The roots of interpersonal influence:

A mediated moderation model for knowledge and traits as predictors of opinion leadership

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Abstract

Opinion leadership as a measure of individual differences describes influential individuals who informally shape the attitudes and behaviors of their peers. It is commonly assumed that the most important source of opinion leadership stems from expert knowledge in their domain of influence. Study I ($N = 183$), however, demonstrates that objective knowledge does not predict opinion leadership unambiguously. Rather, the relationship is moderated by a personality trait measuring stable dispositions for social influence, thus, highlighting two different roots of opinion leadership: domain-specific competencies and domain-independent traits. Furthermore, study II on $N = 185$ pairs of acquaintances illustrates that the interaction effect of these two sources on other-reports of opinion leadership is mediated by the degree of word-of-mouth communication.

Keywords: consumer psychology, opinion leadership, knowledge, word-of-mouth communication, mediated moderation

The Roots of Interpersonal Influence: A Mediated Moderation Model for Knowledge and Traits as Predictors of Opinion Leadership

Opinion leadership characterizes individuals who excel in informally shaping the opinions, attitudes and overt behavior of their social referent group by exerting a form of social influence on others' health behavior (Iyengar, Van den Bulte, & Valente, 2011), voting behavior (Harben & Kim, 2010), consumer behavior (Shoham & Ruvio, 2008), or adoption of new innovations (Vishwanath, 2006). Expert knowledge in the domain of influence is considered to be the most important source of opinion leadership that enables individuals to influence others (Coulter, Feick, & Price, 2002). Another, so far somewhat neglected, root of opinion leadership are domain-independent dispositional characteristics. Some authors (e.g., Clark & Goldsmith, 2005; Stokburger-Sauer & Hoyer, 2009) argue that an individual's ability to influence others is partly determined by specific personality traits such as social potency (Tellegen, 1982), personality strength (Weimann, 1991), market mavenism (Feick & Price, 1987), polymorphic (Merton, 1957) or generalized opinion leadership (Gnambs & Batinic, 2011a). In this study it is proposed that knowledge and traits not only represent two independent sources of opinion leadership but also exert an interactive effect. Domain-specific knowledge becomes less important as a source of opinion leadership with increasing levels of domain-independent traits, while it predicts opinion leadership more strongly for low levels of domain-independent traits. Furthermore, by adopting a multi-informant approach the study highlights the process through which opinion leadership achieves its central outcome of social influence: an individiual's degree of word-of-mouth communication mediates the interaction effect of knowledge and traits on other-reports of opinion leadership.

Opinion Leadership

Opinion leadership refers to an individual's ability to informally shape attitudes, opinions and overt behavior of others. It is typically conceived as an, albeit stable, but highly domain-specific measure of individual differences (Flynn, Goldsmith, & Eastman, 1996; Shoham & Ruvio, 2007). Opinion leaders exert their influence in a strongly limited area of interest (e.g., music or politics), but rarely influence others in several different areas (Myers & Robertson, 1972). The central outcome of opinion leadership is a social influence on others. This influence is hardly a form of restrictive control, an influence against the interests of the influencee, as opinion leaders seldom hold formal positions in their social group with an ability to distribute rewards or punishments, but rather an inherent potential to cause change (Weimann, Tustin, van Vuuren, & Joubert, 2007).

Effective leadership in small group and organizational settings generally stems from two major sources, general mental abilities and personality traits (Antonakis, 2004, 2011). Meta-analyses clearly link the emergence and also effectiveness of leadership to intelligence (Judge, Colbert, & Ilies, 2004; Lord, De Vader, & Alliger, 1986) and various personality characteristics such as extraversion and conscientiousness (Bono & Judge, 2004; Judge, Bono, Ilies, & Gerhardt, 2002). As a consequence, distinct patterns regarding successful leaders' dispositions are increasingly accepted in organizational leadership research (see Antonakis, 2011, for a review). For informal, opinion leadership a comparable consolidation has not yet been reached. Despite over five decades of research on opinion leadership, the roots of its social influence are still in dispute. Some authors (e.g., Antonides & Raij, 1998; Coulter et al., 2002) regard high levels of knowledge in a certain domain as the most important precondition for opinion leadership and, thus, highlight the opinion leaders' role as content experts to influence others. Empirical results on this matter, however, offer limited evidence at best. Katz and Lazarsfeld (1955), for example, observed that individuals high in opinion leadership tend to know more about public affairs.

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Comparably, Schenk (2005) reports a positive relationship between opinion leadership and knowledge on financial products. However, generally the correlations between opinion leadership and various measures of knowledge tend to be small and seldom exceed .30 (Grewal, Mehta, & Kardes, 2000; Lyons & Henderson, 2005; Schenk, 2005); some studies even report null-results (Jaccard & Levinson, 1995). This led some authors (e.g., Trepte & Scherer, 2010) to conclude that "informed opinion leaders" (p. 126) who indeed are more knowledgeable than their referent group are rather rare in practice and most opinion leaders possess average levels of knowledge. Hence, they dismiss the assumption of an increased knowledge as necessary precondition for opinion leadership. In contrast, opinion leadership is discussed in terms of certain personality traits (cf. Clark & Goldsmith, 2005; Gnambs & Batinic, in press; Stokburger-Sauer & Hoyer, 2009). Domain-independent traits that predict social influence have been described in great number, such as personality strength (Weimann, 1991), market mavenism (Feick & Price, 1987), polymorphic (Merton, 1957) or generalized opinion leadership (Gnambs & Batinic, 2011a). Although there is no consensus yet as to the degree these concepts operationalize the same or simply related traits, they share a common assumption: the degree of an individual's social influence is determined by a domain-independent personality trait. In empirical terms, correlations between domain-specific opinion leadership and various measures of such domain-independent dispositions for social influence, hereafter referred to with the generic term as 'influencer trait', generally vary between .20 and .50 (Clark & Goldsmith, 2005; Gnambs & Batinic, 2011b; Trepte & Scherer, 2010).

