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A personality-competence model of opinion leadership

Timo Gnambs

University of Osnabrück

Bernad Batinic

University of Linz

Author Note

Timo Gnambs, Institute of Psychology, University of Osnabrück, Germany, Email: timo.gnambs@uni-osnabrueck.de; Bernad Batinic, Institute of Education and Psychology, University of Linz, Austria, Email: bernad.batinic@jku.at.

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Correspondence concerning this article should be addressed to Timo Gnambs, Institute of Psychology, University of Osnabrück, Seminarstr. 20, 49069 Osnabrück, Germany, Email: timo.gnambs@uni-osnabrueck.de

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A personality-competence model of opinion leadership

Opinion leaders constitute a central consumer segment for targeted marketing strategies. By separating opinion leadership into a generalized and domain-specific component this study examines the psychological profile of $N = 417$ consumers from Germany and incorporates opinion leadership into a hierarchical framework of human personality. Results emphasize two major sources of domain-specific opinion leadership: personality in the form of a general, domain-independent influencer trait and competencies in terms of product-specific knowledge. Moreover, the study highlights a number of traits including the Big Five of personality, typical intellectual engagement, and general self-efficacy that form a distinct personality profile of domain-specific opinion leadership. The effects of these personality traits on domain-specific opinion leadership are partially mediated by generalized opinion leadership and objective knowledge.

Keywords: opinion leadership, knowledge, big five, self-efficacy

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Interpersonal communication is frequently considered more trustworthy and influential for consumers than messages conveyed by various advertising media (Johnson-Brown & Reingen, 1987; Engel, Kegerreis, & Blackwell, 1969; Villanueva, Yoo, & Hanssens, 2008). As opinion leaders frequently engage in word-of-mouth communication and provide other consumers with advice and information on different products and places to shop (Flynn, Goldsmith, & Eastman, 1996; Venkatraman, 1990), they constitute an attractive segment for marketeers to include in their promotional schemes for new products. Hence, in the past academics as well as practitioners have put a great deal of effort not only into validly identifying this important consumer group (cf. Flynn et al., 1996; Goldsmith & Witt, 2003), but additionally into describing their primary attributes in terms of stable motivations, behavioral tendencies and personal characteristics. While it soon became apparent that socio-demographic variables alone provided little contribution in describing opinion leaders (Myers & Robertson, 1972; Vernette, 2004), numerous personality traits were identified that were able to shed light on their unique characteristics (cf. Chan & Misra, 1990; Clark, Zboja, & Goldsmith, 2007; Goldsmith, Clark, & Goldsmith, 2006; Ruvio & Shoham, 2007; Shoham & Ruvio, 2008). Although these studies provide important insights into their typology, thus greatly enhancing our knowledge on opinion leaders, each of the studies only considered selected traits, without integrating them into a general framework of personality. Hence, to date opinion leadership has not yet been connected to the Big Five model of personality that describes individuals on the basis of five elementary traits: extraversion, neuroticism, conscientiousness, agreeableness, and openness to experiences (cf. John, Naumann, & Soto, 2008). By adopting the framework proposed by Mowen, Park, and Zablah (2007) the present study traces opinion leadership and similar domain-independent traits back to the Big Five of personality and integrates them in a hierarchical model which includes the most basic traits of

human personality. Additionally, the model acknowledges the importance of the opinion leaders' superior knowledge in their domain of influence (Coulter, Feick, & Price, 2002; Eastman, Eastman, & Eastman, 2002; Gnambs & Batinic, in press; Goldsmith, 2002) by highlighting two central sources of opinion leadership: abstract personality traits and domain-specific competencies.

Personality in consumer research

Authors in consumer research have repeatedly called for a stronger consideration of personality as a determinant of consumer behavior (cf. Baumgartner, 2002). However, particularly broad personality traits established in psychology which generally operationalize rather abstract behavioral dispositions have sometimes attracted little attention. This can be attributed to the fact that the Big Five of personality, for example, usually exhibit a rather limited ability to predict concrete behavior in specific situations (Paunonen, Rothstein, & Jackson, 1999; Paunonen & Ashton, 2001). This has more or less led to an abandonment of such broad traits in consumer research in favor of more domain-specific personality traits specifically targeted at consumer behavior (e.g., shopping confidence, Moye & Kincade, 2003, or fashion consciousness, Shim & Kotsiopulos, 1993). These traits usually describe significant proportions of variance in the target behavior but they provide rather limited informational gain as they only exist on a superficial level and strongly overlap with the behavior to be explained (Buss, 1989). Approaches focusing on abstract dispositions alone, or traits that concentrate primarily on situational variables, seem to be inadequate to properly explain consumer behavior. Hence, an integrative framework is required that links established personality traits with more context-specific variables of individual differences in order to analyze consumer personality within a nomological network of traits (Mowen & Voss, 2008). Such an approach has been proposed by Mowen et al. (2007), who differentiate between traits within a hierarchical personality model on four levels with increasing

specificity. From the most general to the most specific level, these are termed elemental, compound, situational and surface traits.

The *elemental level* contains a limited number of abstract traits with little specificity, which have a strong genetic foundation or stem from very early learning experiences. These traits represent the most basic, cross-situational behavioral dispositions, as operationalized by the Big Five of personality (cf. John et al., 2008). *Compound traits* are formed during an individual's socialization from the complex interaction of elemental traits, culture and individual learning experiences. Compound traits, though also situation-independent, usually exhibit a stronger ability to predict overt behavior than elemental traits. They include behavioral dispositions such as general self-efficacy (Bandura, 1994). At the third hierarchical level, *situational traits* represent stable dispositions for certain behaviors within situational classes. They are not limited to single situations, but rather encompass whole groups of situations, for example different situations in which a consumer displays buying behavior. A common situational trait could be represented by shopping enjoyment (Mowen et al., 2007). The most specific level in the trait hierarchy is represented by *surface traits*. These are very specific behavioral dispositions within a concrete context, resulting from the cumulative effects of elemental, compound and situational traits as well as effects from specific situational influences. They usually emerge in a narrower context than the more general situational traits. As they operationalize stable dispositions to display certain behavioral patterns, they are usually strongly predictive of overt behavior, that is, they predict specific behaviors in specific situations within a certain time frame. According to Mowen et al. (2007), consumer innovativeness could represent such a surface trait in buying situations. Traits on the same hierarchical level and traits on different levels do not have to be independent from each other. On the one hand, it is possible that elemental traits, for example, have an additional direct effect on situational and surface traits above and beyond the influence of

compound traits. On the other hand, different elemental traits are not necessarily independent from each other, but can be correlated (cf. Anusic, Schimmack, Pinkus, & Lockwood, 2009; DeYoung, 2006). The aim of this hierarchical framework is the development of empirically testable hypotheses regarding consumer behavior and the integration of traits of different levels of generality and their interactions in a common trait network. In the past, this approach has been successfully applied to explain different consumer behaviors, for example determinants of online shopping (Bosnjak, Galesic, & Tuten, 2007), conditions for word-of-mouth communication (Mowen et al., 2007), and even motives for volunteerism (Mowen & Sujan, 2005). Despite the importance of opinion leadership for consumer research, however, the construct has not yet been incorporated in this hierarchical model, although some researchers included the concept in related models specifying selected levels of the presented frame work only (Chelminski & Coulter, 2002; Clark & Goldsmith, 2005; Gnambs & Batinic, in press).

