Check: Including Zurich-Dummy

	M21
Openness to Experience	−0.10
	(0.14)
Conscientiousness	0.35**
	(0.15)
Extraversion	0.27*
	(0.14)
Agreeableness	0.05
	(0.18)
Neuroticism	0.19
	(0.14)
Sex (Ref. = female)	0.61***
	(0.23)
Age	0.22***
	(0.07)
Direct Democracy	−0.25**
	(0.12)
* Openness to Experience	−0.03
	(0.06)
* Conscientiousness	−0.02
	(0.07)
* Extraversion	−0.09
	(0.06)
* Agreeableness	−0.07
	(0.07)
* Neuroticism	−0.12**
	(0.06)
Language Region	−0.03
	(0.03)
Urbanization	0.09
	(0.06)
Zurich-Dummy	0.21
	(0.46)
Constant	4.42***
	(0.26)
Random Effects	
SD Constant	0.00
SD Slope (Openness to Experience)	0.00
SD Slope (Conscientiousness)	
SD Slope (Extraversion)	0.11
SD Slope (Agreeableness)	
SD Slope (Neuroticism)	0.15
SD Residual	1.84
BIC	1364.66
N (Individual)	296
N (Context)	26

Note: Estimations based on the data set "Politics and Society in Switzerland 2012" and context data from various sources (cf. Table A.11 in the Appendix);
Subsample: all observations with tertiary education;
Hierarchical linear regression models with RI and RS,
standard errors in parentheses; * $p < 0.1$ ** $p < 0.05$ *** $p < 0.01$.

A.5 Appendix Chapter 5

Table A.16: Factor Structure of Big Five Personality Traits in Switzerland

I see myself as someone who...	Openness to Experience	Conscientiousness	Extraversion	Agreeableness	Neuroticism	Uniqueness (1-h^2)
is original, comes up with new ideas	0.57					0.60
values artistic, aesthetic experiences	0.43					0.81
has an active imagination	0.82					0.34
does a thorough job		0.61				0.52
does things efficiently		0.76				0.47
almost never tends to be lazy*		0.38				0.81
is outgoing, sociable			0.78			0.43
is not reserved*			0.36			0.77
is talkative			0.79			0.36
is almost never rude to others*				0.53		0.73
has a forgiving nature				0.31		0.80
is considerate and kind to almost everyone				0.64		0.45
does not remain calm in tense situations*					0.37	0.69
does worry a lot					0.74	0.51
does get nervous easily					0.56	0.65
Variance	1.65	1.92	2.09	1.53	1.27	
N			1117			

Note: Method: maximum likelihood, rotation: promax; only factor loadings > 0.3 are displayed; * item was inversed in the original data set; data: "Politics and Society in Switzerland 2012".

Table A.17: Variables, Operationalization, Descriptive Statistics and Source

Variable	Operationalization	$\bar{x}$	σ	min	max
Individual Level					
Attitude Toward Immigrants	Categorical variable "Do you prefer better opportunities for Swiss citizens or equal opportunities between Swiss citizens and immigrants?" 0 = person prefers better opportunities for Swiss citizens, 10 = person prefers equal opportunities between Swiss citizens and immigrants.	5.34	3.11	0	10
Openness to Experience	Continuous Variable Factors scores estimated on the basis of an exploratory factor analysis (maximum likelihood, promax rotation, see Table A.16) and rescaled to a value range from 0 to 1	0.65	0.17	0	1
Conscientiousness	Continuous Variable Factors scores estimated on the basis of an exploratory factor analysis (maximum likelihood, promax rotation, see Table A.16) and rescaled to a value range from 0 to 1	0.70	0.14	0	1
Extraversion	Continuous Variable Factors scores estimated on the basis of an exploratory factor analysis (maximum likelihood, promax rotation, see Table A.16) and rescaled to a value range from 0 to 1	0.62	0.18	0	1
Agreeableness	Continuous Variable Factors scores estimated on the basis of an exploratory factor analysis (maximum likelihood, promax rotation, see Table A.16) and rescaled to a value range from 0 to 1	0.62	0.15	0	1
Neuroticism	Continuous Variable Factors scores estimated on the basis of an exploratory factor analysis (maximum likelihood, promax rotation, see Table A.16) and rescaled to a value range from 0 to 1	0.48	0.15	0	1
Sex	Dichotomous Variable Sex of respondent: 0 = female; 1 = male	0.49	–	0	1
Age	Continuous Variable Age of respondent: "May I ask you in which year you are born" Values rescaled by the factor 10 (e.g. 3 = 30 years)	4.93	1.68	1.8	9
Education	Categorical Variable "What is you highest level of education you have completed?"	1.20	0.57	0	2