Sources of Social Influence

Social influence on others requires two basic skills (Lord, Phillips, & Rush, 1980; Treadway, Breland, Williams, Cho, & Ferris, 2011): domain-specific skills that enable individuals to face the task at hand in a competent manner, and interpersonal skills allowing them to inspire,

motivate and effectively interact with others. Although both skills increase an individual's ability to influence others, possessing interpersonal skills alone is typically not enough; individuals also need domain-specific competencies (Anderson & Kilduff, 2009; Hawkins, 1995). Inferior competencies typically prevent individuals from gaining influence, as groups predominantly emphasize domain-specific competencies over interpersonal skills (Lord et al., 1980; Van Vugt, 2006). However, it is frequently not essential that individuals actually *are* competent, as long as they *appear* competent (Anderson & Kilduff 2009). If others attribute superior abilities or task-relevant knowledge to someone, they are likely to give more importance to this individual's opinions and advice and, as a consequence, are more likely to follow this person's suggestions. Perceived competence is a frequent byproduct of influencer traits. Individuals high in influencer traits typically have higher levels of self-esteem (Clark & Goldsmith, 2005), they strongly trust in their abilities (Geissler & Edison, 2005), and, moreover, are perceived as competent by others (Gnambs & Batinic, 2011b), even when controlling for actual abilities (Anderson & Kilduff, 2009). As to the roots of domain-specific opinion leadership, both, domain-specific knowledge and influencer traits, have received some empirical support in the past. However, so far, they have not been included within a common framework. It is suggested that the ambiguous evidence regarding knowledge as source of opinion leadership can be attributed to effects of personality traits. Individuals who lack the knowledge to be considered content experts in a domain can still exert influence on others on part of their influencer trait that creates an appearance of competence. Indeed, Weimann (1991) demonstrated that individuals high in personality strength, a variant of a domain-independent influencer trait, determine actual voting decisions within a social group more strongly than those low in personality strength. In a similar vein, Batinic and Appel (in press) showed that an individual's influencer trait significantly predicts the media choices of their peers (e.g., the choice of entertainment products). Hence, it is proposed that domain knowledge is

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primarily relevant for those who are not influential by nature. With higher levels of an influencer trait the importance of factual competency as predictor of opinion leadership will decrease. Therefore, it is expected that domain-independent influencer traits moderate the link between domain knowledge and domain-specific opinion leadership (see Figure 1).

H1: Knowledge predicts domain-specific opinion leadership more strongly at lower levels of an influencer trait than at higher levels; i.e. the interaction of knowledge and an influencer trait predicts opinion leadership.

The way a person is perceived by others is particularly relevant for opinion leadership as its central outcome, social influence, manifests in others (e.g., as a change in attitudes or behaviors). The ascription of social influence, i.e. high levels of opinion leadership, occurs on numerous routes. For example, simple physiological characteristics such as a person's height are significantly related to the ascription of status and other-ratings of competence and leadership ability (Judge & Cable, 2004). Even rather unconventional features such as facial appearance seem to be consistently associated with perceived competence and leadership, and even predict objective performance criteria such as election outcomes (Antonakis & Dallas, 2009; Todorov, Mandisodza, Goren, & Hall, 2005) or financial success (Rule & Ambady, 2008, 2009). One central mechanism that links an individual's level of opinion leadership and its intrinsic sources, knowledge and personality, to the perceptions of others is the amount of gregariousness (Summers, 1970; Weimann et al., 2007) and above all interpersonal communication (Godes & Mayzlin, 2009; Richins & Root-Shaffer, 1988). For a long time, word-of-mouth communication has been identified as a central factor promoting social influence on peers' attitudes and behaviors (Grewal, Cline, & Davis, 2003; Liu, 2006; Villanueva, Yoo, & Hanssens, 2008). Communication from personal sources is frequently more credible and persuasive than information distributed through mass media or traditional marketing strategies (e.g., television commercials), as the

former is usually more individualized and less likely to be perceived as an intentional influence, for example as an attempt of a company to sell their products. Although the persuasiveness of a message varies depending on different factors such as the communicator's emotional, social (Riggio, Salinas, Riggio, & Cole, 2003) and political skills (Treadway et al., 2011) or the use of different linguistic styles (cf. Blankenship & Craig, 2011; Craig & Blankenship, 2011), the amount of communication is frequently the crucial factor. Those individuals who talk more and dominate the discussion time with their contributions are perceived as more competent and exert stronger influence on others (Mullen, Salas, & Driskell, 1989; Schmid Mast, 2002). Accordingly, domain-specific opinion leadership is usually accompanied by an increase in word-of-mouth communication (Godes & Mayzlin, 2009). As opinion leadership results from the interaction of knowledge and influencer traits (see hypothesis 1), we expect that the degree of word-of-mouth communication mediates between the interaction of an individual's self-reported knowledge and influencer trait on the one hand and other-reports of opinion leadership on the other hand (see right panel of Figure 1). Thus, the degree of word-of-mouth communication links the roots of opinion leadership within an individual to others' perceptions of opinion leadership.