Opinion leadership

Opinion leadership describes an individual's disposition to influence opinions, attitudes and behaviors of others in a desired direction (Flynn et al., 1996). Hence, opinion leaders are central disseminators of market information, heavily determining the decisions of other consumers. The scope of their area of influence is still disputed. According to Merton (1957) two types of opinion leaders can be distinguished: monomorphic opinion leaders exert their influence in a very limited domain only, while polymorphic opinion leaders are able to influence others in a broad range of domains. For a long time, opinion leadership has solely been considered as a monomorphic, domain-specific construct; that is, opinion leaders exclusively exert their influence concerning a concise, clearly defined product (e.g. sports cars) or at the most a product class (e.g. automobiles). According to this approach, an overlap of opinion leadership regarding different products or product classes seems rather unlikely. An opinion leader for politics is presumed

unlikely to be simultaneously an opinion leader on pop music as well (Myers & Robertson, 1972). However, new approaches assume that apart from these domain-specific traits, a domain-independent trait can also be distinguished (Feick & Price, 1987; Gnambs & Batinic, 2011a; Weimann, 1991). Hence, there is an underlying trait identifying exceptionally influential individuals, independent of a particular product area. For consumer research in particular, the construct of the market maven (Feick & Price, 1987) has been developed, which captures a version of a generalized opinion leadership trait (Steenkamp & Gielens, 2003). Market mavens are consumers who have ”information about many kinds of products, places to shop, and other facets of markets, and initiate discussions with consumers and respond to requests from consumers for market information” (Feick & Price, 1987, p. 85). As market mavens are considered good sources of information on the marketplace in general, and do not necessarily possess a product-specific orientation, they are able to influence the buying decisions of other consumers on a great variety of products. Generalized and domain-specific opinion leadership are conceived to be two different but not independent traits (Clark & Goldsmith, 2005; Gnambs & Batinic, 2011b; Shoham & Ruvio, 2008) that frequently display correlations of medium size (Cano & Sams, 2010; Ruvio & Shoham, 2007).

A hierarchical model of opinion leadership

The model proposed in the following section incorporates the concept of opinion leadership into the framework by Mowen et al. (2007). The complete structural model including all hypothesized paths between the constructs is displayed in figure 1. As detailed above concerning opinion leadership two distinct approaches have to be distinguished: opinion leadership as a monomorphic, domain-specific trait and opinion leadership as a polymorphic, domain-independent trait. The starting point for this model is the construct of domain-specific opinion leadership, which is to be integrated into a nomological network of hierarchical traits.

The personality aspect of domain-specific opinion leadership is assumed to be represented by the domain-independent trait of generalized opinion leadership (cf. Gnambs & Batinic, 2011b; Steenkamp & Gielens, 2003). Therefore, generalized opinion leadership can be conceptualized as a compound trait as a more abstract antecedent of domain-specific opinion leadership, which is a situational trait. In the past, average correlations between the two variants of opinion leadership ranging from .20 to .50 have been reported (Cano & Sams, 2010; Clark & Goldsmith, 2005; Gnambs & Batinic, 2011b; Ruvio & Shoham, 2007).

H1: There is positive relationship between generalized opinion leadership and domain-specific opinion leadership.

In addition to personality traits, a frequently cited characteristic of domain-specific opinion leadership is a superior knowledge in the domain of influence (Coulter et al., 2002; Eastman et al., 2002; Feick & Price, 1987; Goldsmith, 2002). It is assumed that opinion leaders possess higher levels of product-specific knowledge than their peers. Although some authors (e.g. Trepte & Scherer, 2010) consider high levels of knowledge a frequent but not essential attribute of opinion leaders and, thus, regard knowledge rather a potential consequence of opinion leadership, most do not (e.g., Coulter et al., 2002; Gilly, Graham, Wolfsbarger, & Yale, 1998; Gnambs & Batinic, in press; Shoham & Ruvio, 2008). Typically, superior levels of product knowledge are seen as an important precondition for opinion leadership. In empirical studies, however, authors frequently neglected to explicitly distinguish between self-perceived, subjective knowledge and actual, objective knowledge. Many authors related self-rated knowledge to opinion leadership and interpreted the frequently quite high correlations as evidence for the superior knowledge of opinion leaders (e.g., Allen, 2000; Coulter et al., 2002; Myers & Robertson, 1972; O'Cass, 2002). Myers and Robertson (1972, p. 42), for example, operationalized knowledge using one self-report item ("How much do you feel you know about each topic area in

comparison to your friends and relatives?") and found correlations ranging from .52 to .81. Self-reports and objective tests of cognitive performance, however, are rather different constructs (cf. Brucks, 1985; C. W. Park, Mothersbaugh, & Feick, 1994; Chamorro-Premuzic & Furnham, 2006). When comparing subjective and objective measures of knowledge, small to medium-sized correlations between .26 and .60 are usually found, that tend to strongly vary with the content domain (Brucks, 1985; Flynn & Goldsmith, 1999; C. Park & Moon, 2003; Raju, Lonial, & Mangold, 1995). Generally, self-reports are inferior indicators of cognitive abilities; rather they represent motivational tendencies and interests in a certain domain (Flynn & Goldsmith, 1999; C. W. Park, Gardner, & Thukral, 1988). As opinion leaders are assumed to possess high levels of knowledge in their area of influence (Coulter et al., 2002; Feick & Price, 1987), it is expected that objective knowledge represents the second central source of domain-specific opinion leadership in addition to generalized opinion leadership.

H2: There is a positive relationship between objective knowledge and domain-specific opinion leadership.

| Insert figure 1 about here |

The Big Five of personality, which are also included in the framework by Mowen et al. (2007) as elemental traits, are assumed to represent basic behavioral dispositions and describe personality on the most abstract level. Regarding their relationship with opinion leadership, mixed results have been reported in the past. While some studies found significant correlations (Brancaleone & Gountas, 2007; Mooradian, 1996), others did not (Goodey & East, 2008; Robinson, 1976). On theoretical grounds, meaningful relationships with generalized opinion

leadership can be derived for three traits of the Big Five, extraversion, neuroticism and openness to experiences. In detail, the following hypotheses are postulated.

Extraverted individuals enjoy being with other people: they are gregarious, communicative and full of energy (John et al., 2008). These resemble characteristics typically attributed to opinion leaders as well. Empirical data confirm that opinion leaders are more talkative than their peers (Weimann, 1991), have a greater circle of friends (Booth & Babchuk, 1972), and generally a stronger social orientation (Venkatraman, 1989). They are more active and report more leisure activities (Booth & Babchuk, 1972) as well as frequent participation in various clubs and organizations (Robinson, 1976). Accordingly, correlations between market mavenism and extraversion have been reported in the past that range from .22 to .30 (Brancaleone & Gountas, 2007; Mooradian, 1996).

H3: There is a positive relationship between extraversion and generalized opinion leadership.

Neuroticism describes interindividual differences in emotional stability, the degree to which individuals are able to cope with criticism and setbacks (John et al., 2008). Concerning market mavenism, there are reports that the trait is accompanied by greater levels of self-confidence (Bearden, Hardesty, & Rose, 2001; Chelminski & Coulter, 2007). Individuals high in market mavenism are generally more secure about themselves and their abilities (Coulter et al., 2002). Clark and Goldsmith (2005) additionally report that market mavens as well as domain-specific opinion leaders have higher levels of global self-esteem. These findings conform to an image of emotional stability.

H4: There is a negative relationship between neuroticism and generalized opinion leadership.

Individuals high in openness to experiences are interested in many different things: they are intellectually curious and like to explore new and unusual ideas (John et al., 2008). Comparably, opinion leaders seek diversity and like to try different brands within their product class (Coulter et al., 2002); they are more informed about new developments in their area of interest (Mittelstaedt, Grossbart, Curtis, & Devere, 1976) and generally exhibit higher levels of innovativeness (Goldsmith et al.,2006; Ruvio & Shoham, 2007).

