SCM
Studies in Communication | Media

FULL PAPER

Same result, different effect
The credibility attribution to public opinion research results

Gleiches Ergebnis, andere Wirkung
Die Glaubwürdigkeit von Ergebnissen der Markt- und Meinungsforschung

Nora Denner, Julian Brocke & Sven Joeckel

Nora Denner, Johannes Gutenberg-Universität Mainz, Jakob-Welder-Weg 12, 55128 Mainz; Kontakt: nora.denner(at)uni-mainz.de

Julian Brocke, Friedrich-Alexander-Universität Erlangen-Nürnberg, Lange Gasse 20, 90403 Nürnberg; Kontakt: julian.brocke(at)fau.de

Sven Joeckel, Universität Erfurt, Nordhäuser Str. 63, 99089 Erfurt; Kontakt sven.joeckel(at) uni-erfurt.de

FULL PAPER

Same result, different effect
The credibility attribution to public opinion research results

Gleiches Ergebnis, andere Wirkung
Die Glaubwürdigkeit von Ergebnissen der Markt- und Meinungsforschung

Nora Denner, Julian Brocke & Sven Joeckel

Abstract: Results of opinion polls are used frequently in the press and media users rely on them in order to form an opinion or to make a decision. Sometimes, the reliability of polls can be questioned. This study examines the relative impact of source and type of medium on the credibility of published public opinion poll results. We conducted a two-factorial experimental online survey study (N = 150 German internet users). Manipulated factors were *source* (well-known vs. unknown polling institute) and *type of medium* (quality press vs. tabloid press). While we find significant effects for *type of medium*, effects for *source* cannot be confirmed. Independent from the *source* of the result, the same result being published by quality press is considered more credible than when published by tabloid press.

Keywords: Public opinion research, polls, credibility, tabloid, newspaper.

Zusammenfassung: Meinungsforschungsergebnisse werden regelmäßig von Printmedien verwendet. Gleichzeitig orientieren sich Rezipienten an ihnen, um sich eine Meinung zu bilden oder Entscheidungen zu treffen. Allerdings kann die Glaubwürdigkeit von Umfragen hinterfragt werden. Diese Studie untersucht den relativen Einfluss der Quelle und des Mediums auf die Glaubwürdigkeit von veröffentlichten Meinungsforschungsergebnissen. Hierfür wurde eine zweifaktorielle experimentelle Onlinestudie durchgeführt (N = 150 deutsche Internetnutzer). *Quelle* (bekanntes vs. unbekanntes Umfrageinstitut) und *Medium* (Qualitätszeitung vs. Boulevard-Zeitung) wurden hierbei manipuliert. Während für das *Medium* signifikante Effekte gefunden werden konnten, können Effekte für die *Quelle* nicht bestätigt werden. Unabhängig von der Quelle des Meinungsforschungsergebnisses ist es glaubwürdiger, wenn das Ergebnis in einer Qualitätszeitung veröffentlicht wird als wenn es in einer Boulevardzeitung erscheint.

Schlagwörter: Meinungsforschung, Umfragen, Glaubwürdigkeit, Boulevard, Zeitung

1. Public opinion results in the media

Many news stories rely on the presentation of findings from public opinion research (Crespi, 1980). Journalists may employ these findings as a way to underline and justify their arguments (Koetsenruijter, 2011; Lipari, 2001) and opinion polls can be seen as an important guideline for decision-making processes in a democracy (Ampofo, Anstead, & O'Loughlin, 2011; Wolf & Holian, 2006). Poll results can affect potential voters when forming an opinion about the candidates (Hardy & Jamieson, 2005) as well as the actions of policy makers (Greenwald et al., 2003). Yet, employing public opinion research results is not limited to issues of politics or current affairs, but often also refers to *softer* aspects of everyday life such as lifestyle and celebrities. At the same time public opinion polls are no longer published exclusively in quality press such as *F.A.Z* (Germany), *Le Monde* (France), or *Times* (UK), but are used in more entertainment oriented tabloid press such as *Bild* (Germany), *Paris Match* (France), or *Daily Mail* (UK) as well. This growth in the importance of public opinion polls is accompanied by an increasing number of polling institutes offering their services and findings for newsmakers.

Even though results of public opinion research are used very frequently, the validity, suitability, and reliability of public opinion polls can be questioned (Koetsenruijter, 2011; Lipari, 2001; Smith & Verrall, 1985; Weiner, 1977). With the increasing use of public opinion research, the widespread presentation of its results and at the same time often dubious qualities of these results, the attribution of credibility becomes a crucial criterion for judging these results (Altschuler, 1986; Reich, 2011; Schweiger, 2000). As people do not always have the cognitive resources to evaluate all given information rationally (Selten, 2002), nor do they have the time to do so (Metzger, Flanagin, & Medders, 2010), we assume that people will rely on a few key cues for attributing credibility to a public opinion research result. In this article, we elaborate on two crucial aspects of credibility: First, we are asking the question in how far the credibility of a given public opinion research result is affected by its *source* (the polling institute that conducts a study). Second, we scrutinize potential effects from the *type of medium* in which it is published. In this regard, we focus on newspapers and the distinction between quality and tabloid press.

2. Credibility of public opinion research results

Research on credibility has a long tradition in communication research. Credibility research ranges back to persuasion studies (Hovland, Janis, & Kelley, 1959; McComas & Trumbo, 2001) accentuating *source* credibility as a crucial element of attributing credibility to a message, or studies underlining the comparative credibility of different forms of media (Kohring & Matthes, 2007; Roper, 1985). Research on the concept of *bounded rationality* (Simon, 1947) provides us with a suitable theoretical framework for analyzing people's attribution of credibility in the context of public opinion research. Bounded rationality acknowledges people's decision-making with a limited amount of resources. People do not look for

an optimal alternative, but for a satisfying one (Metzger et al., 2010; Simon, 1947). Humans do not have unrestricted cognitive capacities to evaluate messages such as public opinion research results. Useful mechanisms to simplify decision-making and message evaluation within the concept of bounded rationality are heuristics (Gigerenzer, 2008). Following Gigerenzer and Todd (1999), heuristics are simple rules of thumb that, by ignoring some information, make it possible to choose the option which is satisfactory or good enough with a limited amount of time and cognitive effort. The attribution of credibility may be considered such a decision following a heuristic (Metzger et al., 2010) and we might also follow Schweiger (2000) that "credibility becomes an important heuristic for content selection at a time of information overload" (p. 38).