Variable	Operationalization	$\bar{x}$	σ	min	max
	0 = primary education, 1 = secondary education, 2 = tertiary education				
Diversity in the Neighborhood	Categorical Variable "And what would you say, how many of the neighbors you know have a different nationality than you?" $0 = 0\%, 1 = 10\%, 2 = 25\%, 3 = 50\%, 4 = 75\%, 5 = 90\%, 6 = 100\%$	1.39	1.39	0	6
Contextual Level					
Language Region	Dichotomous variable 0 = French or Italian speaking canton (TI, FR, VD, NE, GE, JU,VS); 1 = German speaking canton (ZH, BE, LU, UR, SZ, OW, NW, GL, ZG, SO, BS, BL, SH, AR, AI, SG, GR, AG, TG) *Source:* Official statistics	0.72	–	0	1
Degree of Urbanization	Continuous variable Share of inhabitants in urban areas within a canton in 2010 Values rescaled by the factor 10 (e.g. 3 = 30 percent inhabitants in urban areas) *Source:* Official statistics	6.54	2.72	0	10

Note: All individual variables are taken from the survey "Politics and Society in Switzerland 2012".

Table A.18: Personality Traits, Neighborhood Diversity and Attitudes toward Equal Opportunities for Immigrants in Switzerland

	M 1	M 2.1	M 2.2	M 2.3	M 2.4	M 2.5
Fixed Effects						
Openness to Experience	1.31*	1.03	1.31*	1.38**	1.30*	1.37**
	(0.69)	(0.89)	(0.69)	(0.69)	(0.69)	(0.69)
Conscientiousness	−5.08***	−5.23***	−6.32***	−5.18***	−5.15***	−5.30***
	(0.99)	(0.98)	(1.18)	(0.98)	(0.98)	(0.98)
Extraversion	−0.74	−0.73	−0.80	−1.36	−0.74	−0.75
	(0.75)	(0.75)	(0.75)	(0.92)	(0.75)	(0.75)
Agreeableness	1.61*	1.66*	1.61*	1.65*	1.60	1.65*
	(0.86)	(0.85)	(0.85)	(0.85)	(1.06)	(0.85)
Neuroticism	−1.11	−1.29*	−1.38**	−1.30*	−1.25*	−1.91**
	(0.70)	(0.70)	(0.70)	(0.70)	(0.70)	(0.92)
Sex (male = 1)	−0.14	−0.12	−0.14	−0.13	−0.13	−0.12
	(0.20)	(0.20)	(0.20)	(0.20)	(0.20)	(0.20)
Age (in 10 years)	−0.12**	−0.11*	−0.12**	−0.12**	−0.11*	−0.11*
	(0.06)	(0.06)	(0.06)	(0.06)	(0.06)	(0.06)
No/primary Education	Ref. cat.	Ref. cat.	Ref. cat.	Ref. cat.	Ref. cat.	Ref. cat.
Secondary Education	0.47	0.46	0.45	0.45	0.46	0.46
	(0.35)	(0.35)	(0.35)	(0.35)	(0.35)	(0.35)
Tertiary Education	2.15**	2.10***	2.10***	2.10***	2.10***	2.10***
	(0.38)	(0.38)	(0.38)	(0.38)	(0.38)	(0.38)
Neighborhood Diversity		0.05	−0.46	−0.04	0.19	−0.03
		(0.25)	(0.37)	(0.24)	(0.31)	(0.23)
* Openness to Experience		0.25				
		(0.37)				
* Conscientiousness			0.94*			
			(0.51)			
* Extraversion				0.40		
				(0.37)		
* Agreeableness					0.04	
					(0.48)	
* Neuroticism						0.46
						(0.42)

Language Region (German = 1)	-0.59^{*}	-0.58^{*}	-0.52^{*}	-0.52^{*}	-0.47	-0.50
	(0.30)	(0.30)	(0.30)	(0.30)	(0.30)	(0.31)
Degree of Urbanization	-0.02	-0.04	-0.03	-0.03	-0.03	-0.03
	(0.05)	(0.05)	(0.05)	(0.05)	(0.05)	(0.05)
Constant	8.40^{***}	8.48^{***}	9.16^{***}	8.56^{***}	8.16^{***}	8.53^{***}
	(0.86)	(0.91)	(1.00)	(0.92)	(0.96)	(0.91)
Random Effects						
σ^2 Constant	0.21	0.00	0.00	0.21	0.00	0.17
	(0.16)	(0.00)	(0.00)	(0.15)	(0.00)	(0.33)
σ^2 Residual	8.41	8.32	8.31	8.36	8.33	8.33
	(0.39)	(0.94)	(0.39)	(0.39)	(0.46)	(0.39)
AIC	4834.51	4832.30	4827.83	4833.20	4833.05	4830.13
N	26	26	26	26	26	26
n	965	965	965	965	965	965