H5: There is a positive relationship between openness to experiences and generalized opinion leadership.

For the two remaining traits of the Big Five, agreeableness and conscientiousness, no explicit relationships can be derived from existing findings. However, they are included in the hierarchical model, as the Big Five, due to their repeated cross-cultural confirmation and temporal stability, as a whole should be used as superordinate taxonomy to describe individual differences in human personality (Ozer & Benet-Martinez, 2005). Hence, the two traits are assumed to be independent of opinion leadership.

H6: There is no relationship between agreeableness and generalized opinion leadership.

H7: There is no relationship between conscientiousness and generalized opinion leadership.

In order to remain consistent with other studies, no further elemental traits are specified in addition to the Big Five. However, Mowen et al. (2007) explicitly state that traits of the same hierarchical level do not have to be independent from each other. Rather, traits located on the same level are likely to be correlated with each other. Hence, the model includes two compound traits, typical intellectual engagement and self-efficacy, that are assumed to explain additional variance components of generalized opinion leadership beyond the influence of the elemental traits.

Typical intellectual engagement (TIE; Goff & Ackerman, 1992) describes interindividual differences in the effort an individual invests in engaging with new topics and the acquisition of new knowledge. Individuals high in TIE are curious, eager to learn, and generally well informed. Comparably, opinion leaders are characterized by a strong involvement (Nisbet & Kotcher, 2009; Venkatraman, 1990) and a superior knowledge (Coulter et al., 2002; Eastman et al., 2002; Goldsmith, 2002) in their domain of influence. Although correlated to openness to experiences, TIE constitutes a different construct, focusing primarily on an individual's typical performances and assessing a variant of self-perceived intelligence (Chamorro-Premuzic, Furnham, & Ackerman, 2006a). Hence, in the model presented here, TIE does not solely act as a mediator of the underlying elemental traits (i.e. openness to experiences) but also makes a unique contribution in describing generalized opinion leadership that goes beyond the effects of the Big Five.

H8: There is a positive relationship between typical intellectual engagement and generalized opinion leadership, even when controlling for the effects of the elemental traits.

Opinion leaders generally display great self-confidence (Chelminski & Coulter, 2007; Clark, Goldsmith, & Goldsmith, 2008). They trust in their abilities, particularly in their domain of interest, and use this trust to achieve their goals. Comparably, general self-efficacy characterizes an individual's belief of possessing the necessary abilities and proficiencies to achieve certain goals and exert influence over one's life (Bandura, 1994). Accordingly, correlations of approximately .24 between market mavenism and general self-efficacy have been reported in the past (Geissler & Edison, 2005).

H9: There is a positive relationship between general self-efficacy and generalized opinion leadership, even when controlling for the effects of the elemental traits.

Recent personality models (Ackerman, 1996; Chamorro-Premuzic & Furnham, 2006) presume that an individual's cognitive competence is determined by different sources, by an array

of both actual abilities and non-ability traits. Therefore, specific personality attributes play also an important role in an individual's intellectual development, and most of the Big Five traits are significantly correlated with academic performance (see the meta-analysis by O'Connor & Paunonen, 2007). Even individual differences in general and domain-specific knowledge can partly be attributed to personality traits like extraversion, openness to experiences and typical intellectual engagement, which represent the degree of an individual's intellectual orientation and effort (Ackerman, Bowen, Beier, & Kanfer, 2001; Chamorro-Premuzic, Furnham, & Ackerman, 2006b). Those traits not only are assumed to be predictors of generalized opinion leadership but also of objective knowledge. Hence, the superior knowledge in the area of influence is hypothesized to be partly a result of the opinion leaders' specific personality profile.

H10: There is a positive relationship between (a) extraversion, (b) openness to experiences, (c) typical intellectual engagement and objective knowledge.

The proposed trait model summarized in figure 1 includes three hierarchical levels, largely representing the trait classes presented by Mowen et al. (2007). While the Big Five of personality can be conceptualized as elemental traits, the two additional predictors of generalized opinion leadership and knowledge, typical intellectual engagement and general self-efficacy, by contrast represent compound traits. As the model primarily aims at linking these traits relative to domain-specific opinion leadership and is not concerned with the relationship between these predictors themselves, hypotheses about correlations with each other are not formulated. However, the model implies that the effects of superordinate traits are fully captured by traits on the subsequent level. Therefore, the model does not include direct effects of the Big Five, TIE and self-efficacy on domain-specific opinion leadership. Rather, these effects are assumed to be mediated by generalized opinion leadership and objective knowledge.

H11: Generalized opinion leadership and objective knowledge mediate the effects of (a) extraversion, (b) neuroticism, (c) openness to experiences, (d) typical intellectual engagement, and (e) general self-efficacy on domain-specific opinion leadership.

| Insert table 1 about here |

Method

Sample and procedure

Participants from two independent samples were combined to form a final sample of N = 417. The first sample consisted of 195 students (131 women) with different majors (including economics, computer sciences and social sciences) from a medium-sized university. Participants had a mean age of 24 years (SD = 4.26). Although the sample size exceeded the minimal size required for comparisons of covariance structure models of N = 166, using a power of .80 and an alpha of .05 (MacCallum, Browne, & Cai, 2006), results of Monte-Carlo studies (Fritz & Mackinnon, 2007) suggest that a sample size of at least N = 400 is necessary to also detect small mediation effects. For this reason, a second sample of N = 222 individuals (115 women) aged between 16 and 85 years (M = 32.55, SD = 15.27) was recruited via a German market research panel. This sample was more heterogeneous in socio-demographic terms than the first sample, but was also highly educated - approximately half had completed university entrance-level examinations and a quarter had a university degree. A detailed description of the total sample's socio-demographic characteristics is summarized in table 1. All participants were invited by email to complete an anonymous online survey. After finishing the questionnaire, the participants were debriefed and received individual feedback in the form of a personality profile. No further compensation was provided.

As the study mainly collected self-report data in a cross-sectional design, common method variance might introduce a systematic bias and attenuate the true correlations between the constructs (Podsakoff, MacKenzie, Lee, & Podsakoff, 2003). To minimize the potential threat to internal validity, different recommendations by Podsakoff et al. (2003) were followed. In particular, attention was paid to protect the anonymity of the respondents in order to avoid socially desirable responding as well as acquiescence and leniency tendencies. Online surveys usually provide higher levels of anonymity than face-to-face interviews (cf. Joinson & Paine, 2007). Additionally, the introductory text prior to the survey explicitly pointed out the anonymity of participation, which frequently leads to higher levels of perceived anonymity (Hui, Teo, & Lee, 2007). Finally, the items of the different constructs were grouped together on the pages according to the traits to be measured, and were not randomly mixed in order to avoid artificially raised correlations between similar constructs (Podsakoff & Organ, 1986).

Instruments

Big Five traits. Extraversion, neuroticism, agreeableness, conscientiousness and openness to experiences were measured with the short form of the Big Five Inventory (Rammstedt & John, 2005). Despite its short length, with each trait operationalized by four items (five in the case of openness), the instrument allows for a reliable measurement of the five basic personality dimensions, resulting in acceptable Cronbach's alpha reliabilities around .70 (see table 2). Only agreeableness displayed a slightly impaired reliability of .62. An exploratory factor analysis with an oblique rotation (promax) led to a five-factor solution with eigenvalues of 2.92, 2.04, 2.27, 1.98 and 1.58, respectively, with all items displaying satisfactory loadings, $\overline{\lambda}_E = .74$, $\overline{\lambda}_N = .66$, $\overline{\lambda}_A = .56$, $\overline{\lambda}_C = .61$, $\overline{\lambda}_O = .57$, on their respective factors. Together, the five factors explained 46 percent of the items' variance. Most of the trait scores were slightly correlated to each other, in

particular extraversion with neuroticism, (r = −.25, p< .001), conscientiousness (r = .23, p< .001) and openness (r = .26, p < .001). The lack of orthogonality corresponds to comparable results in various samples (Benet-Martinez & John, 1998; Rammstedt & John, 2005) and reflects the current view that the Big Five do not represent completely independent traits (Anusic et al., 2009; DeYoung, 2006).