Hilligoss and Rieh (2008) distinguish different types of heuristics such as source-related heuristics ("heuristics about sources of information in two ways: familiar vs. unfamiliar sources and primary vs. secondary sources") and media-related heuristics ("heuristics about different media are used to compare and contrast the credibility of those media") (p. 1475). The recipients' decision whether to attribute credibility or not is based on a combination of components of the message since he or she is often not able to differentiate between quintessential (the actual content) and additional information (such as the medium publishing a message and the source the message – e.g. an opinion poll – originates from). This phenomenon carries even more weight if the motivation of the decision-maker is relatively low (Metzger, 2007). Building upon related research on media credibility (Hovland & Weiss, 1951; Kohring, 2001; Schweiger, 1999), we focus on *source* and *medium* credibility for attributing credibility to a published public opinion research result. In this context, heuristics can help to understand how people assess *source* and *medium*.

Media credibility research also outlines the importance of context effects in respect of message evaluation in general. For instance, the respective context affects the credibility of a news story (Thorson, Vraga, & Ekdale, 2010). In this study, context is seen as a particular newspaper and its respective presumed image that recipients associate with either upscale or downscale variants. This idea of the influence of context is especially relevant when it comes to different media formats such as quality vs. tabloid newspapers. Not only because little attention has been paid to the question how far the gap between quality broadsheet and popular tabloid outlets is meaningful (Richardson & Stanyer, 2011), but also due to the great influential power ascribed to tabloids. Matthews and Brown (2012) state that "studies view tabloid newspapers with particular apprehension because of their presumed reproduction of conservative ideology linked to their ability to influence readership's views and opinions along such lines" (p. 803).

Therefore, the interaction between influential power (of tabloids) on the one hand and the perception of content provided in newspapers on the other is an area of particular interest within this study, especially with respect to the attribution of credibility. In consequence, the type of medium, in which a public opinion result is published – being it quality or tabloid press –, can affect its credibility. We define this context as *medium credibility*. We differentiate between the author of a message (the cited representative of an opinion) and the type of *medium* itself

in which the message is being published. This is contrary to studies conducted by Hovland (Hovland et al., 1959; Hovland & Weiss, 1951), in which the *source* of a message has been seen as both, author and medium. The reason is that for public opinion research results *source* and *medium* perform different tasks. Whereas opinion research institutes (*source*) conduct surveys, the *medium* (or type of media, e.g. quality vs. tabloid newspapers) is responsible for publishing the results. As a consequence, for this study *source* (the public opinion research institute) and *type of medium* (the type of newspaper the result is published in) are the two underlying factors for attributing credibility.

However, we are confronted with the issue that current research shows no unanimity about what credibility exactly is and which dimensions it comprises. The smallest common denominator seems to be considering credibility as a multidimensional construct (e.g. Bentele, 1988; Berlo, Lemert, & Mertz, 1969). Kohring and Matthes (2007) even see the analysis of the different constituting dimensions of credibility as one central stream of credibility research. While this area of research mainly focuses on methodological issues of measuring these different dimensions (Jacobson, 1969; Lee, 1978), it still lacks a confirmative notion, testing for instance established multi-dimensional scales for credibility (Kohring & Matthes, 2007; for exceptions see Meyer, 1988; West, 1994).

In this context a differentiation has to be made between credibility and trust. Kohring and Matthes (2007) see credibility as a part of trust. Bentele (1998) and Dernbach (2005) also hold the opinion that credibility can be reconstructed as a part of the social mechanism trust. We share this opinion, but explicitly focus on credibility because we see trust as a prerequisite for credibility. Without trust, there cannot be credibility.

Additionally, the dimensions of credibility in the context of public opinion research results published in press differ from other studies on credibility. The reason is that "credibility dimensions identified in the other studies are possibly specific in the type of source studied" (van den Bergh, Soley, & Reid, 1981, p. 630).

3. Identifying credibility dimensions

As a consequence, because of the lack of a predefined set of credibility dimensions for the research of public opinion research results in newspapers, we carried out an extensive pre-test study. We conducted semi-structured interviews with a total of 13 experts in the field of public opinion research in Germany. This study was done to condense the amount of potential credibility dimensions that are deemed crucial for analyzing the credibility of public opinion research results. To do so we compared the dimensions discussed in literature with the actual opinion of such experts as journalists working with public opinion research results (3), academics (2), and pollsters (8). Expert interviews took between 30 to 75 minutes and were structured following established dimensions of credibility in related fields (e.g. news), but provided open elements for the interviewees to add their own dimensions and criteria. Expert statements were analyzed following a qualitative content analysis methodology. The findings of this pre-study are not in the focus of this paper. Nevertheless, a brief overview of the results is provided here:

The dimensions *trustworthiness* and *competence* are endorsed in almost every study on credibility (Flanagin & Metzger, 2003; McCroskey & Teven, 1999). Both dimensions were also mentioned by our experts. Their importance was first outlined by Hovland and Weiss (1951). *Trustworthiness* can also be named reliability, constancy, and seriousness of a presented result (Lim, 2013; Sparks & Rapp, 2011; Wirth, 1999). C*ompetence* was also found to be of relevance in early studies on message credibility (Berlo et al., 1969; Jacobson, 1969; Wirth, 1999), but was sometimes called expertise or authority. This dimension is of particular importance to public opinion research as it may directly refer to the accomplishing public opinion research institute and its reputation as a *source* of credibility.

Transparency of the given information is considered a third dimension of credibility, relevant for analyzing public opinion research results' credibility. It is derived from journalism research, where providing background information on the origin of an article is seen as a crucial aspect for underlining its credibility (Meier & Reimer, 2011; Mosier & Ahlgren, 1981). The importance of *transparency* was emphasized by the experts in our pre-study. Besides, the way data and results of public opinion research are depicted in an article plays a role as well. Presenting information in a pleasant manner can help people understand the published information (Griffin & Stevenson, 1992; Peter & Brosius, 2010). Thus, the outer appearance or the *attractiveness* (Armstrong & McAdams, 2009; Berlo et al., 1969) of the article, respectively, is relevant. Finally, the reader's decision whether to attribute credibility or not also depends on how similar the presented opinion is to his or her own attitudes or background knowledge. Hence, *similarity* – or likeability – is a dimension of credibility as well (O'Keefe, 1990; Seiter, Weger, Merril, McKenna, & Sanders, 2010). The importance of both latter dimensions was underlined by our experts, too.