H2a: Self-reported knowledge predicts other-reports of opinion leadership more strongly at lower levels of a self-reported influencer trait than at higher levels; i.e. the interaction of self-reported knowledge and a self-reported influencer trait predicts other-reports of opinion leadership.

H2b: The degree of word-of mouth communication mediates the interaction of self-reported knowledge and a self-reported influencer trait on other-reports of opinion leadership.

Overview

In two independent studies with non-overlapping samples we analyze the effects of knowledge and influencer traits on domain-specific opinion leadership. Global influencer traits

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are expected to moderate the relationship between knowledge and opinion leadership, thus limiting the importance of knowledge as a precondition for opinion leadership for high levels of an influencer trait (hypothesis 1). Furthermore, in the second study we seek to clarify the process knowledge and influencer traits achieve their effect on others by demonstrating that word-of-mouth communication mediates this interaction on other-reports of opinion leadership (hypothesis 2). Opinion leadership is measured in the domain of movies. The identification of influential movie goers has a long tradition (e.g., Katz & Lazarsfeld, 1955; Spann, Ernst, Skiera, & Soll, 2009) as recommendations of opinion leaders increase the likelihood that their peers will see a movie as well (Hennig-Thurau, Walsh, & Wruck, 2001; Liu, 2006). Hence, individuals high in opinion leadership represent an attractive consumer segment for marketing efforts to attract new audiences and, thus, increase movie companies' revenues.

Study I

Method

   Participants. Participants were 183 members (118 women) of a general-interest, online social network in Germany who had a mean age of $M = 31.06$ ($SD = 11.31$) years. Their educational level was rather diverse, including secondary level up to university education; about 33% were high school alumni and an additional 14% had a university degree. Most of the participants (64%) were employed in various occupations (including manual and office workers in public services as well as in the private sector). All participants were invited by an announcement in a public discussion board to complete an anonymous online survey. As minor incentive all participants who finished the survey received a personalized ranking of their movie knowledge.

   Instruments. Opinion leadership in the domain of movies was measured with six items (e.g., "In a discussion of movies would you be most likely to listen to your friends' ideas or

convince your friends of your ideas?") by Childers (1986) and the influencer trait with nine items (e.g., "I usually succeed if I want to convince someone about something.") of the short generalized opinion leadership scale (Gnambs & Batinic, 2011a) on five-point response scales. The latter operationalizes a domain-independent personality trait characterizing exceptionally influential individuals, whereas the former captures opinion leadership in a specific subject area. An exploratory principal axis analysis with promax rotation ($\kappa = 4$) clearly reproduced the two scales. All items had satisfactory loadings on their respective factor, $\bar{\lambda} = .70$ for opinion leadership and $\bar{\lambda} = .65$ for the influencer trait, while exhibiting only minor cross-loadings, all λs $< .30$. Objective knowledge was measured with 16 pretested[1] multiple-choice items with four response options (e.g., "What was the ship's computer called in '2001: A space odyssey'? ⊠ HAL 9000 ☐ Deep Thought ☐ ZXL-3077 ☐ R2D2). The test captured a single factor with a mean factor loading of $\bar{\lambda} = .57$. All instruments displayed satisfactory Cronbach's Alpha reliabilities between $\alpha = .85$ and $.88$ (see Table 1).

Results

Means, standard deviations, and bivariate correlations among the study variables are summarized in Table 1. The significant, $p < .05$, correlations between opinion leadership and its hypothesized predictors, objective knowledge and the influencer trait in the form of generalized opinion leadership, support both views regarding the roots of opinion leadership, competencies and personality. However, these correlations do not give insights in potential interaction effects of the two predictors.

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[1] A pool of 90 items was pretested in a sample of $N = 83$ students (49 women, mean age $M = 25.65$, $SD = 4.65$). The 16 items for the final scale, $M = 9.55$ ($SD = 3.61$), were selected on basis of their difficulties, ten easy ($D > .50$) and six difficult items ($.50 <= D$). The scale displayed a Cronbach's Alpha reliability of $\alpha = .88$.

The moderation analyses are conducted by means of latent variable modeling in Mplus 6 (Muthén & Muthén, 1998-2010) with a robust maximum likelihood algorithm using a numerical integration algorithm (Klein & Moosbrugger, 2000). Compared to linear regression with observed scores, latent variable modeling has the advantage of addressing the measures' unreliabilities and, thus, results in less biased parameter estimates. For the moderation analysis, objective knowledge and the influencer trait were used to predict opinion leadership. In the first step, two hierarchically nested models were compared by means of a log-likelihood difference test to gauge the significance of the interaction effect: a) a regression model without a path from the interaction term to the criterion, and b) a regression model that included a path from the interaction term to the criterion. Regression 2 in Table 2 that considered the interaction term provided a significantly, $\Delta\chi^2(df = 1) = 4.69$, $p = .03$, better fit to the data than regression 1 without an interaction effect. As a consequence, in the former regression the interaction term was significant at $b = -.06$ ($SE = .03$), $p = .05$. Figure 2 (left panel) illustrates the interaction effect at one standard deviation below and above the mean of the moderator. Knowledge significantly, $b = .29$, $p < .001$, predicted domain-specific opinion leadership at lower levels of the influencer trait, whereas at higher levels knowledge no longer was associated with opinion leadership, $b = .03$, $p = .69$. To examine the direction of effects more closely, we also calculated a confidence band for different values of the moderator (cf. Preacher, Curran, & Bauer, 2006). The confidence band in Figure 3 displays the standardized values of the influencer trait for which the simple slopes of knowledge on opinion leadership are statistically significant. The region of significance includes all values below 0.50, indicating that at values of the moderator smaller than this threshold any simple slopes are statistically significant. About half a standard deviation above the mean of the moderator knowledge fails to significantly predict opinion leadership.