Typical intellectual engagement. Typical intellectual engagement (TIE) was operationalized with five items (e.g. ”I like to listen to speeches about different topics”) by Wilhelm, Schulze, Schmiedek, and Süß (2003), capturing one factor with an eigenvalue of 1.14 and explaining 23 percent of the items’ variance. The average item loadings on the factor were satisfactory, $\overline{\lambda}$ = .47. With a Cronbach’s alpha of .66, the reliability was somewhat impaired. Openness to experiences, the trait of the Big Five with which the construct is theoretically related the most strongly (Goff & Ackerman, 1992), only correlated slightly with TIE, r = .27, p< .001. This confirms the assumption that typical intellectual engagement represents a trait that differs from openness.

| Insert table 2 about here |

General self-efficacy. Self-efficacy was operationalized with ten items (e.g. ”I can solve most problems if I invest the necessary effort”) by Schwarzer and Jerusalem (1989), which captured one factor with an eigenvalue of 4.83 explaining 48 percent of the item variance. The average item loading on the factor was good, $\overline{\lambda}$ = .69 as was the reliability of .90. Neuroticism, the trait of the Big Five the construct is most similar, correlated medium with self-efficacy, r = −.51, p< .001.

Generalized opinion leadership. Generalized opinion leadership (GOL) was operationalized with nine items (e.g. ”Many of my friends and acquaintances base their decisions on my opinion”) by Gnambs and Batinic (2011a). The instrument operationalizes a variant of opinion leadership that is independent from a specific content domain and is not exclusively limited to consumer behavior like the market maven construct (Feick & Price, 1987). The scale was chosen as it constitutes an entirely domain-free approach to generalized opinion leadership and therefore more strongly resembles the concept of a compound trait as specified by Mowen et al. (2007). However, as market mavenism represents a special case of the selected instrument (cf. Gnambs & Batinic, 2011b), it is expected that the reported results of this study can easily be generalized to market mavenism. An exploratory factor analysis resulted in one factor with an eigenvalue of 3.17 explaining 35 percent of the items' variance. The average item loadings on the factor were satisfactory, $\overline{\lambda}$ = .61. The reliability of the scale was good, at .83.

Domain-specific opinion leadership. Domain-specific opinion leadership (DSOL) was operationalized with six items (e.g. ”I often persuade other people to buy books that I like”) by Flynn et al. (1996). The scale is a widely used instrument that has repeatedly displayed good psychometric properties (e.g., Goldsmith & Witt, 2003; Shoham & Ruvio, 2008) and validly captures opinion leadership in a specific product area. To avoid ambiguous interpretations of the results by relying on a single product area only, opinion leadership was captured in three different domains; on the one hand in the domain of movies and literature, as these are common topics in social communication and are central to many individuals of different ages and educational groups. On the other hand, as a third domain, the area of Internet was chosen, as online opinion leaders are gaining increasing importance, especially in applied settings (Barnes & Pressey, 2012; Eastman et al., 2002; Lyons & Henderson, 2005; Tsang & Zhou, 2005). An exploratory factor analysis with promax rotation originally led to a four-factor solution. As the items for the Internet

domain were split into two factors containing the positively phrased items and negatively phrased items, respectively (cf. Ruvio & Shoham, 2007), indicating method artefacts rather than different trait facets (Conrad et al., 2004), an additional factor analysis was calculated that extracted the first three factors only. With eigenvalues of 3.67, 3.72 and 3.14, the factors explained 47 percent of the items' variance. The average factor loadings of the items were satisfactory, $\overline{\lambda}_{mov} = .58$, $\overline{\lambda}_{lit} = .71$ and $\overline{\lambda}_{int} = .61$. The reliabilities were good, ranging around .80.

Objective knowledge. The current level of knowledge in the three domains was measured with five open response items (e.g. ”Who wrote the book 'Don Quijote de la Mancha'?”) for each domain. Items for the domain of movies and literature were taken from the General Knowledge Test (Lynn, Wilberg, & Margraf-Stiksrud, 2004), while the items for the Internet knowledge test were newly created. To avoid artificial results due to the items' dichotomous response format, the exploratory factor analysis was based on the polychoric correlation matrix (cf. Kubinger, 2003) and resulted in eigenvalues of 3.89, 5.56 and 3.72 explaining 71 percent of the items' variance. The average factor loadings of the items were satisfactory, $\overline{\lambda}_{mov} = .54$, $\overline{\lambda}_{lit} = .82$ and $\overline{\lambda}_{int} = .78$. The reliabilities were generally good at about .87.

All self-ratings were answered on a five-point response scale from ”strongly disagree” to ”strongly agree”. Hence, high scores represent high levels of the respective traits.

Analytical strategy

The test of the presented personality model was conducted by means of covariance structure models in Mplus 5 (Muthén & Muthén, 1998-2007). Compared to the analysis of observed scores latent variable modeling has the advantage of addressing the problem of a measure's unreliability and, thus, leads to less biased parameter estimates. For each latent construct the scale's items were combined to form three parcels. Parceling provides several

advantages compared to modeling single items (see Bandalos, 2002; Little, Cunningham, Shahar, & Widaman, 2002): (a) it reduces the number of parameters to be estimated and, thus, leads to more parsimonious models, (b) it reduces the likelihood that an item loads on multiple latent factors, and (c) it frequently results in more reliable latent constructs. The fit of these models is evaluated in line with conventional criteria (Hu & Bentler, 1999; Mathieu & Taylor, 2006) based on the root mean square error of approximation (RMSEA) and the comparative fit index (CFI). Models with a CFI ≤ .90 or a RMSEA ≥ .10 are considered ”bad”, those with .90 > CFI < .95 and .05 > RMSEA < .10 as ”acceptable” and CFI ≥ .95 and RMSEA ≤ .05 as ”good” fitting. The significance of the parameter estimates is derived by a bootstrap approach with 1000 replications which generally results in more precise estimates, particularly for small effects (MacKinnon, Lockwood, & Williams, 2004). Moreover, in mediation analysis bootstrapping is superior to classical significance tests (e.g. Sobel, 1982) and leads to more precise estimates of the indirect effect (Cheung & Lau, 2008).

Results

Measurement model

In the first step the measurement model was evaluated by specifying a baseline model with 14 correlated latent constructs. The overall model demonstrated a good fit to the data, $\chi^2(610) = 950$, CFI = .95, RMSEA = .04 [.03, .04]. All latent constructs had satisfactory factor reliabilities between .71 and .91 (see table 2). Moreover, for most constructs the average variances explained by the latent factors (AVE) exceeded the commonly recommended threshold of .50 (Fornell & Larcker, 1981). Only conscientiousness and typical intellectual engagement displayed slightly impaired AVEs with .46 and .47 respectively. Hence, in general the item parcels operationalized the constructs adequately.

