Acquiescence in personality questionnaires: Relevance, domain specificity, and stability ☆

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A B S T R A C T

Acquiescence, which is defined as agreeing to items regardless of content, is a well-known bias in self-report instruments. This paper investigates the relevance, domain specificity, and the stability of acquiescence in personality questionnaires. Data from two large samples representative for the German ($N = 1999$) and for the Austrian adult population ($N = 3266$) were investigated with structural equation models. In both studies respondents answered, besides others, a short Big Five inventory. The three core findings are: (1) acquiescence systematically affects the variance of personality items and biases the association with other variables, (2) acquiescence is consistent across different question types, and (3) acquiescence in personality items is moderately stable over time. Implications for research and the application of personality questionnaires are discussed.

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1. Introduction

An individual's response to an item consists partly of content-related response and partly of non-content-related response styles, such as extreme responding or acquiescence. Such unwanted response tendencies can bias the results of surveys and questionnaires, especially when participants differ in their tendency for the corresponding response style. One of the most common response styles is acquiescence, defined as agreeing with an item or question regardless of the content (e.g., Cronbach, 1942; Ferrando, Condon, & Chico, 2004; Paulhus, 1991). Evidence for the distorting effect of acquiescence has been widely demonstrated. For example, Bentler, Jackson, and Messick (1971) demonstrated that acquiescent responding can bias the correlation between personality items. In several studies they found that the intended strong negative correlations between oppositely poled adjectives like "happy" and "sad" were only weak. After controlling for acquiescence, however, these coefficients markedly increased in strength, thus indicating that the adjective ratings are severely affected by acquiescence. In the same vein, Rammstedt and colleagues (Rammstedt & Farmer, 2013; Rammstedt, Goldberg, & Borg, 2010; Rammstedt & Kemper, 2011) and Aichholzer (2014)

showed that acquiescence can even affect the factor structure of established personality questionnaires. Based on large scale data, the authors demonstrated that the initial factor loadings were inconsistent with the expected Big Five factor structure. However, after controlling for acquiescence, the expected factor structure emerged in textbook-like clarity (see also McCrae, Herbst, & Costa, 2001). In addition, they showed that the amount of acquiescence bias is related to educational attainment which suggests that acquiescence can differently affect the validity of personality questionnaires in subpopulations.

These results indicate that acquiescence can be a serious obstacle in empirical research and especially in personality research. During the last decades, acquiescence has been investigated from different perspectives. Several studies investigated how acquiescence can be measured (e.g., Billiet & McClendon, 2000; Paulhus, 1991; Winkler, Kanouse, & Ware, 1982), which situational or item characteristics affect acquiescence (e.g., Elliott, 1961; Krosnick & Presser, 2010; McBride & Moran, 1967; Trott & Jackson, 1967), and how acquiescence is related to personality or demographic variables (e.g., DiStefano, Morgan, & Motl, 2012; Knowles & Nathan, 1997; Weems, Onwuegbuzie, Schreiber, & Eggers, 2003). However, few studies have examined the structure of the construct acquiescence itself. Therefore, several crucial aspects of acquiescence remain unclear until now.

First of all, it is still debated whether acquiescence is a broad, general, or a domain specific construct, whether persons who tend to acquiescent responding in attitude or knowledge items also tend to acquiescent responding in personality items. This is particularly

important because it has been suggested to use control scales for identifying acquiescent responding (e.g., Amelang & Borkenau, 1981; Paulhus, 1991; Rorer & Goldberg, 1965). Control scales consist of heterogeneous items (e.g., Amelang & Borkenau, 1981; Handel, Ben-Porath, Tellegen, & Archer, 2010; Weijters, Geuens, & Schillewaert, 2010) or semantically balanced scales (e.g., Billiet & McClendon, 2000; Ferrando et al., 2004; Rammstedt et al., 2010). Balanced scales contain an equal amount of positively poled items (e.g., "I see myself as someone who is sociable, outgoing") and negatively poled items (e.g., "I see myself as someone who is reserved"). Using such items to control for acquiescent responding in different domains would only be admissible if acquiescence is consistent across different item contents. Furthermore, investigating the specificity of acquiescence allows gaining a better understanding of the causes of acquiescent responding. A multidimensional, domain specific construct would suggest a heterogeneous response style with different causes in different domains. A consistent, unidimensional construct in contrast would suggest a homogeneous response style which is affected by similar factors in different domains.