Yet, before readers of public opinion research make a decision on credibility, two requirements need to be met: *comprehensibility* and *motivation*. On the one hand, the article dealing with the results of public opinion research must be understandable for the reader. On the other hand, he or she must be motivated to deal with the entire article's content after having read the headline (Großmann, 1999; Lim, 2013; Rieh & Danielson, 2007). Related, our interviewed experts largely agreed that both comprehensibility and motivation are not sub-dimensions of credibility but are prerequisites for the process of credibility attribution.

4. The attribution of credibility to public opinion research results

All in all, we see the process of attributing credibility to a published public opinion research result within a logic that follows bounded rationality. A newspaper article's general comprehensibility and a recipient's motivation to read the article are necessary requirements for the initialization of the process of attributing credibility. Following the literature review and juxtaposed with the statements of the public opinion research experts in our pre-test study, credibility is described as a multidimensional construct comprising *competence*, *trustworthiness*, *transparency*, *attractiveness*, and *similarity*.

Credibility plays a crucial role when it comes to situations, where the validity of an information is not apparent and for which no objective measure is available. During the process of evaluating a public opinion research result's credibility two factors come into play: *source* and *medium* credibility. Based on previous knowledge and experience, following a recognition heuristic for instance (Gigerenzer, 2008), people will judge a result originating from a renowned institute as more credible as the same result being presented as coming from an unknown *source*. However, this might be overshadowed by context variables, as research on media credibility shows – making a public opinion research result published in an unreliable *medium*, or media outlet such as the tabloid press, respectively, less credible than the same result being published in quality press. We can deduce two hypotheses:

H1: The results of public opinion research that are conducted by a well-known source are more credible than results which are presented by an unknown one.

H2: The results of public opinion research that are published in a reputable medium such as quality press are more credible than results which are published in an less reputable one such as tabloid press.

Analyzing both hypotheses simultaneously leads us to ask a related research question:

RQ1: Will the detrimental effect of a less reputable medium on public opinion research result's credibility be compensated by the positive effect of a well-known source?

As of now, we have neither theoretical nor empirical support to answer the question which effect is stronger. However, from a journalists' perspective this becomes a crucial question, asking for instance whether (tabloid) newspapers should be advised to publish poll results conducted by little known public opinion research institutes, or if an article based on such a poll result is bound to suffer from this context. Additionally, we will set out in how far the theoretical impact of *motivation* and *comprehensibility* as prerequisites for attributing credibility can be found under real-life conditions. Accordingly, we will take these prerequisites into consideration as control measures.

5. Method

In order to test our hypotheses and to investigate causal effects on the attribution of credibility to public opinion results, we conducted a 2 (*source*) x 2 (*medium*) between-subject experimental design relying on an online survey.

5.1 Participants and Procedure

Participants were recruited online through personal networks. In order to reduces self-selectivity quota criteria for age (16–29; 30–49; 50 and older), gender and education (A-Level, no A-Level) based on figures on socio-demographics for internet

use were employed. This was also done to provide some variety in terms of socio-demographic factors even in a self-selected online sample where often younger and better educated segments are over-represented. As a minimum we required at least 30 participants per experimental condition. Recruitment was stopped when under-represented quotas could not be further improved. Due to non-response of certain groups in the presented study, data was weighted with weight factors ranging from 0.6 for 16–29-year-old females with A-Level and 50-plus-year-old males with A-Level to 2.0 for 16–29-year-old males without A-Level and 50-plus-year-old males and females without A-Level. Weighting was carried out without changing the overall number of participants. After eliminating incomplete data, a total of $N = 150$ participants took part in the study. We are aware that our data stems from a small and skewed sample but we see it as sufficiently broad in terms of socio-demographic variables to allow for some first insights.

All participants answered questions on news use and credibility attribution to public opinion results. Afterwards, we randomly distributed them to one of four experimental conditions, where they were confronted with a manipulated newspaper article containing a public opinion research result.

5.2 Stimulus Material

We prepared our stimulus material based on an actual newspaper article about financial investments in times of debt crisis published in the Austrian newspaper *Der Standard* (Austrian Press Agency, 2012). Relying on Austrian material limited the chances of our German participants coming across the original results by chance. In order to manipulate the poll's *source*, we replaced the Austrian research company *Spectra* with the well-known German institute *Forsa*.

By *Forsa* and *Spectra* we set out to manipulate an unknown vs. a well-known *source*. A treatment check revealed that 85 percent of participants in the *Forsa* condition declared that they knew the *source*, compared to 4 percent in the *Spectra* condition. Manipulation of the *medium* was done by formatting the article according to the layout standards of either German quality press *ZEIT* or German tabloid *Bild* (Becker, 2009) (see appendix).

5.3 Measures

While *medium* and *source* acted as independent variables, the credibility attributed to the results of public opinion research was measured as dependent variable. This was achieved by relying on the five dimensions of credibility identified by our pre-study and the literature review. We measured the *extent* to which the single dimensions occurred with five items each and the personal *importance* of these dimensions with two items each. *Comprehensibility* of the actual article and *motivation* to read the article were measured as control variables, also using five items each. Each scale was tested in a second pre-test study for internal consistency and item wording in a sample of $N = 41$ before it was used in the final survey. A complete list of the items we employed and key scale attributes (means, internal consistency) is provided in the appendix.

Measuring credibility (DV). Due to difficulties in measuring credibility (Kohring & Matthes, 2007) and the lack of a tried and tested instrument that could be transferred to the context of public opinion research results, we developed our own scales combining different approaches (Gaziano & McGrath, 1986; Metzger et al., 2010; West, 1994). However, when it comes to the actual measurement of credibility, the *Fishbein Model* (Anderson & Fishbein, 1965; Fishbein, 1963) can serve as a foundation for our proceeding. This model was developed in the context of the *theory of attitude change* (Hackman & Anderson, 1968). Fishbein's operational definition of attitude states that "attitude is the summation of the multiplicative function between a person's belief probability about how the attitude object is related to a concept (e.g. a Jaguar is stylish) and his evaluation of that concept (ex. style)" (Guerrero & Hughes, 1972, p. 686). Analogous to Fishbein's (1963) *belief probability* and *evaluation*, we used the *extent* to which dimensions of credibility occur (e.g. the article is transparent) and the personal *importance* recipients attribute to the dimensions each (ex. transparency). To measure attitude, Fishbein & Middlestadt (1995) propose the following approach: "(a) identify the salient attributes associated with the attitude object, (b) assess the strength of one's beliefs that the attributes are associated with the object, (c) assess the evaluation of the attributes" (p. 186). In our study, *a)* is the determining of the credibility dimensions, *b)* is the measurement of the *extent* to which the credibility dimensions are occurring and *c)* is the measurement of the *importance* of these dimensions.