Prior to conducting specific model tests, the discriminant validity of the factors has to be established, and it needs to be demonstrated that all variables in the model do indeed operationalize different constructs. If this is not successful mediation analyses are not appropriate, as it is not possible to differentiate between predictor, mediator and criterion (Mathieu & Taylor, 2006). Discriminant validity is commonly analyzed in two ways. On the one hand, Fornell and Larcker (1981) recommend a descriptive approach by comparing the squared correlation between two factors to the average indicator variances explained by the latent factor. If the squared correlation is smaller then the AVEs of both constructs, discriminant validity is supported. All 14 constructs met this condition (see table 2). On the other hand, discriminant validity between two constructs can be explicitly tested by comparing an unconstrained model to a hierarchically nested model that fixes the correlation between the two constructs to one (Widaman, 1985). A comparable good fit of the constrained and unconstrained model would indicate a lack of discriminant validity. However, all constrained models exhibited significantly, $p < .05$, worse model fits compared to the unconstrained baseline model with 14 correlated factors. For example, a model fixing the correlation between generalized opinion leadership and extraversion ($r = .52$, $p < .001$) to one displayed a significantly worse model fit than an unconstrained model, $\Delta\chi^2(1) = 147$, $p < .001$, thus, indicating discriminant validity. Finally, a structural null model, which assumed all constructs to be uncorrelated with each other, also led to a significantly worse fit, $\Delta\chi^2(90) = 1973$, $p < .001$. Therefore, the 14-factor model represents an acceptable measurement model, providing sufficient covariation between the constructs to analyze the intervening effects.

Common method bias

If a variable can be identified that is largely independent of the others, then this variable can be used as marker variable to quantify the influence of a common method bias (Lindell & Whitney, 2001; Podsakoff et al., 2003). The trait agreeableness was chosen as marker variable, as

the hypotheses specified no relationship with the other variables in the model, and furthermore it was uncorrelated with most of the other traits (see table 2). A multi-factorial model with ten correlated trait factors and agreeableness as independent factor, that served as marker for a potential common method bias, was specified, $\chi^2(449) = 726$, CFI = .95, RMSEA = .04 [.03, .04]. This model was compared to a model that used agreeableness as predictor for the other factors' item parcels. However, the latter, $\chi^2(419) = 697$, CFI = .95, RMSEA = .04 [.04, .05], did not provide a better fit to the data, $\Delta\chi^2(30) = 24$, $p = .77$ than the model without agreeableness as a marker for common method bias. Moreover, the average difference in trait correlations between the two models (cf. Meade, Watson, & Kroustalis, 2007) was extremely low, $M_{\Delta r} = .00$ ($SD_{\Delta r} = .006$). These results correspond to current findings (Malhotra, Kim, & Patil, 2006; Spector, 2006) that do not attribute a large influence on survey results to common method variance. Although these results do not completely exclude the possibility of a common method bias, they suggest that it does not have a huge impact on the results and does not impair the interpretations of the findings considerably.

| Insert table 3 about here |

Evaluation of overall model

The test of the hypothesized personality-competence model as summarized in figure 1 follows a two-step strategy. The predictors of generalized opinion leadership and knowledge include the Big Five of personality, the most abstract traits of human personality, and additionally two compound traits, typical intellectual engagement and self-efficacy, that comprise of effects of the Big Five and also unique variance components. In the first step the Big Five only were considered, as they should be used as a common framework to compare new findings against (cf.

Baumgartner, 2002; Ozer & Benet-Martinez, 2005). In the second step, the two compound traits were also included to analyze their *incremental* contribution in explaining generalized opinion leadership and knowledge beyond the effects of the Big Five. The respective results for these two models are summarized in table 3.

The Big Five model that includes extraversion, neuroticism, conscientiousness, agreeableness, and openness to experiences but omits typical intellectual engagement and self-efficacy resulted in an acceptable fit to the data, $\chi^2(463) = 806$, CFI = .94, RMSEA = .04 [.04, .05]. The model in figure 1 postulated that domain-specific opinion leadership is determined by two components, generalized opinion leadership and objective knowledge. In line with hypotheses 1 and 2, GOL, $\beta = .33 / .32 / .45$, and objective knowledge, $\beta = .17 / .26 / .10$, significantly predicted DSOL in all three domains under study and resulted in R^2 of .15, .17 and .22 respectively. As some authors (e.g., Trepte & Scherer, 2010) are rather unclear whether knowledge constitutes an antecedent or a consequence of domain-specific leadership, an alternative model with a reversed path between knowledge and DSOL was also tested. However, this model led to a slightly worse fit to the data, $\chi^2(466) = 874$, CFI = .93, RMSEA = .04 [.05, .05]. Moreover, information criteria for this model, AIC = 26571, BIC = 27087, were higher than the hypothesized model in figure 1, AIC = 26509, BIC = 27037, supporting the notion that knowledge is a cause of domain-specific opinion leadership rather than a consequence. Regarding the relationship between the Big Five and generalized opinion leadership, the results supported hypotheses 3 and 4. Extraversion, $\beta = .44$, $p < .001$, and neuroticism, $\beta = -.15$, $p = .03$, were significantly related to GOL. Openness to experiences, however, failed to predict GOL accordingly, $\beta = .07$, $p = .27$, thus, dismissing hypothesis 5. For the two remaining traits of the Big Five, conscientiousness and agreeableness, no relationships with GOL were hypothesized. Accordingly, a model that included paths from these two traits to generalized opinion leadership

did not improve the model fit compared to a model that omitted these paths, $\Delta\chi^2(2) = 4.71$, $p = .09$. Moreover, in the former model the paths from agreeableness, $\beta = -.08$, $p = .21$, and conscientiousness, $\beta = .08$, $p = .15$, on generalized opinion leadership were not significant, thus, supporting hypotheses 6 and 7. Altogether, the Big Five explained about 30 percent of variance in GOL. Regarding the postulated relationships of the Big Five and objective knowledge, the results supported hypothesis 10 only partially. In all three domains concordantly, knowledge was significantly, $p < .05$, related to openness to experiences, $\beta = .32 / .25 / .11$, but not to extraversion, $\beta = .00 / .00 / .09$ (see table 3).

In the second step the two compound traits, typical intellectual engagement and self-efficacy, were also included to study their incremental effect on GOL and knowledge (see table 3). The respective model yielded an acceptable fit to the data, $\chi^2(654) = 1077$, CFI = .94, RMSEA = .04 [.04, .04]. However, typical intellectual engagement failed to predict GOL, $\beta = .11$, $p = .09$, and knowledge of movies, $\beta = .10$, $p = .16$, and Internet, $\beta = .08$, $p = .29$. TIE was only significantly related to knowledge in the domain of literature, $\beta = .24$, $p < .001$. Hence, these results give no support for hypothesis 8 and only rather weak support for hypothesis 10c. In line with hypothesis 9, general self-efficacy was significantly related to generalized opinion leadership, $\beta = .29$, $p < .001$. Although self-efficacy explained a significant additional proportion of GOL variance beyond the effects of the Big Five, at $\Delta R^2 = .06$ the amount was somewhat small.