Study II

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The second study extends the previous results in three important aspects. First, as there is no consensus yet regarding the operationalization of influencer traits, all constructs are operationalized with different instruments to replicate the previous findings with another set of measures. Second, to overcome various biases inherent to cross-sectional designs (e.g., common method bias) the study adopts a multi-informant design and assesses the dependent variable, opinion leadership, and the predictors, knowledge and the influencer trait, from different sources. The latter are measured as self-reports, while the former represents other-reports from close acquaintances. In contrast to the previous study that examined how individuals viewed themselves in terms of opinion leadership, this study focuses on how they are actually perceived by others who represent the target of their social influence. Third, the study additionally seeks to analyze the process influencer traits achieve their effect on others. Word-of-mouth communication is expected to mediate the interaction between knowledge and influencer traits on other-reports of opinion leadership.

Due to the multi-informant design, we include three covariates in the analyses that might affect other-perceptions of an individual's level of opinion leadership. First, the accuracy of perceived personality traits is strongly influenced by the quality (Connelly & Ones, 2010) and duration (Biesanz, West, & Millevoi, 2007) of acquaintance between two individuals. The longer and the more intimately two persons know each other, the better is their ability to correctly infer the other's personality. Hence, we consider the tie strength between a pair of acquaintances as a potential covariate. Second, other-ratings of domain-specific opinion leadership might depend on the perceiver's competence in the domain of interest. The accuracy of other-ratings varies with the perceiver's abilities (Fleenor, Smither, Atwater, Braddy, & Sturm, 2010). For example, perceivers that consider themselves more competent in a domain also tend to attribute higher levels of competence to others (Kirkcaldy, Noack, Furnham, & Siefen, 2007). As a consequence,

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to some degree other-ratings of domain-specific opinion leadership might depend on the perceiver's level of competence. Therefore, we included the perceiver's own knowledge and influencer trait as potential covariates in the analyses.

Method

Participants. A mixed sample of $N = 185$ (105 women) students and non-students provided self-reports and their acquaintances provided other-reports. The participants were $M = 30.81$ ($SD = 12.29$) years of age; 35% were high school alumni and an additional 19% had a university degree. About 29% of the participants were currently students of miscellaneous majors (including economic, computer and social sciences), whereas the majority of the sample was employed, primarily in clerical positions. Self- and other-ratings were collected individually by a trained research assistant. If a peer was not currently available, the peer questionnaire was handed out to the participant and returned in a closed envelope. As minor incentive, all participants were eligible to enter a lottery with the chance of winning three sums of 50 Euro.

Instruments. Opinion leadership in the domain of movies was measured as other-rating with six items (e.g., "I often influence people's opinions about movies.") by Flynn et al. (1996) resulting in a Cronbach's Alpha reliability of $\alpha = .82$. The influencer trait in the form of market mavenism (Feick & Price, 1987) was assessed with six items (e.g., "I like introducing new brands and products to my friends.") on five-point response scales from "strongly disagree" to "strongly agree" for both members of a pair to include the peer's influencer trait as a potential confounding variable in the analyses. In contrast to the instrument used in study I market mavenism measures a specialized form of social influence focusing on consumer decisions. The scale yielded good reliabilities in both groups, $\alpha = .84$ within self-reports and $\alpha = .85$ within acquaintances. An exploratory principal axis analysis with promax rotation ($\kappa = 4$) clearly reproduced the three scales with mean item loadings of $\overline{\lambda} = .68$ for opinion leadership, $\overline{\lambda} = .70$ for the influencer trait

in self-reports, and $\bar{\lambda} = .70$ in their acquaintances. Objective knowledge was measured with ten

multiple-choice items with four response options (e.g., "Which movie starred Arnold

Schwarzenegger together with Jamie Lee Curtis? ☐ Terminator ☐ Predator ☐ Alien ☒ True

Lies) using a pretested instrument[2]. Again, the construct was assessed for both members of a pair,

yielding satisfactory reliabilities of $\alpha = .76$ and .74 for self and acquaintances' knowledge, and

mean factor loadings of $\bar{\lambda} = .50$ and $\bar{\lambda} = .43$, respectively. Word-of-mouth communication was

assessed with two items (e.g., "Generally, how often do you talk with your friends about

movies?") as self-rating on five-point response scales from "never" to "very frequently", whereas

tie strength within the dyads was measured as other-rating with one item ("How well do you

know the person you are about to rate?") on a 7-point response scale from "not at all" to "very

good".

Results

      Descriptive analyses. Means, standard deviations, and bivariate correlations among the

study variables are summarized in Table 2. With a median of 7, the tie strength within the dyads

was generally high. No dyad reported a tie strength below four. As self-other correlations usually

increase with higher levels of acquaintanceship (Connelly & Ones, 2010) the correlations between

peer-assessed opinion leadership and the self-reported measures are expected to be rather high.