Extent of credibility dimensions was measured for each of these five credibility dimensions with a five-item Likert-type scale (each ranging from 1 "not at all" to 5 "very much").

Personal importance of credibility dimensions (weighting measure) measured how important each dimension of credibility was to every single participant. This was done by relying on two items for each dimension, using a two-item Likert-type scale (ranging from 1 "not at all" to 5 "very much"). The first item was a direct assessment of the respective credibility dimension. The second item was an indirect assessment of the dimensions each by selecting one out of five items from the *extent of credibility* scale.

Weighted overall credibility indicator. In order to measure the credibility attributed to the results of opinion research with a single figure, we developed a proceeding following Fishbein (Fishbein & Middlestadt, 1995). The approach is to "create a sum of the products formed by multiplying the strength of each belief by its evaluative aspect" in the context of the expectancy-value theory (Fishbein & Middlestadt, 1995, p. 187). We combined the two components of our study in a similar way. Firstly, we multiplied the *extent* to which a single dimension occurs by its personal *importance* to a reader and secondly added up the products. Finally, the sum is divided by the overall number of dimensions (formula see appendix).

Before calculating the weighted credibility indicator (C_r), the five mean indices representing *extent* and *importance* each (original range from 1 to 5) were transformed homologously into indices that range from 0 to 1. Zero indicating that a credibility dimension does not occur or is not important at all, respectively. This transformation along with multiplying the indices allow us to take into account

that non-appearing or unimportant dimensions are not included in the computation of the overall credibility (C_r) if either *extent* or *importance* of a single dimension, or both, is zero. Multiplying *extent* by *importance* was done since not all dimensions of credibility can be considered equally relevant for each participant. Finally, we divide the sum by 5 to express the *weighted overall credibility indicator* (C_r) as a single figure ranging from 0 to 1.

To illustrate how the formula works we provide an example: First, imagine the following rating of the *extent* of the credibility dimensions: *competence* = 0.6 (out of 1), *trustworthiness* = .8, *transparency* = .3, *attractiveness* = 0, and *similarity* = .5. Additionally, consider the assessment of the individual *importance* of these dimensions as follows: *competence* = 0.8 (out of 1), *trustworthiness* = .7, *transparency* = .9, *attractiveness* = .2, and *similarity* = .2. Second, both values need to be combined: *competence* = .6*.8 = .48; *trustworthiness* = .8*.7 = .56; *transparency* = .3*.9 = .27; *attractiveness* = 0*.2 = 0; *similarity* = .5*.2 = .1. Third, we compute the sum of the respective products: .48 + .56 + .27 + 0 + .1 = 1.41 and divide it by the amount of credibility dimensions (in this case 5): 1.41 / 5 = .282.

Comprehensibility of the article was measured with a five-item Likert-type scale based on previous work by Mosier and Ahlgren (1981), Singletary (1976), and Wirth (1999).

Motivation was also measured with a five-item Likert-type scale based on Meyer, Marchionni, and Thorson (2010).

5. Results

Results are presented following t-tests for independently testing H1 and H2 before multivariate tests are carried out to simultaneously test H1, H2, and answer RQ1. Descriptive findings for all our dependent variables are summed up in table 1:

Table 1: Descriptives by experimental group

	Experimental Groups			
	Bild: Forsa *M* (*SD*)	Bild: Spectra *M* (*SD*)	Zeit: Forsa *M* (*SD*)	Zeit: Spectra *M* (*SD*)
C_r	.33 (.13)	.33 (.17)	.37 (.13)	.37 (.16)
Extent of Credibility	2.81 (.77)	2.55 (.83)	3.07 (.73)	2.96 (.66)
Attractiveness	2.74 (.82)	2.53 (.73)	2.87 (.85)	2.99 (.86)
Expertise	2.98 (.76)	2.74 (.94)	3.26 (.68)	3.25 (.82)
Transparency	2.72 (.77)	2.41 (.94)	2.95 (.70)	2.90 (.81)
Trustworthiness	2.95 (.78)	2.76 (.97)	3.16 (.67)	3.08 (.89)
Similarity	3.25 (.84)	2.81 (.85)	3.23 (.75)	2.96 (.99)

6.1 Source (H1)

For a first test of H1 we carried out t-tests to compare the means of our dependent variables. Our dependent variable is the *extent of credibility dimensions* (for each of the five dimensions). The type of the public opinion research institute was

the independent variable. *Forsa* was the well-known *source* and *Spectra* the unknown one.

As a result, we only found significant differences on the $p < .1$ level for the *extent* of the dimension *similarity*: $t(135) = 1.88$; $p < .1$; ($M = 3.21$; $SD = 0.82$ [*Forsa*] / $M = 2.92$; $SD = 0.95$ [*Spectra*]).

Using our weighted overall credibility indicator C_r as dependent variable, we could not find a significant difference between our two independent measures ($M = 0.35$; $SD = 0.13$ [*Forsa*] / $M = 0.36$; $SD = 0.17$ [*Spectra*]; $n = 137$) regarding the overall credibility attributed to the result of the opinion research presented in the article. Based on these findings, H1 does not find support.

6.2 Medium (H2)

Again, for a first test of H2 we employed simple t-tests. The *extent* of the five dimensions of credibility each is used as the dependent variables and the *medium* the result was published in served as the independent variable. Here, we found significant differences for three of the five dimensions: *attractiveness* ($t(135) = 0.60$; $p < .05$ ($M = 2.65$; $SD = 0.78$ [*Bild*] / $M = 2.95$; $SD = 0.85$ [*ZEIT*])); *expertise* ($t(135) = -2.95$; $p < .01$ ($M = 2.88$; $SD = 0.88$ [*Bild*] / $M = 3.30$; $SD = 0.77$ [*ZEIT*])); *transparency* ($t(135) = -2.40$; $p < .01$ ($M = 2.60$; $SD = 0.88$ [*Bild*] / $M = 2.94$; $SD = 0.78$ [*ZEIT*])). As well as one significant difference on the $p < .1$ level: *trustworthiness* ($t(135) = -1.78$; $p < .1$ ($M = 2.88$; $SD = 0.89$ [*Bild*] / $M = 3.14$; $SD = 0.83$ [*ZEIT*])).