| Insert table 4 about here |

Indirect and mediated effects

The proposed model in figure 1 is of a hierarchical nature; that is, the model implies that generalized opinion leadership and knowledge acted as mediators between extraversion,

neuroticism, openness, typical intellectual engagement and self-efficacy on the one hand and domain-specific opinion leadership on the other hand. Mediation assumes (a) an indirect effect between the personality traits and domain-specific opinion leadership and, moreover (b) a significant direct relationship between personality and DSOL that is accounted for by the mediators (Mathieu & Taylor, 2006). The respective indirect effects for the two models presented in the previous section are summarized in table 4. Extraversion, neuroticism and self-efficacy had significant ($p < .05$) indirect effects on domain-specific opinion leadership in all three domains. The respective effects were rather small and fell around $\overline{ß}$ = .17 (extraversion), $\overline{ß}$ = -.06 (neuroticism) and $\overline{ß}$ = .11 (self-efficacy). Indirect effects for openness to experiences, $\overline{ß}$ = .08, and typical intellectual engagement, $\overline{ß}$ = .10, were found in two domains, movies and literature, but not in the Internet domain, $\beta_{ope} = .04$, $p = .15$ and $\beta_{TIE} = .06$, $p = .06$. In order to interpret these indirect effects in terms of mediation, it has to be demonstrated that they explain a direct effect that was initially present when the mediators were not considered (Mathieu & Taylor, 2006). Therefore, the direct effects of extraversion, neuroticism, openness, typical intellectual engagement and self-efficacy on domain-specific opinion leadership were determined without considering the mediators (see table 5). Only extraversion consistently displayed significant ($p > .05$) direct effects on domain-specific opinion leadership in all three domains, $\overline{ß}$ = .23, while openness to experiences, $\overline{ß}$ = .17, had direct effects in two domains, movies and literature. TIE predicted DSOL in the domain literature only, $\beta = .24$; neuroticism and self-efficacy had no direct effects on DSOL. In conclusion, domain-specific opinion leadership is significantly related to extraversion and openness to experiences. This relationship is mediated by generalized opinion leadership and objective knowledge, thus, lending support to hypotheses 11a and 11b. On the other hand, the effects of neuroticism, typical intellectual engagement, and self-efficacy are not

mediated. They exhibit only indirect effects on domain-specific opinion leadership via GOL and knowledge, thus, dismissing hypotheses 11c to 11e.

| Insert table 5 about here |

Discussion

As a central contribution to existing research on opinion leadership, the present study integrated the construct into a hierarchical framework of personality including the most basic traits of human personality. By separating opinion leadership into a domain-specific and a domain-independent component, the study highlighted two central roots of opinion leadership: non-ability traits and objective competencies. Moreover, these two components operationalized as generalized opinion leadership and product-specific knowledge partially mediated the effects of more general personality traits on domain-specific opinion leadership. On a more abstract level domain-specific opinion leadership is characterized by three elemental traits: high levels of extraversion and openness to experiences, and low levels of neuroticism. Furthermore, two compound traits were hypothesized to describe DSOL beyond the effects of the Big Five, typical intellectual engagement and general self-efficacy. While the hypothesis regarding the former was not supported, domain-specific opinion leadership is also characterized by high levels of general self-efficacy.

In light of the ever increasing costs for traditional advertising media (e.g. on television, in magazines etc.) companies need to carefully consider how to invest their marketing budgets to attract new customers. In the past, it has been repeatedly shown that marketing strategies stimulating word-of-mouth communication between consumers are particularly effective, as interpersonal communication is frequently considered more trustworthy than messages

transmitted by impersonal advertising material (Johnson-Brown & Reingen, 1987; Engel et al., 1969). Hence, it has been widely acknowledged that opinion leaders represent a prominent target group for increased marketing efforts. These individuals are strongly involved with products they evaluate as beneficial for them or others and like to discuss their opinions with their peers, thus generating long-term values for the respective companies (Villanueva et al., 2008). For these strategies to be effective, marketeers require in-depth insights into this influencer segment. Thus, for a long time, both academics and practitioners have been striving to acquire a deeper understanding of opinion leaders. In particular, they have recently been focusing on opinion leaders' psychographic attributes with the aim of explicating the traits and motives behind their behavior. Although numerous characteristics accompanying opinion leadership have been identified, opinion leadership has not yet been integrated into a common framework of personality with established traits in psychology. This strongly hampers the ability to compare the trait to findings for other personality constructs (Ozer & Benet-Martinez, 2005).

To analyze consumer personality, Mowen et al. (2007) recommended the use of a hierarchical framework that distinguishes traits not only based upon different construct definitions but also different levels of abstractedness or domain-specificity. Therefore, the present study integrated opinion leadership into a hierarchical model of traits that traced back opinion leadership to the most abstract factors of human personality, the Big Five. By separating opinion leadership into two related trait classes, domain-specific opinion leadership as situational trait and generalized opinion leadership as more abstract compound trait representing the underlying influencer personality (Gnambs & Batinic, 2011b; Steenkamp & Gielens, 2003), opinion leadership was described on the basis of a limited number of basic characteristics. Generalized opinion leadership could be characterized by two broad traits, extraversion and neuroticism (negative). Opinion leaders are gregarious and communicative individuals with a strong social

orientation. Moreover, they are self-confident and trust their opinions and abilities (John et al., 2008). These results reflect comparable findings in previous research (e.g. Chelminski & Coulter, 2007; Clark et al., 2008; Coulter et al., 2002), which primarily administered measures of compound traits without considering the elemental level. This study, however, extended these findings by demonstrating that the personality of opinion leaders can even be described comparably at the most abstract level of personality exclusively considering elemental traits, as primarily applied in psychological research, thus linking the specific traits in consumer psychology to general psychological concepts and theories. Furthermore, the study included two additional compound traits in order to explain generalized opinion leadership in more detail. Typical intellectual engagement and general self-efficacy represent hierarchical subordinate traits to the elemental traits, which partially comprise the effects of the Big Five but additionally include unique variance components in their own rights. While the hypotheses regarding TIE were not supported, self-efficacy was useful in characterizing generalized opinion leadership in more detail. Opinion leaders are confident in their abilities and trust that they can achieve their goals. Although the trait was successful in predicting generalized opinion leadership, the two-step approach demonstrated that it has a rather limited incremental predictive power, i.e. it only explains a small amount of additional variance of generalized opinion leadership beyond the effects of the Big Five. Although general self-efficacy represents a different construct compared to extraversion and neuroticism, it explains similar variance components of generalized opinion leadership. Hence, this compound trait primarily mediates the effects of the underlying elemental trait without providing a great deal of additional explanatory value. By applying a stepwise procedure and testing the hypotheses for the compound traits separately in the hierarchical framework, the present study managed to distangle the independent influence of the elemental

and compound traits and presented the unique contribution of self-efficacy in the form of its incremental predictive power compared to the traits on the elemental level.

The study also highlighted a second source of domain-specific opinion leadership: objective knowledge. Generally, opinion leaders are assumed to possess higher levels of product-related knowledge than their peers (Coulter et al., 2002; Gilly et al., 1998; Gnambs & Batinic, in press; Shoham & Ruvio, 2008). However, in the past many empirical studies were rather inconclusive, as they neglected to distinguish between self-perceived knowledge and actual competencies (Allen, 2000; Coulter et al., 2002; Myers & Robertson, 1972). Many authors used subjective measures of knowledge as proxies for the opinion leaders' level of knowledge, although these reflect objective knowledge only partially (C. Park & Moon, 2003). This study demonstrated that objective knowledge, indeed, is a significant antecedent of domain-specific opinion leadership. In three different domains, DSOL was concordantly predicted by two components: cognitive abilities in terms of domain-specific knowledge and a domain-independent personality trait in the form of generalized opinion leadership. By incorporating the concept of recent personality theories (Ackerman, 1996; Chamorro-Premuzic & Furnham, 2006) into the hierarchical framework and linking the opinion leaders' personality to their competence, the study also demonstrated that the high levels of domain-specific knowledge can be partly explained by the opinion leaders' characteristic personality profile. Traits like openness to experiences determine the effort individuals spend in engaging with their environment, particularly with topics in their domain of influence. As a consequence, openness is to some degree responsible for the opinion leaders' increased level of knowledge. In conclusion, the study demonstrated that personality and knowledge are not completely independent components, but are mutually connected. Domain-specific opinion leadership is a result of their product-specific knowledge and a general influencer personality. Both components are related to more abstract traits of personality

such as the Big Five and, thus, partially act as mediators for these traits on domain-specific opinion leadership.