Note: Estimations based on the data set "Politics and Society in Switzerland 2012" and context data from official statistics (see Table A.17 in the Appendix); Multilevel linear regression models with random intercepts; unstandardized coefficients reported, standard errors in parentheses; * $p < 0.1$ ** $p < 0.05$ *** $p < 0.01$.

A.6 Appendix Chapter 6

Table A.19: Personality traits and attitudes toward the openness of Switzerland

	M 1	M 2.1	M 2.2	M 2.3	M 2.4	M 2.5
Level 1 (Individual)						
Openness to Experience	1.06*	0.38	1.04*	1.10*	1.08*	1.07*
	(0.60)	(1.00)	(0.59)	(0.60)	(0.59)	(0.60)
Conscientiousness	−3.38***	−3.49***	−5.49***	−3.43***	−3.48***	−3.38***
	(0.85)	(0.85)	(1.31)	(0.85)	(0.85)	(0.85)
Extraversion	0.03	0.06	−0.01	−0.73	−0.00	−0.01
	(0.65)	(0.65)	(0.65)	(1.02)	(0.65)	(0.65)
Agreeableness	2.47***	2.51***	2.44***	2.49***	0.36	2.48***
	(0.74)	(0.74)	(0.74)	(0.74)	(1.20)	(0.74)
Emotional Stability	0.70	0.78	0.87	0.80	0.83	−0.06
	(0.61)	(0.61)	(0.61)	(0.61)	(0.61)	(1.07)
Sex (male = 1)	−0.03	−0.01	−0.03	−0.03	−0.04	−0.03
	(0.17)	(0.17)	(0.17)	(0.17)	(0.17)	(0.17)
Age (in 10 years)	0.03	0.04	0.03	0.04	0.03	0.04
	(0.05)	(0.05)	(0.05)	(0.05)	(0.05)	(0.05)
No/primary Education	Ref. cat.	Ref. cat.	Ref. cat.	Ref. cat.	Ref. cat.	Ref. cat.
Secondary Education	0.04	0.01	0.02	0.02	0.05	0.03
	(0.31)	(0.31)	(0.31)	(0.31)	(0.31)	(0.31)
Tertiary Education	0.93***	0.88***	0.89***	0.89***	0.95***	0.90***
	(0.33)	(0.33)	(0.33)	(0.33)	(0.33)	(0.33)
Neighborhood Diversity		−0.07	−0.53*	−0.07	−0.47*	−0.06
		(0.22)	(0.32)	(0.21)	(0.27)	(0.19)
* Openness to Experience		0.28				
		(0.33)				
* Conscientiousness			0.92**			
			(0.45)			
* Extraversion				0.30		
				(0.33)		
* Agreeableness					0.94**	
					(0.48)	
* Neuroticism						0.36
						(0.38)

Level 2 (Canton)						
Language Region	-0.10^{***}	-0.09^{**}	-0.09^{**}	-0.09^{**}	-0.10^{**}	-0.09^{**}
	(0.04)	(0.04)	(0.04)	(0.04)	(0.04)	(0.04)
Degree of Urbanization	0.01	0.01	0.01	0.01	0.01	0.01
	(0.04)	(0.04)	(0.04)	(0.04)	(0.04)	(0.04)
Constant	6.10^{***}	6.21^{***}	7.26^{***}	6.21^{***}	7.13^{***}	6.18^{***}
	(0.69)	(0.88)	(1.01)	(0.85)	(0.93)	(0.83)
Random Effects						
σ^2 Constant	0.22	0.24	0.23	0.24	0.22	0.23
	(0.13)	(0.14)	(0.13)	(0.14)	(0.13)	(0.13)
σ^2 Residual	6.27	6.25	6.23	6.25	6.22	6.25
	(0.29)	(0.29)	(0.29)	(0.29)	(0.29)	(0.29)
AIC	4562.2	4565.5	4561.5	4565.4	4560.8	4565.1
N	26	26	26	26	26	26
n	965	965	965	965	965	965

Note: Estimations based on the data set "Politics and Society in Switzerland 2012" and context data from official statistics (see Table A.21 in the Appendix); Multilevel linear regression models with random intercepts; standard errors in parentheses; * p < 0.1 ** p < 0.05 *** p < 0.01.