Second, it is not clear whether acquiescence in personality questionnaires is stable over time, that is, whether persons who tend to acquiescent responding today also tend to acquiescent responding several months later. From the perspective of personality psychology, it is important to detect whether acquiescent responding is primarily determined by the person or by the measurement occasion. From an applied perspective, it is important to decide whether acquiescent responding at a first measurement occasion can be used to control for acquiescent responding at a following measurement occasion.

2. Previous research

2.1. Domain specificity of acquiescence

Several studies suggest that there is a certain level of generalizability of acquiescence *within domains* like attitude scales or personality questionnaires. For example, Billiet and McClendon (2000) analyzed data from 986 respondents and reported a latent correlation of $r = .44$ between acquiescence in two attitude scales. Likewise, Ferrando et al. (2004) assessed 207 students and reported positive correlations ($r = .14$ to $r = .54$) between several personality acquiescence scales, and Hinz, Michalski, Schwarz, and Herzberg (2007) analyzed data from 2037 respondents and reported positive correlations ($r = .15$ to $r = .40$) between several personality acquiescence indicators. However, there have been only a few studies investigating the generalizability of acquiescence *across domains*. For example, Gage, Leavitt, and Stone (1956) assessed 97 teachers and reported a correlation of $r = .19$ between acquiescent responding in personality items and difficult knowledge items. Similarly, Ray (1983) analyzed data from several Australian samples ($N = 83$ to $N = 377$) and reported positive correlations between acquiescence in personality items (on average $r = .30$), between acquiescence in attitude items (on average $r = .30$), but not between acquiescence in personality and attitude items (on average $r = .09$). In turn, a study by Blumberg (1973) in a student sample suggests practically no convergence between acquiescence measures derived from personality and attitude scales whatsoever (see also Rorer & Goldberg, 1965). Summarizing, these results suggest that acquiescence is rather domain specific and persons who tend to acquiescent responding in attitude or knowledge items do not equally tend to acquiescent responding in personality items. However, these studies did not report reliability estimates for the acquiescent measures and hence, these small correlations may also be biased by a small

reliability of the manifest acquiescence variables. In the present study, we will investigate the relation between acquiescence in personality questionnaires and acquiescence in attitude scales using structural equation models. This method allows analyzing the relation between latent variables adjusted for unsystematic measurement error.

2.2. Stability of acquiescence

The stability of acquiescence over time has also received little scrutiny. Billiet and Davidov (2008) analyzed data from the Belgian Election study ($N = 1503$) and reported a correlation of $r = .56$ between two latent acquiescence variables over a period of 4 years. In addition, Weijters, Geuens, and Schillewaert (2010b) analyzed data of 604 respondents with latent state–trait models and reported that 60% of acquiescence variance is stable over one year. Similarly, other authors have considered the response bias associated with wording effects as wording method factors and also find relatively high stability of these factors, for instance, in the Rosenberg Self-Esteem Scale (Gana et al., 2013; Marsh, Scalas, & Nagengast, 2010; Motl & DiStefano, 2002). These results do suggest that a substantial proportion of acquiescence is stable over time. However, Billiet and Davidov as well as Weijters and colleagues used only attitude items in their analyses. McCrae et al. (2001) investigated the stability of acquiescence in personality items using a sample of elder respondents (above 60 years, $N = 255$) and reported a correlation of $r = .74$ between two acquiescence indicators. Considering the rather low correlations between acquiescence in personality questionnaires and acquiescence in attitude scales (Ray, 1983), we do not know whether acquiescence is stable in general or only within the domain of attitude items. In the present study, we will close this gap and use a latent state–trait model to investigate the stability of acquiescence in personality items.

2.3. The present study

The present research will investigate to what extent acquiescence is relevant in assessing personality. In particular, we will estimate the extent to which acquiescence affects the variance of single items and we will illustrate that acquiescence can bias the relation between personality items and criterion variables. Furthermore, this research investigates to what extent acquiescence is a general or a domain specific construct and to what extent acquiescence is stable over time. These research questions will be investigated based on two data sources, namely two representative population samples, the Austrian National Election Study (AUTNES; Kritzinger et al., 2013; Kritzinger et al., 2014) and the German Longitudinal Election Study (GLES; Rattinger, Roßteutscher, Schmitt-Beck, & Weßels, 2013). Subsequently we will discuss implications for future research and the application of personality questionnaires.

3. Method

3.1. Participants and procedure

The present research is based on two samples. The *AUTNES sample* uses data from the Austrian National Election Study (Pre- and Post-Election Survey 2013, Kritzinger et al., 2013). The survey is based on a representative random sample of the Austrian voting age population living in private households (response rate 62%). The sample was drawn using an address-based stratified design (for details see Kritzinger et al., 2014). The resulting sample was only slightly biased with regard to some socio-demographic