Limitations and future research

A series of limitations might impair the interpretation of these findings. The first limitation pertains to the cross-sectional design of the study, with the majority of the data being collected as self-reports. Although it was demonstrated that the influence of common method variance seemed to be negligible, the measures might potentially have still been distorted by a common method bias limiting the interpretations of the findings. To provide more valid results, future research should endeavor to integrate the perspectives of different informants in the form of, for example, self-ratings and peer-ratings, in order to correct for the biasing influence of using a single method. Second, the study tested the proposed hierarchical model in a single sample without providing some form of cross-validation. In view of the rather small indirect effects, the study should be replicated with an independent sample to corroborate the findings. Third, the selected content domains in the study, movies, literature, and Internet, were rather broad in scope and primarily centered around leisure activities. Although the correlations of generalized and domain-specific opinion leadership as well as the correlations of the latter with objective knowledge were quite consistent for all three domains, previous findings regarding the relationship between product knowledge and involvement (C. Park & Moon, 2003) indicate that these correlations vary for different product types (e.g., hedonistic versus utilitarian products). Hence, future studies should explicitly compare the correlations between opinion leadership and knowledge for different products. Generally, however, the approach adopted by Mowen et al. (2007) successfully demonstrated how to analyze traits of different generality within a common framework and determine the unique contributions of single traits within a trait hierarchy in order to explain domain-specific opinion leadership. The present study selected two compound traits to

exemplify how to establish the incremental predictive power of compound traits over the effects of traits on the elemental level. A similar approach seems invaluable in the future in order to quantify the incremental value of different traits identified in the past as important correlates of opinion leadership compared to superordinate traits like the Big Five. For example, it was repeatedly demonstrated that generalized opinion leaders possess high levels of self-confidence (Chelminski & Coulter, 2007; Clark et al., 2008). However, it has not yet been shown to what degree self-confidence indeed explains an additional variance component beyond the elemental trait of, for instance, neuroticism, or whether self-confidence itself only mediates the effect of neuroticism. Moreover, typically each trait of the Big Five is assumed to comprise of different facets, subordinate trait dimensions (see the NEO PI-R by Costa and McCrae, 1992). In the future, the use of these facets rather than the global Big Five constructs might provide a deeper understanding of opinion leadership on the elemental level, as not all facets seem to be comparably related to opinion leadership. For instance, the reported correlations between generalized opinion leadership and extraversion can presumably be primarily attributed to the facets “gregariousness” and “assertiveness”. To what degree the remaining facets, for example “excitement-seeking” or “activity”, are also relevant, remains to be shown. An advantage of using the Big Five of personality as a reference and modelling opinion leadership within a hierarchical network of traits is the potential to compare resulting findings more easily to findings for other constructs (e.g. the concept of charismatic leadership), as the Big Five represent a general classification to describe personality in many domains (Ozer & Benet-Martinez, 2005). Finally, it seems fruitful to extend the proposed framework to a general hierarchical model (Mowen & Voss, 2008) in the future that includes different outcome measures of opinion leadership, for example emotions or overt consumer behavior to explain these outcomes even by traits on the elemental level.

Conclusions and managerial implications

To effectively incorporate consumers into a company's marketing scheme a profound knowledge is required not only on how these consumers behave, but additionally on why they behave as they do. The present study extended existing findings about an important consumer segment, opinion leaders, by going beyond the analysis of observable behavior or demographics and explicated their psychological profile. By linking the trait to the most basic traits of human personality, the study not only contributed to the understanding of opinion leaders on a theoretical level, but additionally holds a number of managerial implications for practitioners. First, generalized opinion leaders are rather extraverted consumers. Being gregarious and communicative, they are likely to act as unpaid disseminators of market information. Second, compared to domain-specific opinion leadership, generalized opinion leadership characterizes individuals that influence others independent of a certain product group in a number of different areas. Therefore, for businesses that sell a great variety of products, generalized opinion leadership might be a more economical measure to identify influential consumers than using domain-specific measures for each product or product group in question. Third, as opinion leaders are emotionally stable and trusting in their abilities, marketing strategies should endeavor to affirm their self-confidence and try to avoid persuasion tactics that might be identified as deceptive or sneaky. Finally, being open to new ideas, marketing messages introducing new, possibly even slightly unconventional products might be more appealing to them.

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Table 1.

Socio-demographic statistics of the sample

	Total		Female		Male	
Age groups						
16 – 20	70	(17%)	45	(18%)	25	(15%)
21 – 25	155	(37%)	99	(40%)	56	(33%)
26 – 30	90	(22%)	55	(22%)	35	(20%)
31 – 40	46	(11%)	28	(11%)	18	(11%)
41 – 50	25	(6%)	11	(5%)	14	(8%)
51 – 85	31	(7%)	7	(3%)	24	(14%)
Educational level						
Secondary school	71	(17%)	38	(16%)	33	(19%)
Advanced level of secondary school	349	(60%)	151	(62%)	98	(57%)
University degree	97	(23%)	56	(23%)	41	(24%)
Total	417		245	(59%)	172	(41%)

Table 2.

Descriptive statistics and correlations

										Domain movies		*Domain literature*		*Domain Internet*	
		EXT	NEU	AGR	CON	OPE	TIE	SEL	GOL	DSOL	KNO	DSOL	KNO	DSOL	KNO
1.	Extraversion (EXT)	*(.65)*													
2.	Neuroticism (NEU)	-.25*	*(.55)*												
3.	Agreeableness (AGR)	.12*	-.12*	*(.52)*											
4.	Conscientiousness (CON)	.23*	-.15*	.00	*(.46)*										
5.	Openness (OPE)	.26*	.04	.02	.14*	*(.57)*									
6.	Typical intellectual engagement (TIE)	.13*	-.14*	.09	.20*	.27*	*(.47)*								
7.	Self-efficacy (SEL)	.46*	-.51*	.06	.44*	.15*	.19*	*(.78)*							
8.	Generalized OL (GOL)	.47*	-.24*	.01	.19*	.20*	.22*	.45*	*(.67)*						
	Domain movies														
9.	Domain-specific OL (DSOL)	.24*	.02	.04	-.01	.22*	.02	.07	.30*	*(.61)*					
10.	Knowledge (KNO)	.08	.06	-.06	-.05	.25*	.15*	-.01	.11*	.18*	*(.62)*				
	Domain literature														
11.	Domain-specific OL (DSOL)	.22*	.04	-.04	.11*	.26*	.23*	.10*	.30*	.35*	.14*	*(.76)*			
12.	Knowledge (KNO)	.07	.01	-.05	-.02	.22*	.23*	-.03	.12*	.07	.59*	.25*	*(.65)*		
	Domain Internet														
13.	Domain-specific OL (DSOL)	.21*	-.15*	.03	.05	.13*	.05	.22*	.37*	.40*	.05	.16*	-.06	*(.61)*	
14.	Knowledge (KNO)	.08	-.02	.01	.09	.09	.10*	.09	.09	.08	.03	-.04	.02	.12*	*(.60)*
	M	3.40	3.09	2.88	3.49	3.96	3.10	3.46	2.92	3.05	0.37	3.01	0.33	3.22	0.47
	SD	0.88	0.85	0.74	0.68	0.68	0.66	0.62	0.56	0.76	0.34	0.86	0.35	0.72	0.35
	Cronbach's alpha	.83	.75	.62	.69	.72	.66	.90	.83	.83	.87[a]	.86	.88[a]	.78	.87[a]
	Factor reliability	.85	.79	.74	.71	.77	.72	.91	.86	.82	.76	.90	.79	.83	.75

Notes. $N = 417$. OL … Opinion leadership; Average variance extracted by the latent factor in diagonal (Fornell & Larcker, 1981). [a] Due to the dichotomous response format based on the polychoric correlation matrix (cf. Kubinger, 2003).