Again, using our weighted overall credibility indicator C_r as dependent variable, we could not find a significant difference between our two independent measures ($M = 0.34$; $SD = 0.15$ [*Bild*] / $M = 0.37$; $SD = 0.15$ [*ZEIT*]; $n = 137$).

In summary, for this analysis we only find partial support for H2. *Medium* seems to affect four out of five dimensions of credibility but does not seem to affect overall credibility.

6.3 Testing Source and Medium Credibility (Multivariate-Analysis for H1, H2, RQ1)

For analyzing H1 and H2 simultaneously and in order to account for potential control variables we carried out a multivariate analysis of variance (MANOVA) and a multivariate analysis of covariance (MANCOVA), respectively.

First, we ran a MANOVA to analyze whether there is any influence of the independent variables on the five dimensions of credibility (only *extent* of the dimensions) as dependent variables (*analysis 1*). Additionally, we conducted a MANCOVA to control for the influence of *motivation*, *comprehensibility*, and the *importance* of the dimensions (*analysis 2*). The latter acted as a control measure. The reason why we considered the *extent* of the dimensions as the dependent variables but not the entire weighted overall credibility indicator C_r, which includes the *importance* of the dimensions as well, is based on the following assumption: the independent variables *source* and *medium* only influence how people rate the *extent* of the different dimensions. However, their assessment of *importance* is part of their individual experiences and prior knowledge, respec-

tively. Thus, the participants' opinion about the *importance* of a specific credibility dimension had existed before they have come across the stimulus. In contrast to that, their evaluation on the *extent* of the dimensions is formed because of reading the article. Therefore, the *extent* is directly influenced by the different independent variables *source* and *medium* and based on the information provided in the stimulus. Consequently, C_r cannot serve as the dependent variable in this specific case, because only one part of it (*extent*) is directly affected by the independent variables. However, we take into account that while reading the article the participants' pre-existing judgements of the *importance* of the dimensions somehow might influence their rating of the *extent* of the dimensions. Accordingly, we decided to consider *importance* as a control measure (*analysis 2*). We compared *analysis 1* and *2* according to the multivariate test statistics using Pillai's trace since this approach is most robust against the violation of its prerequisites (normal distribution and equality of variance) (Bortz & Schuster, 2010).

As can be seen in *analysis 1* the effects of the independent variable *source* approach significance ($p < .1$). The effects for the independent variable *medium* are significant on the $p < .05$ level. Partial eta-squared (η^2) suggests explained variance around 6 to 9 percent. No significant interaction effect between *source* and *medium* has been found (see table 2).

Table 2: Multivariate test statistics (Pillai's-Trace) | Hypothesis 1 and 2

Analysis 1				
Variable	**Score**	***F-Test***	***p***	***Part. Eta²***
Source	.056	$F(170,5) = 2.01$	$p < .1$	.056
Medium	.085	$F(170,5) = 3.14$	$p < .05$	.085
Source*Medium	.016	$F(170,5) = 0.54$	n.s.	.016
Analysis 2				
Variable	**Score**	***F-Test***	***p***	***Part. Eta²***
Comprehensibility	.274	$F(162,5) = 12.21$	$p < .001$	.274
Motivation	.470	$F(162,5) = 28.69$	$p < .001$	.470
Trustworthiness (*importance*)	.028	$F(162,5) = 0.95$	n.s.	.028
Competence (*importance*)	.036	$F(172,5) = 1.22$	n.s.	.036
Attractiveness (*importance*)	.059	$F(172,5) = 2.02$	$p < .1$	.059
Similarity (*importance*)	.074	$F(162,5) = 2.58$	$p < .05$	.074
Transparency (*importance*)	.033	$F(162,5) = 1.12$	n.s.	.033
Source	.040	$F(162,5) = 1.35$	n.s.	.040
Medium	.078	$F(162,5) = 2.75$	$p < .05$	.078
Source*Medium	.034	$F(162,5) = 1.14$	n.s.	.034

Looking at the in-between-subject effects for *analysis 1*, we observe one significant effect for *source* (on *similarity*), four for *medium* (*trustworthiness*, *competence*, *attractiveness, similarity*) and, as expected, no significant interaction effects. Explained variance is rather modest again (see table 3).

For *analysis 2*, including the covariates, we found a significant influence of our two covariates *motivation* and *comprehensibility*. The significant effect of *medium* as observed in *analysis 1* remains. The overall explanatory power of *me-*

dium is roughly the same as in *analysis 1*, that is to say our covariates did not reduce the explanatory power of *medium*. It is also conspicuous that the *importance* of two of five dimensions of credibility (*similarity* and *attractiveness*) has a significant influence on the dependent variables.

Looking at the in-between-subject effects for *analysis 2* we see a highly significant influence of *motivation* on *attractiveness*. The same holds for *comprehensibility* on *transparency*. Furthermore, the influence of *importance* of the credibility dimensions as covariates is only approaching significance ($p < .1$) with partial eta-squared around .03 or below. With respect to our independent variables, only *medium* has a significant effect ($p < .05$) on *competence*.

Finally, when we look at the overall explained variance for *analysis 1* and *2*, we find that *analysis 2* explains a substantially higher level of variance (*analysis 1*: 2% to 5%; *analysis 2*: 32% to 56%), indicating that our covariates, particularly *comprehensibility* and *motivation*, explain most of the variance in our models.

Table 3: Test of the in-between-subject effects | (Hypothesis 1 and 2)

Analysis 1				
IV	**DV**	**F-value**	**p**	**Part. Eta²**
Source	Similarity	7.50	$p < .01$	.041
Medium	Trustworthiness	4.42	$p < .05$	.025
	Competence	10.63	$p < .01$	.058
	Attractiveness	5.80	$p < .05$	.032
	Transparency	8.75	$p < .01$	.048
Analysis 2				
IV	**DV**	**F-value**	**p**	**Part. Eta²**
Motivation	Trustworthiness	32.42	$p < .001$	.124
	Competence	16.82	$p < .001$	.092
	Attractiveness	104.38	$p < .001$	.386
	Similarity	34.24	$p < .001$	.171
	Transparency	39.82	$p < .001$	.193
Comprehensibility	Trustworthiness	32.42	$p < .001$	.163
	Competence	23.71	$p < .001$	.125
	Attractiveness	7.02	$p < .01$	.041
	Similarity	8.41	$p < .01$	.048
	Transparency	57.24	$p < .001$	.256
Trustworthiness (*importance*)	Trustworthiness	3.34	$p < .1$	.020
Attractiveness (*importance*)	Similarity	3.28	$p < .1$	.019
Similarity (*importance*)	Competence	3.06	$p < .1$	.018
	Similarity	5.15	$p < .05$	.030
Source	Similarity	3.90	$p < .1$	.023
Medium	Competence	6.11	$p < .05$	.035
	Similarity	2.98	$p < .1$	.018

With respect to testing H1 and H2, we have to reject H1 for multiple reasons. First, only the *extent* of one dimension (*similarity*) shows a significant difference

in regard of the different *sources*. Additionally, the difference between the overall credibility of the opinion poll results (C_r) is neither substantial nor significant. Third, the multivariate analysis could only confirm effects that approach significance for the independent variable *source*.