This represents rather common situations in practice. Opinion leadership is expected to be most

effective in dyads with high tie strength, as opinion leaders primarily influence the opinions and

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[2] A pool of 20 items was pretested in a sample of $N = 71$ students (55 women, mean age $M = 25.64$, $SD = 5.61$). The

ten items for the final scale, $M = 5.48$ ($SD = 2.27$), were selected on basis of their difficulties, three easy ($D >= .60$),

four medium ($.40 < D < .60$), and three difficult items ($D <= .40$), to differentiate across a broad range of

proficiencies. The scale displayed a Cronbach's Alpha reliability of $\alpha = .75$.

behaviors of close acquaintances and friends. The high relationship status is mirrored by a significant correlation in the movie knowledge between the two members of a pair, $r = .35$, $p < .001$. As close friends usually share common hobbies and interests, their movie knowledge is expected to be similar to some degree as well (cf. the similarity effect of interpersonal attraction; Jamieson, Lydon, & Zanna, 1987). As in the previous study, objective knowledge was significantly, $r = .35$, $p < .05$, correlated with opinion leadership. However, in this case the influencer trait in the form of market mavenism was uncorrelated with opinion leadership, $r = .11$, $p = .13$.

Moderation analysis. As in study I, objective knowledge and the influencer trait were used to predict opinion leadership. Additionally, three control variables were included in the models: the peer's knowledge and influencer trait as well as tie strength. To determine the significance of the interaction between knowledge and the influencer trait regression model 1 in Table 4 was compared to regression model 2. The latter model that included the interaction term provided a significantly, $\Delta\chi^2(df = 1) = 4.40$, $p = .04$, better fit to the data than the former that omitted the interaction effect. As a consequence, the interaction term in regression 2 was significant at $b = -.11$ ($SE = .05$), $p = .02$. The interaction plot in Figure 2 indicates that knowledge significantly, $b = .26$, $p < .001$, predicted opinion leadership at low levels of the moderator, whereas at higher levels it was not significantly associated with the influencer trait, $b = .08$, $p = .10$. Furthermore, the confidence band in Figure 3 displays the standardized values of the influencer trait for which the simple slopes of knowledge on opinion leadership are statistically significant. The region of significance includes all values below 0.89, indicating that for all values of market mavenism below this threshold any simple slopes of knowledge on opinion leadership are statistically significant. Hence, the influencer traits in both studies concordantly moderate the link between knowledge and opinion leadership.

Mediated moderation. The tests of the mediated moderation are conducted according to the guidelines outlined by Muller, Judd, and Yzerbyt (2005). Given the significant interaction term established in the previous section, mediated moderation is demonstrated if three conditions are satisfied: a) the interaction of knowledge and the influencer trait on the mediator (word-of-mouth communication) and b) the main effect of the mediator on opinion leadership are both significant. As a result, c) the interaction between knowledge and the influencer trait on opinion leadership should become non-significant or at least reduce in magnitude. For market mavenism all conditions for mediated moderation are fully met (see Table 4): a) the interaction between knowledge and the influencer trait, $b = -.10$ ($SE = .05$), $p = .05$, significantly predicts the mediator (word-of-mouth communication) in regression 3, b) the main effect of the mediator on opinion leadership, $b = .73$ ($SE = .15$), $p < .001$, in regression 4 is significant, and 3) the interaction of knowledge and market mavenism, $b = -.07$ ($SE = .04$), $p = .11$, in regression 4 no longer reaches significance. Furthermore, a Monte-Carlo confidence interval (95%) with 1000 replications was computed to test the mediated effect statistically (cf. MacKinnon, Lockwood, & Williams, 2004). In concordance with the previous analysis this resulted in a significant mediated effect of -.065 [-.071, -.058]. Hence, word-of-mouth communication fully mediates the interaction of knowledge and the influencer trait on other-reports of opinion leadership.

Discussion

This study proposed that the level of knowledge as source of opinion leadership varied depending on domain-independent personality traits. The importance of cognitive competencies to influence others' opinions and behaviors has been discussed rather controversially. While some authors (Antonides & Raij, 1998; Coulter et al., 2002) emphasize the prominent level of knowledge as a necessary precondition for opinion leadership, others (Trepte & Scherer, 2010) consider it, an albeit frequent, but by no means essential byproduct of opinion leadership. In line

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with the former view, we identified knowledge as an important precondition for domain-specific opinion leadership; this effect emerged concordantly in both studies. However, the results also provide strong support for the assumption that influencer traits represent a central moderator of the relationship between knowledge and opinion leadership. With increasing levels of an influencer trait the effect of knowledge on opinion leadership gradually decreases; i.e. objective knowledge is first and foremost important for those who are not influential by disposition. However, despite the decreasing importance of knowledge for high levels of an influencer trait, knowledge remained a relevant predictor of opinion leadership for most individuals in the two samples. Not until half (study I) to one (study II) standard deviation above the influencer trait's mean knowledge failed to significantly predict opinion leadership. Thus, overall knowledge represents an important albeit not a necessary precondition of domain-specific opinion leadership; a lack of expert knowledge in a domain can be compensated by high levels of an influencer trait. Furthermore, by adopting a multi-informant design, thus, separating the sources of opinion leadership and the criterion itself, the study highlighted a mechanism by which opinion leadership achieves its effects on others: word-of-mouth communication. The interaction of knowledge and the influencer traits on other-reported opinion leadership is mediated by the degree of interpersonal communication. These results can be considered rather unbiased, as the study's research design overcomes many limitations of cross-sectional self-report studies (e.g., common method bias) which sets it apart from previous research by including not only different informants (self and peer) but also different assessment methods (objective tests and subjective self-ratings).