Table A.20: Factor Structure of Big Five Personality Traits in Switzerland

I see myself as someone who...	Openness to Experience	Conscientiousness	Extraversion	Agreeableness	Emotional Stability	Uniqueness (1-h^2)
is original, comes up with new ideas	0.57					0.60
values artistic, aesthetic experiences	0.43					0.81
has an active imagination	0.82					0.34
does a thorough job		0.61				0.52
does things efficiently		0.76				0.47
almost never tends to be lazy*		0.38				0.81
is outgoing, sociable			0.78			0.43
is not reserved*			0.36			0.77
is talkative			0.79			0.36
is almost never rude to others*				0.53		0.73
has a forgiving nature				0.31		0.80
is considerate and kind to almost everyone				0.64		0.45
remains calm in tense situations					0.37	0.69
does not worry a lot*					0.74	0.51
does not get nervous easily*					0.56	0.65
Variance	1.65	1.92	2.09	1.53	1.27	
N			1117			

Note: Method: maximum likelihood, rotation: promax; only factor loadings > 0.3 are displayed; * item was inversed in the original data set; data: "Politics and Society in Switzerland 2012".

Table A.21: Variables, Operationalization, Descriptive Statistics and Source

Variable	Operationalization	$\bar{x}$	σ	min	max
Level 1 (Individual)					
Openness/Closedness	Categorical variable "Do you prefer Switzerland to be more open or to be more closed?" 0 = person prefers Switzerland to be closed, 10 = person prefers Switzerland to be open.	6.22	2.61	0	10
Openness to Experience	Continuous Variable Factors scores estimated on the basis of an exploratory factor analysis (maximum likelihood, promax rotation, see Table A.20) and rescaled to a value range from 0 to 1	0.65	0.17	0	1
Conscientiousness	Continuous Variable Factors scores estimated on the basis of an exploratory factor analysis (maximum likelihood, promax rotation, see Table A.20) and rescaled to a value range from 0 to 1	0.70	0.14	0	1
Extraversion	Continuous Variable Factors scores estimated on the basis of an exploratory factor analysis (maximum likelihood, promax rotation, see Table A.20) and rescaled to a value range from 0 to 1	0.62	0.18	0	1
Agreeableness	Continuous Variable Factors scores estimated on the basis of an exploratory factor analysis (maximum likelihood, promax rotation, see Table A.20) and rescaled to a value range from 0 to 1	0.62	0.15	0	1
Emotional Stability	Continuous Variable Factors scores estimated on the basis of an exploratory factor analysis (maximum likelihood, promax rotation, see Table A.20) and rescaled to a value range from 0 to 1	0.52	0.15	0	1
Sex	Dichotomous Variable Sex of respondent: 0 = female; 1 = male	0.49	–	0	1
Age	Continuous Variable Age of respondent: "May I ask you in which year you are born" Values rescaled by the factor 10 (e.g. 3 = 30 years)	4.93	1.68	1.8	9
Education	Categorical Variable "What is you highest level of education you have completed?" 0 = primary education, 1 = secondary education, 2 = tertiary education	1.20	0.57	0	2

Variable	Operationalization	$\bar{x}$	σ	min	max
Diversity in the Neighborhood	Categorical Variable "And what would you say, how many of the neighbors you know have a different nationality than you?" $1 = 0\%, 2 = 10\%, 3 = 25\%, 4 = 50\%, 5 = 75\%, 6 = 90\%, 7 = 100\%$	2.38	1.38	1	7
Contextual Level					
Language Region	Continuous variable Share of German speaking people within a canton in 2010, rescaled, divided by 10 *Source:* Official statistics	6.75	3.36	0.58	9.66
Degree of Urbanization	Continuous variable Share of inhabitants in urban areas within a canton in 2010, rescaled, divided by 10 *Source:* Official statistics	6.54	2.72	0	10

Note: All individual variables are taken from the survey "Politics and Society in Switzerland 2012".