The picture becomes more complicated with respect to H2. We found significant differences regarding the extent of most dimensions, namely *competence, attractiveness, transparency,* and *trustworthiness*. Besides, the multivariate analyses displayed a significant influence of *medium* on the extent of most dimensions. However, this influence was partially superimposed statistically by our covariates in *analysis 2* and the overall credibility attributed to the results did only differ slightly but not significantly. Therefore, H2 only receives little support. Referring to our RQ1, we see some detrimental effects on credibility of publishing in tabloid press, but we do not see any positive effect of a well-known polling institute.

7. Discussion

Our study set out to investigate the attribution of credibility to public opinion research results. When people are confronted with published public opinion research results, they will rely on a limited amount of cues when attributing credibility to a published result. For the sake of our study, we focused on the role of two essential cues for attributing credibility: *source* credibility (Berlo et al., 1969; Hovland & Weiss, 1951; Reich, 2011) and *media* credibility (Golan, 2010; Roberts, 2010). While research on media credibility often sees the two related, we defined a public opinion result's *source* as the institute the result originates from, whereas by *medium* we referred to the medium, in which the same was published. In our study we used a tabloid newspaper vs. a quality press newspaper.

In H1 we analyzed potential effects from a public opinion research result's *source*. We found that an influence of the *source* on the attribution of credibility of opinion surveys is not explicitly certifiable. We failed to find significant effects of the *source* both in the bivariate and the multivariate analyses. As such, these results reveal that readers do not rely on the *source* of a public opinion result. For us, this seems counter-intuitive and not supported by theory as well. As by using *Forsa* and *Spectra* we indeed manipulated an established, well-known and unknown polling institute. We assume that what had happened was that readers of our study did not pay attention to the *source* the study originated from. This may even be seen in our data, as our two covariates (*motivation*, *comprehensibility)* are by far the most important predictors for credibility. Consequently, if users were motivated to read the article and found it comprehensible, they are more likely to attribute credibility to the public opinion research results, regardless of the *source* it originated from. In our study, the mentioning of the research institute was rather unobtrusive. This was done to increase external validity by relying on an article actually published before. However, this might have led to a fairly weak, albeit true to everyday life, manipulation with regard to a public opinion research result's *source*. This potential explanation of our missing experimental effect challenges future studies into providing stimulus material that is both close to real life but at the same time able to differentiate between known

and less-known *sources*. Another explanation might be that people generally cannot distinguish between sources which are credible and sources which are not credible. If that is the case, the source of a published public opinion result has no influence on the result itself.

The low variance explanation by the dimensions' *importance* as covariates leads to the assumption that the *importance* as a part of the construct credibility cannot explain the other part *extent* (or strength of the dimensions' characteristic). Thus, our assumption that there is not a direct interrelation or influence, respectively, between both components of the weighted overall credibility indicator C_r is supported in general. Yet, if we look closely at this low impact (according to *analysis 2)*, it is apparent that the *importance* of the single dimensions wields predominantly influence on the *extent* of the same dimension. Therefore, it is possible that the participants were influenced by their own evaluation of the dimensions' *importance* when evaluating the *extent* of the single dimensions each. However, the influence of this evaluation is not applicable to all dimensions and, in addition, very low.

Dealing with the effect of the *medium* a result of opinion research is published in (H2), we found stronger effects than for H1. Although a result published in quality press was not considered substantially more credible compared to the same result being published in a tabloid press (according to C_r), there are some clear influences of the *medium*. For example, the type of *medium* has an impact on the *extent* of four out of five dimensions of credibility with tabloid press being perceived as less credible than quality press. Furthermore, it has a strong effect particularly on the dimension *competence* that remained to be significantly explained by *medium* even after all covariates were accounted for. This is not only in line with our theoretical assumption and fits into findings on *medium's* credibility in general (Bentele, 1988, 2008; Seidenglanz, 2008). Face-validity of our manipulation is also higher than compared to H1. The *medium* in which the article with the result of public opinion research was allegedly published was more obtrusive to the participants in our study. We precisely mimicked each newspaper's layout and the hint to where the result was published was much more accessible to participants. We could argue that people rely only on the medium in order to judge the credibility of a result published in the medium, regardless which source the result is from. This needs to be clearly separated and further investigated in future research.

It is interesting to see that no-interaction effect was found (RQ1). Thus, an established *source* cannot compensate for the detrimental effect a tabloid newspaper has on a public opinion research result's credibility – at least when we employ stimulus material that is close to actually available newspaper articles.

Future studies are advised to follow up on our manipulation of the *type of medium* and should investigate whether our findings remain true if more accurate measures for credibility could be employed. For public opinion researchers our results indicate that it is, with certain restrictions, influential for the credibility of their results, where they are published. Only quality press (at least in contrast to tabloid press) seems to be able to convey credibility. This, however, challenges public opinion researchers to find additional instruments – or cues for the reader

– to convey credibility when results are published by tabloid press. At the same time, it posits the question to journalists of tabloid newspapers how they can overcome the lack of credibility even when publishing poll results from well-known sources. Having only provided an established (brand) name in an article does not seem to be sufficient for articles in tabloid newspapers to be considered credible. Further studies as such need to account for those potential additional cues or measures that can be taken. We might speculate that providing readers with more information about a study's key figures (such as number of participants, tolerance levels, etc.) might be one option to compensate.

8. References

Altschuler, B. E. (1986). Lyndon Johnson and the public polls. *The Public Opinion Quarterly, 50*(3), 285–299.

Ampofo, L., Anstead, N., & O'Loughlin, B. (2011). Trust, confidence, and credibility: Citizen responses on Twitter to opinion polls during the 2010 UK General Election. *Information, Communication, & Society, 14*(6), 850–871.