As opinion leadership stems from two sources, objective knowledge and personality traits, that operate in a complementary fashion, a lack of knowledge can be compensated by high levels of an influencer trait, two types of the trait can be differentiated: opinion leadership influencing others by means of their competence in a certain domain and opinion leadership influencing

others by means of their personality. This mirrors a comparable distinction in formal leadership

research that distinguishes between task-oriented leadership and socio-emotional leadership (Livi,

Kenny, Albright, & Pierro, 2008). While the former usually goes along with high levels of

knowledge and influences others by offering task-oriented information and advice, the latter

emphasizes interpersonal relationships and influences others by offering emotional support, praise

and critique. In opinion leadership research a similar distinction was rarely explicated before. In a

related vein, Locock, Dopson, Chambers, and Gabbay (2001) described two kinds of opinion

leaders in health care. Expert opinion leaders represent trustworthy authorities, who have

specialized knowledge on a topic and base their social influence on the communication of these

facts. Peer opinion leaders, on the other hand, have a stronger social orientation and use their

relationship with others to influence others. In combination with the above presented studies,

these results raise doubts about the conventional understanding of opinion leadership as a strictly

uni-dimensional concept. In the future it seems important to differentiate opinion leadership more

precisely into different types, expert opinion leadership using their knowledge to influence others

and social opinion leadership that bases its influence on specific personality traits.

Limitations

Some aspects might limit the generalizability of these results. First, the study did not

include a measure of social influence as an external criterion of opinion leadership. Several

studies, however, demonstrated the predictive validity of the administered opinion leadership

scales for miscellaneous measures of social influence (e.g., Vishwanath, 2006). Second, there is

no consensus yet regarding the operationalization of influencer traits. In the past, various

measures have been used interchangeably without knowing to what degree they capture the same

or simply related traits. The two studies tried to circumvent the problem by including two rather

heterogeneous influencer traits which both yielded comparable results. However, it is not clear to

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what degree these results also generalize to other influencer traits, for example personality strength (Weimann, 1991). Moreover, organizational leadership research identified several other personality traits predicting leadership emergence and effectiveness, for example extraversion or conscientiousness (cf. Antonakis, 2011). Future research should assess their relevance for opinion leadership, particularly in comparison with different influencer traits. Generally, it seems fruitful to place influencer traits within in a larger framework of personality and also connect them to the five factor model (Goldberg, 1981). Third, it is conceivable that the relative contribution of knowledge and dispositions to predict opinion leadership might vary for different domains. Knowledge might be more relevant for influencing cognitive decisions (e.g., the purchase decision for expensive products) than for influencing attitudes (e.g., on politics). Future research should also emphasize the process by which opinion leadership exerts its influence on others. This study included one such measure, the degree of word-of-mouth communication. Although small-group research suggests that merely the quantity of communication is crucial to be recognized as leader (Mullen et al., 1989; Schmid Mast, 2002), the quality (e.g., different social and emotional communication skills) are relevant as well (cf. Craig & Blankenship, 2011; Riggio et al., 2003). So far, little is known about different communication styles of opinion leadership.

Conclusion and General Implications

Opinion leadership represents the central drive behind an individual's social influence on others (Flynn et al., 1996; Shoham & Ruvio, 2007). In contrast to formally recognized leaders in organizational settings, individuals high in opinion leadership exert their influence in informal groups among peers. For a long time, it has been acknowledged that competence is a major force behind social influence (Lord et al., 1980; Treadway et al., 2011). Individuals who are perceived as competent at a task at hand shape opinions, attitudes and behaviors of their peers more strongly. Perceived opinion leadership, however, does not necessarily imply that the respective individual

is indeed competent as it results from effects of knowledge and influencer traits. Hence, in organizational settings opinion leadership might yield detrimental effects within task-oriented work groups, if it is not rooted in actual competencies but stems primarily from underlying personality characteristics. On a team of engineers, for example, it would seem beneficial if members with pronounced technical expertise exerted their influence. However, if individuals high in influencer traits gained influence without actually being sufficiently competent at the task at hand, it might lead to suboptimal decisions and inferior group performance. On another realm, marketeers trying to incorporate influential consumers as unpaid disseminators in their marketing strategies might want to reconsider how to approach individuals high in domain-specific opinion leadership. It has been previously suggested that advertising material with detailed product information might be particularly appealing for them (Geissler & Edison, 2005). However, bearing in mind that domain-specific opinion leadership can result from expert knowledge or influencer traits it seems prudent to consider promotional material with different kinds of information. Whereas highly knowledgeable individuals are likely to be interested in rather specialized information (e.g., detailed technical specifications on a new product), individuals high in influencer trait lacking the proper expertise on a matter would most likely be overwhelmed by it.

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Table 1

Descriptive statistics for study I

		M	*SD*	1.	2.	3.
Predictor:	1. Knowledge	6.96	3.87	.88 [†]		
Moderator:	2. Generalized opinion leadership	2.85	0.63	.11	.87	.
Criterion:	3. Domain-specific opinion leadership	2.81	0.80	.42*	.26*	.85

Notes. $N = 183$. Cronbach's Alpha reliabilities in diagonal. [†] Due to the dichotomous response format based on the polychoric correlation matrix (cf. Kubinger, 2003).