Table A.22: Personality traits and attitudes toward the openness of Switzerland under control of political ideology

	M 3	M 4.1	M 4.2	M 4.3	M 4.4	M 4.5
Level 1 (Individual)						
Openness to Experience	0.76	0.88	0.76	0.80	0.80	0.77
	(0.58)	(0.97)	(0.58)	(0.58)	(0.58)	(0.58)
Conscientiousness	-1.69^{**}	-1.74^{**}	-3.61^{***}	-1.74^{**}	-1.75^{**}	-1.64^{**}
	(0.83)	(0.83)	(1.27)	(0.83)	(0.83)	(0.83)
Extraversion	0.00	−0.02	−0.04	−0.57	−0.04	−0.05
	(0.63)	(0.63)	(0.63)	(0.99)	(0.62)	(0.63)
Agreeableness	2.06^{***}	2.06^{***}	2.01^{***}	2.07^{***}	−0.47	2.06^{***}
	(0.72)	(0.72)	(0.72)	(0.72)	(1.19)	(0.72)
Emotional Stability	0.95	1.00^{*}	1.08^{*}	1.01^{*}	1.05^{*}	−0.27
	(0.60)	(0.60)	(0.60)	(0.60)	(0.60)	(1.04)
Ideology (left = 0; right = 10)	-0.43^{***}	-0.43^{***}	-0.43^{***}	-0.43^{***}	-0.43^{***}	-0.43^{***}
	(0.04)	(0.04)	(0.04)	(0.04)	(0.04)	(0.04)
Sex (male = 1)	0.11	0.11	0.10	0.11	0.09	0.10
	(0.16)	(0.17)	(0.16)	(0.16)	(0.16)	(0.16)
Age (in 10 years)	0.12^{**}	0.12^{**}	0.12^{**}	0.12^{**}	0.11^{**}	0.11^{**}
	(0.05)	(0.05)	(0.05)	(0.05)	(0.05)	(0.05)
No/primary Education	Ref. cat.	Ref. cat.	Ref. cat.	Ref. cat.	Ref. cat.	Ref. cat.
Secondary Education	0.22	0.22	0.22	0.21	0.25	0.22
	(0.30)	(0.30)	(0.30)	(0.30)	(0.30)	(0.30)
Tertiary Education	0.82^{**}	0.80^{**}	0.81^{**}	0.80^{**}	0.87^{***}	0.81^{**}
	(0.32)	(0.32)	(0.32)	(0.32)	(0.32)	(0.32)
Neighborhood Diversity		0.09	-0.52^{*}	−0.07	-0.63^{**}	−0.19
		(0.21)	(0.31)	(0.20)	(0.27)	(0.19)
* Openness to Experience		−0.04				
		(0.31)				
* Conscientiousness			0.83^{*}			
			(0.43)			
* Extraversion				0.23		
				(0.31)		
* Agreeableness					1.10^{***}	
					(0.41)	
* Neuroticism						0.54
						(0.36)
Level 2 (Canton)						

Language Region	-0.10^{***}	-0.10^{***}	-0.10^{***}	-0.10^{***}	-0.10^{***}	-0.10^{***}
	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)
Degree of Urbanization	0.00	0.00	0.00	0.00	0.00	0.00
	(0.04)	(0.04)	(0.04)	(0.04)	(0.04)	(0.04)
Constant	6.90^{***}	6.65^{***}	8.04^{***}	7.03^{***}	8.31^{***}	7.32^{***}
	(0.64)	(0.82)	(0.96)	(0.79)	(0.89)	(0.78)
Random Effects						
σ^2 Constant	0.12	0.12	0.12	0.12	0.11	0.12
	(0.09)	(0.14)	(0.09)	(0.10)	(0.09)	(0.09)
σ^2 Residual	5.53	5.53	5.50	5.52	5.48	5.51
	(0.27)	(0.29)	(0.26)	(0.26)	(0.26)	(0.26)
AIC	4185.4	4192.4	4188.0	4191.9	4184.7	4189.9
N	26	26	26	26	26	26
n	965	965	965	965	965	965

Note: Estimations based on the data set "Politics and Society in Switzerland 2012" and context data from official statistics (see Table A.21 in the Appendix); Multilevel linear regression models with random intercepts;
standard errors in parentheses; * $p < 0.1$ ** $p < 0.05$ *** $p < 0.01$.
Ideology is operationalized as self-positioning on a left-right-scale (0 = left ideology, 10 = right)

Selbständigkeitserklärung

Ich erkläre hiermit, dass ich diese Arbeit selbständig verfasst und keine anderen als die angegebenen Quellen benutzt habe. Alle Koautorenschaften sowie alle Stellen, die wörtlich oder sinngemäss aus Quellen entnommen wurden, habe ich als solche gekennzeichnet. Mir ist bekannt, dass andernfalls der Senat gemäss Artikel 36 Absatz 1 Buchstabe o des Gesetzes vom 5. September 1996 über die Universität zum Entzug des aufgrund dieser Arbeit verliehenen Titels berechtigt ist.

Bern, 16.12.2016 Kathrin Ackermann