Anderson, L. R., & Fishbein, M. (1965). Prediction of attitude from the number, strength, and evaluative aspect of beliefs about the attitude object: A comparison of summation and congruity theories. *Journal of Personality and Social Psychology, 2*(3), 437–442.

Armstrong, C. L., & McAdams, M. J. (2009). Blogs of information: How gender cues and individual motivations influence perceptions of credibility. *Journal of Computer-Mediated Communication, 14*(3), 435–456.

Becker, A. (2009). So sehen Bundesbürger die Presse. Glaubwürdigkeit: „Bild" flopp, „Spiegel" top [That's how Germans see the press. Bild a flop, Spiegel top]. *Media Topstory.* Retrieved from http://meedia.de/print/glaubwuerdigkeit-bild-flopspiegeltop/2009/03/31.html

Bentele, G. (1988). Der Faktor Glaubwürdigkeit. Forschungsergebnisse und Fragen für die Sozialisationsperspektive [The credibility factor. Results from a socialization perspective]. *Publizistik, 33*(2-3), 406–426.

Bentele, G. (1998). Vertrauen/Glaubwürdigkeit [Trust/ Credibility]. In O. Jarren, U. Sarcinelli, & U. Saxer (Eds.), *Politische Kommunikation in der demokratischen Gesellschaft. Ein Handbuch mit Lexikonteil* [Political Communication in democratic societies. A handbook]. Opladen: Westdeutscher Verlag, 304–311.

Bentele, G. (2008). Objektivität und Glaubwürdigkeit: Medienrealität konstruiert [Objectivity and credibility: constructed media reality]. In S. Wehmeier, H. Nothhaft, & R. Seidenglanz (Eds.), *Objektivität und Glaubwürdigkeit: Medienrealität konstruiert* [Objectivity and credibility. Media realities constructed] (pp. 63–332). Wiesbaden: VS Verlag für Sozialwissenschaften.

Berlo, D. K., Lemert, J. B., & Mertz, R. J. (1969). Acceptability of message sources. *Public Opinion Quarterly, 33*(4), 563–576.

Bortz, J., & Schuster, C. (2010). Faktorenanalyse [Factor analysis]. In J. Bortz & C. Schuster (Eds.), *Statistik für Human-und Sozialwissenschaftler* [Statistics for human and social sciences] (pp. 385–433). Berlin Heidelberg: Springer.

Crespi, I. (1980). Polls and the news media: A symposium. *The Public Opinion Quarterly, 44*(4), 462–476.

Dernbach, B. (2005). Was schwarz auf weiß gedruckt ist… Vertrauen in Journalismus, Medien und Journalisten [Read it in black and white… Trust in journalism, media, and journalists]. In B. Dernbach & M. Meyer (Eds.), *Vertrauen und Glaubwürdigkeit* [Trust and credibility] (pp. 135–154). Wiesbaden: VS Verlag.

Fishbein, M. (1963). An investigation of the relationship between beliefs about an object and the attitude toward that object. *Human Relations, 16*(3), 233–239.

Fishbein, M., & Middlestadt, S. (1995). Noncognitive effects on attitude formation and change: Fact or artifact? *Journal of Consumer Psychology, 4*(2), 181–202.

Flanagin, A. J., & Metzger, M. J. (2003). The perceived credibility of personal Web page information as influenced by the sex of the source. *Computers in Human Behavior, 19*, 683–701.

Gaziano, C., & McGrath, K. (1986). Measuring the concept of credibility. *Journalism Quarterly, 63*(3), 451–462.

Gigerenzer, G. (2008). Why heuristics work. *Perspectives on psychological science, 3*(1), 20–29.

Gigerenzer, G., & Todd, P. M. (1999). *Simple heuristics that make us smart*. New York: Oxford University Press.

Golan, G. J. (2010). New perspectives on media credibility research. *American Behavioral Scientist, 54*(1), 3–7.

Greenwald, H. P., Beery, W. L., Pearson, D., Senter, S., Cheadle, A., Nelson, G. D., Bodenhorn, K., & Horiuchi, C. (2003). Polling and policy analysis as resources for advocacy. *Journal of Public Administration Research and Theory, 13*(2), 177–191.

Griffin , J. L., & Stevenson, R. L. (1992). Influence of text & graphics in increasing understanding of foreign news context. *Newspaper Research Journal, 13*(1–2), 84–99.

Großmann, B. (1999). *Medienrezeption – Bestehende Ansätze und eine konstruktivistische Alternative [media reception – current approaches and a constructivist alternative]*. Wiesbaden: Westdeutscher Verlag.

Hackman, J. R., & Anderson, L. R. (1968). The strength, relevance, and source of beliefs about an object in Fishbein's attitude theory. *The Journal of Social Psychology, 76*(1), 55–67.

Hardy, B. W., & Jamieson, K. H. (2005). Can a poll affect perception of candidate traits? *The Public Opinion Quarterly, 69*(5), 725–743.

Hilligoss, B., & Rieh, S. Y. (2008). Developing a unifying framework of credibility assessment: Construct, heuristics, and interaction in context. *Information Processing and Management, 44*(4), 1467–1484.

Hovland, C. I., Janis, I. L., & Kelley, H. H. (1959). *Communication and persuasion. Psychological studies of opinion change*. New Haven, CT: Yale University Press.

Hovland, C. I., & Weiss, W. (1951). The influence of source credibility on communication effectiveness. *Public Opinion Quarterly, 15*(4), 635–650.

Jacobson, H. K. (1969). Mass media believability: A study of receiver judgments. *Journalism & Mass Communication Quarterly, 46*(1), 20–28.

Koetsenruijter, A. W. M. (2011). Using numbers in news increases story credibility. *Newspaper Research Journal, 32*(2), 74–82.

Kohring, M. (2001). *Vertrauen in Medien – Vertrauen in Technologie [Trust in media – trust in technology]*. Arbeitsbericht (196). Stuttgart: Universität Stuttgart.

Kohring, M., & Matthes, J. (2007). Trust in news media. Development and validation of a multidimensional scale. *Communication Research, 34*(2), 231–252.

Lee, R. S. H. (1978). Credibility of newspaper and TV news. *Journalism Quarterly, 55*(2), 282–287.

Lim, S. (2013). College students' credibility judgements and heuristics concerning Wikipedia. *Information Processing and Management, 49*(2), 405–419.