[*] $p < .05$

Table 2

Regression analyses in study I

Predictors	Regression 1		Regression 2	
	Criterion: Opinion leadership $R^2 = .28$		Criterion: Opinion leadership $R^2 = .28$	
	b (*SE*)	z	b (*SE*)	z
1. Knowledge	.17 (.04)	4.85[*]	.17 (.03)	5.01[*]
2. Generalized opinion leadership	.24 (.12)	2.05*	.18 (.11)	1.61
Interaction 1 x 2			-.06 (.03)	-2.00[*]

Notes. N = 183. Robust maximum likelihood regression, *b* ... Regression weight,

SE … Standard error;

[*] *p* < .05

Table 3

Descriptive statistics for study II

		M	SD	1.	2.	3.	4.	5.	6.	7.
Covariates:	1. Tie strength	6.52	0.77							
	2. Knowledge of peer	4.13	2.27	.12	.74 [†]					
	3. Market mavenism of peer	2.86	0.82	.00	.06	.85				
Predictor:	4. Knowledge	4.36	2.37	.07	.35*	-.02	.76 [†]			
Moderator:	5. Market mavenism	2.84	0.80	.08	-.02	.12	.09	.84		
Mediator:	6. Word-of-mouth communication	3.50	1.02	.01	.15	.03	.31*	.12	.83	
Criterion:	7. Peer-reported opinion leadership	3.16	0.81	.01	.12	-.06	.35*	.11	.51*	.82

Notes. $N = 185$. Cronbach's Alpha reliabilities in diagonal. [†] Due to the dichotomous response format based on the polychoric correlation matrix (cf. Kubinger, 2003).

[*] $p < .05$

Table 4

Regression analyses in study II

Predictors	Regression 1 Criterion: Opinion leadership $R^2 = .25$		Regression 2 Criterion: Opinion leadership $R^2 = .30$		Regression 3 Criterion: Communication $R^2 = .15$		Regression 4 Criterion: Opinion leadership $R^2 = .43$	
	b (*SE*)	*z*	*b* (*SE*)	*z*	*b* (*SE*)	*z*	*b* (*SE*)	*z*
1. Tie strength	-.05 (.10)	-.43	-.04 (11)	-.40	-.09 (.09)	-.94	-.02 (.11)	-.17
2. Knowledge of peer	-.05 (.06)	-.77	-.04 (.06)	-.71	.02 (.06)	.34	-.05 (.07)	-.76
3. Market mavenism of peer	-.13 (.09)	-1.43	-.13 (.09)	-1.43	.02 (.09)	.20	-.18 (.10)	-1.80
4. Knowledge	.27 (.07)	4.06*	.29 (.07)	4.35*	.19 (.08)	2.25*	.21 (.07)	2.87*
5. Market mavenism	.10 (.10)	.95	.06 (.11)	.60	.12 (.10)	1.26	.00 (.10)	.02
Interaction 4 x 5			-.11 (.05)	-2.25*	-.10 (.05)	-1.97*	-.07 (.04)	-1.59
6. Communication							.73 (.15)	4.96*

Notes. N = 185. Robust maximum likelihood regression, *b* ... Regression weight, *SE* … Standard error;

*$p < .05$

Study I

```
┌──────────────────┐
│ Influencer trait │
└──────────────────┘
                    \
                     ○──────▶ ┌──────────────┐
                    /         │   Opinion    │
┌──────────────────┐          │  leadership  │
│    Knowledge     │          └──────────────┘
└──────────────────┘
```