$* \; p < .05$.

Table 3.

Parameter estimates for personality-competence model

Effect			Big Five model			Overall model		
			B	(*SE*)	β	*B*	(*SE*)	β
EXT	→	GOL	.52	(.08)	.44*	.45	(.08)	.36*
NEU	→	GOL	-.18	(.09)	-.15*	.03	(.12)	.03
OPE	→	GOL	.08	(.08)	.07	.04	(.08)	.03
TIE	→	GOL				.14	(.08)	.11+
SEL	→	GOL				.36	(.11)	.29*
Domain movies								
EXT	→	KNO	.00	(.07)	.00	-.02	(.07)	-.02
OPE	→	KNO	.32	(.07)	.31*	.31	(.07)	.30*
TIE	→	KNO				.11	(.08)	.10
GOL	→	DSOL	.30	(.06)	.33*	.29	(.06)	.33*
KNO	→	DSOL	.18	(.06)	.17*	.18	(.06)	.18*
Domain literature								
EXT	→	KNO	.00	(.06)	.00	-.04	(.07)	-.04
OPE	→	KNO	.25	(.07)	.24*	.22	(.08)	.21*
TIE	→	KNO				.25	(.07)	.24*
GOL	→	DSOL	.30	(.05)	.32*	.28	(.05)	.32*
KNO	→	DSOL	.18	(.06)	.26*	.28	(.06)	.27*
Domain Internet								
EXT	→	KNO	.09	(.06)	.09	.07	(.07)	.07
OPE	→	KNO	.11	(.06)	.11*	.10	(.07)	.09
TIE	→	KNO				.09	(.08)	.08
GOL	→	DSOL	.43	(.07)	.45*	.41	(.07)	.45*
KNO	→	DSOL	.12	(.07)	.10*	.12	(.07)	.11*

Notes. N = 417. EXT … Extraversion, NEU …, Neuroticism, OPE … Openness, TIE … Typical intellectual engagement, SEL … Self-efficacy, GOL … Generalized opinion leadership, DSOL … Domain-specific opinion leadership, KNO … Knowledge, B … Unstandardized parameter, *SE* … Bootstrapped standard error, β … Standardized parameter

* $p < .05$, + $p < .10$ (based upon 1000 bootstrap samples)

Table 4.

Indirect effects on domain-specific opinion leadership

	Big five model			Overall model		
	B	(*SE*)	β	*B*	(*SE*)	β
Domain movies						
Extraversion	.16	(.05)	.15*	.12	(.04)	.12*
Neuroticism	-.06	(.03)	-.05*	.01	(.03)	.01
Openness	.08	(.04)	.08*	.07	(.04)	.06
Typical intellectual engagement				.06	(.03)	.06*
Self-efficacy				.10	(.03)	.10*
Domain literature						
Extraversion	.15	(.04)	.14*	.11	(.04)	.10*
Neuroticism	-.05	(.03)	-.05*	.01	(.03)	.01
Openness	.09	(.04)	.08*	.07	(.04)	.07*
Typical intellectual engagement				.11	(.04)	.10*
Self-efficacy				.10	(.03)	.09*
Domain Internet						
Extraversion	.23	(.05)	.21*	.19	(.04)	.17*
Neuroticism	-.08	(.04)	-.07*	.01	(.05)	.01
Openness	.05	(.03)	.04	.03	(.04)	.02
Typical intellectual engagement				.07	(.04)	.06
Self-efficacy				.15	(.05)	.13*

Notes. $N = 417$. B … Unstandardized parameter, *SE* … Bootstrapped standard error, β … Standardized parameter

* $p < .05$ (based upon 1000 bootstrap samples)

Table 5.

Direct effects of personality on domain-specific opinion leadership

	Domain movies			*Domain literature*			*Domain Internet*		
	B	(*SE*)	β	*B*	(*SE*)	β	*B*	(*SE*)	β
Extraversion	.29	(.08)	.28*	.27	(.08)	.25*	.16	(.08)	.15*
Neuroticism	.08	(.08)	.08	.12	(.08)	.11	-.15	(.09)	-.15
Openness	.17	(.07)	.16*	.19	(.08)	.18*	.09	(.07)	.09
Typical intellectual engagement	-.05	(.08)	-.04	.27	(.08)	.24*	.03	(.08)	-.03
Self-efficacy	-.06	(.11)	-.06	.06	(.10)	.06	.11	(.11)	.10

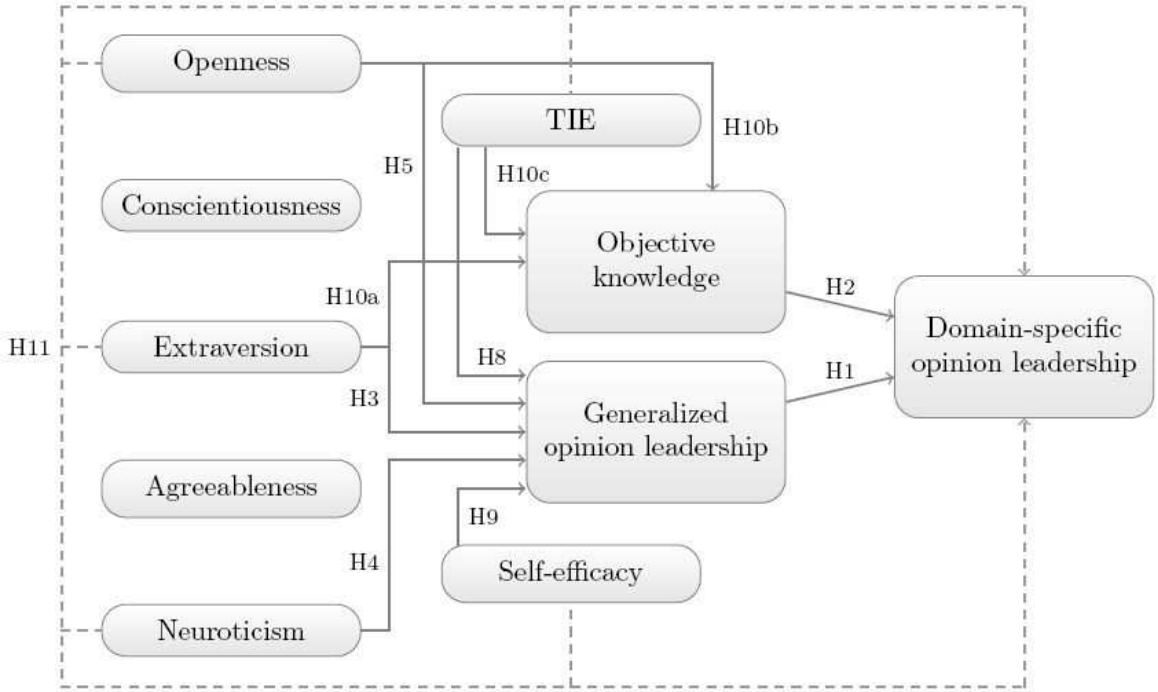
Notes. $N = 417$. B … Unstandardized parameter, *SE* … Bootstrapped standard error, β … Standardized parameter

* $p < .05$ (based upon 1000 bootstrap samples)

Figure Captions

Figure 1. Hierarchical personality-competence model of opinion leadership. TIE . . . Typical intellectual engagement; correlations between predictors of knowledge and generalized opinion leadership are not included; dashed lines indicate mediated effects.

Figure 1.


Openness
TIE
H10b
H5
H10c
Conscientiousness
Objective knowledge
H2
H10a
Domain-specific opinion leadership
H11
Extraversion
H8
H1
H3
Generalized opinion leadership
Agreeableness
H9
H4
Self-efficacy
Neuroticism