Study II

```
┌──────────────────┐
│ Influencer trait │
└──────────────────┘
                    \
                     ○────── ┌ ─ ─ ─ ─ ─ ─ ─ ┐      ┌──────────────┐
                    /        │ Word-of-mouth │──────▶│  Perceived   │
┌──────────────────┐         │ communication │      │   opinion    │
│    Knowledge     │         └ ─ ─ ─ ─ ─ ─ ─ ┘      │  leadership  │
└──────────────────┘                                └──────────────┘
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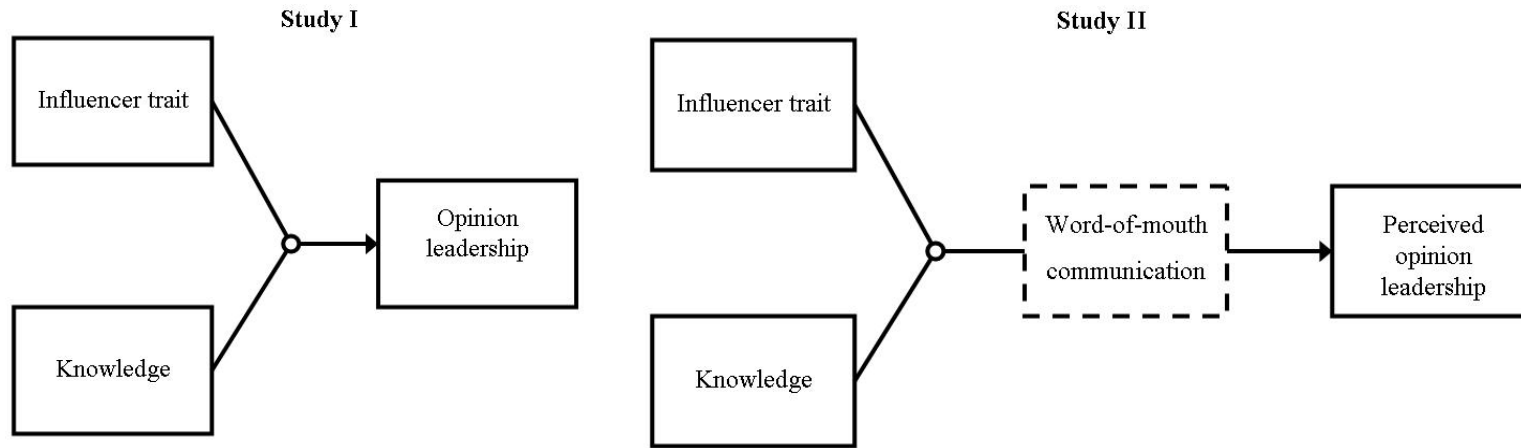
Figure 1. Mediated moderation model for knowledge and opinion leadership; circles mark interactions; the dashed box indicates mediation.
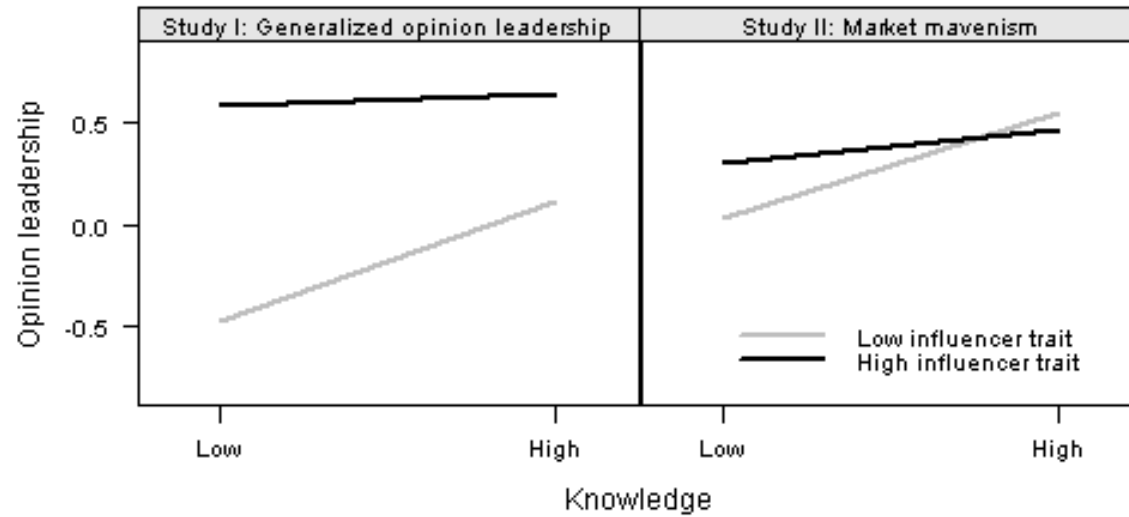
Figure 2. Interaction plots for the effect of knowledge on domain-specific opinion leadership at one standard deviation below (gray lines)

and above (black lines) the mean of the moderator, generalized opinion leadership (study I) or market mavenism (study II).
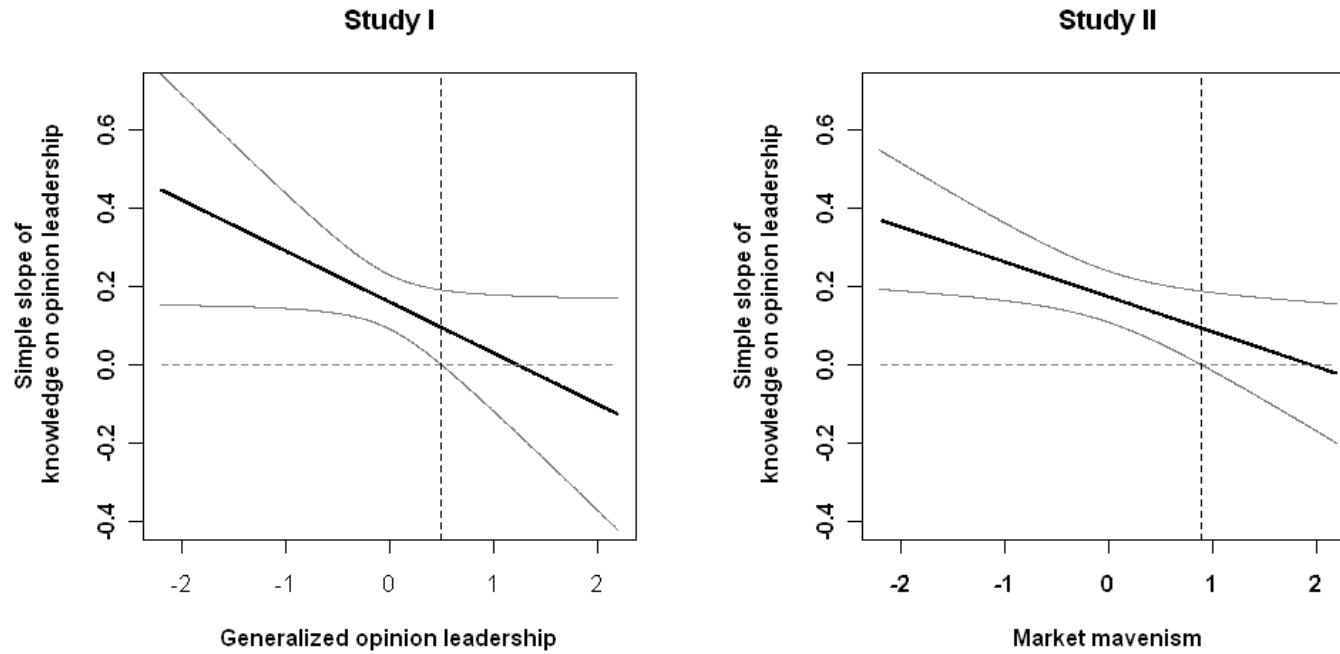
Figure 3. Confidence bands for simple slopes of knowledge on domain-specific opinion leadership for different values of two influencer traits (z-standardized), generalized opinion leadership (study I) or market mavenism (study II). Gray lines indicate the lower and upper bounds of the 95% confidence interval; the vertical, dashed lines mark the regions of significance.