Lipari, L. (2001). Voice, polling, and the public sphere. In R. P. Hart & B. H. Sparrow (Eds.), *Politics, discourse, and American society: New agendas* (pp. 129–149). Lanham: Rowman & Littlefield.

Marchionni, D., & Thorson, E. (2010). The journalist behind the news: Credibility of straight, collaborative, opinionated, and blogged 'news'. *American Behavioral Scientist, 54*(2), 100–119.

Matthews, J., & Brown, A. R. (2012). Negatively shaping the asylum agenda? The representational strategy and impact of a tabloid news campaign. *Journalism, 13*(6), 802–817.

McComas, K. A., & Trumbo, C. W. (2001). Source credibility in environmental health-risk controversies: Application of Meyer's credibility index. *Risk Analysis, 21*(3), 467–480.

McCroskey, J. C., & Teven, J. J. (1999). Goodwill: A reexamination of the construct and its measurement. *Communications Monographs, 66*, 90–103.

Meier, K., & Reimer, J. (2011). Transparenz im Journalismus [transparency in journalism]. *Publizistik, 56*(2), 133–155.

Metzger, M. J. (2007). Making sense of credibility on the Web: Models for evaluating online information and recommendations for future research. *Journal of the American Society for Information Science and Technology, 58*(13), 2078–2091.

Metzger, M. J., Flanagin, A. J., & Medders, R. B. (2010). Social and heuristic approaches to credibility evaluation online. *Journal of Communication, 60*(3), 413–439.

Meyer, P. (1988). Defining and measuring credibility of newspapers: Developing an index. *Journalism & Mass Communication Quarterly, 65*(3), 567–588.

Mosier, N. R., & Ahlgren, A. (1981). Credibility of precision journalism. *Journalism & Mass Communication Quarterly, 58*(3), 375–518.

O'Keefe, D. J. (1990). *Persuasion: Theory and research*. Newbury Park, CA: Sage.

Peter, C., & Brosius, H.-B. (2010). Grenze der Wirksamkeit von Fallbeispielen? [Limitation in the effectiveness of examplifications?]. *Publizistik, 55*(3), 275–288.

Reich, Z. (2011). Source credibility and journalism. Between visceral and discretional judgment. *Journalism Practice, 5*(1), 51–67.

Richardson, J. E., & Stanyer, J. (2011). Reader opinion in the digital age: Tabloid and broadsheet newspaper websites in the exercise of political voice. *Journalism, 12*(8), 983–1003.

Rieh, S. Y., & Danielson, D. R. (2007). Credibility: A multidisciplinary framework. *Annual review of information science and technology, 41*(1), 307–364.

Roberts, C. (2010). Correlations among variables in message and messenger credibility scales. *American Behavioral Scientist, 54*(1), 43–56.

Roper, B. W. (1985). *Public attitudes toward television and other media in a time of change*. New York: Television Information Office.

Schweiger, W. (1999). Medienglaubwürdigkeit – Nutzungserfahrung oder Medienimage? Eine Befragung zur Glaubwürdigkeit des World Wide Web im Vergleich mit anderen Medien [Media credibility – User experience or media image? A comparative survey on

the web's credibility]. In P. Rössler & W. Wirth (Eds.), *Glaubwürdigkeit im Internet. Fragestellungen, Modelle, empirische Befunde [Credibility in the internet. Research questions, models, and empirical findings]* (pp. 89–110). München: Verlag Reinhard Fischer.

Schweiger, W. (2000). Media credibility – Experience or image? A survey on the credibility of the World Wide Web in Germany in comparison to other media. *European Journal of Communication, 15*(1), 37–59.

Seidenglanz, R. (2008). Aspekte der Medienglaubwürdigkeit: Definition, Abgrenzung und Bezugstypen [Aspects of media credibility. Definition and relationships]. In S. Wehmeier, H. Nothhaft & R. Seidenglanz (Eds.), *Objektivität und Glaubwürdigkeit: Medienrealität konstruiert* [Objectivity and credibility. Constructed media realities] (pp. 63–332). Wiesbaden: VS Verlag für Sozialwissenschaften.

Seiter, J. S., Weger, H. J., Merril, M. L., McKenna, R. M., & Sanders, M. L. (2010). Nonsmoker's perceptions of male and female cigarette smokers' credibility, likeability, attractiveness, considerateness, cleanliness, and healthiness. *Communication Research Reports, 27*(2), 147–158.

Selten, R. (2002). What is bounded rationality? In G. Gigerenzer & R. Selten (Eds.), *Bounded rationality: The adaptive toolbox (*pp. 13–36). Cambridge: The MIT Press.

Simon, H. A. (1947). *Administrative behavior*. New York: Macmillan.

Singletary, M. W. (1976). Components of credibility of a favourable news source. *Journalism Quarterly, 53*(2), 316–319.

Smith, T. J., & Verrall, D. O. (1985). A critical analysis of Australian television coverage of election opinion polls. *The Public Opinion Quarterly, 49*(1), 58–79.

Sparks, J. R., & Rapp, D. N. (2011). Readers' reliance on source credibility in the service of comprehension. *Journal of Experimental Psychology, 37*, 230–247.

Thorson, K., Vraga, E., & Ekdale, B. (2010). Credibility in context: How uncivil online commentary affects news credibility. *Mass Communication and Society, 13*(3), 289–313.

Vanden Bergh, B. G., Soley, L. C., & Reid, L. N. (1981). Factor study of dimensions of advertiser credibility. *Journalism & Mass Communication Quarterly, 58*(4), 629–632.

Weiner, S. L. (1977). The competition for certainty: The polls and the press in Britain. *Political Science Quarterly, 91*(4), 673–696.

West, M. D. (1994). Validating a scale for the measurement of credibility: A covariance structure modeling approach. *Journalism & Mass Communication Quarterly, 71*(1), 159–168.

Wirth, W. (1999). Methodologische und konzeptionelle Aspekte der Glaubwürdigkeitsforschung [Methodological and conceptual aspects of credibility research]. In P. Rössler & W. Wirth (Eds.), *Glaubwürdigkeit im Internet. Fragestellungen, Modelle, empirische Befunde [Credibility in the internet. Research questions, models, and empirical findings]* (pp. 47–66). München: Verlag Reinhard Fischer.

Wolf, M. R., & Holian, D. B. (2006). Polls, elite opinion, and the President: How information and issue saliency affect approval. *Presidential Studies Quarterly, 36*(4), 584–605.

APPENDIX: Stimulus material and measures

Figure 1: Stimulus material: Tabloid press (Bild) – Well-known (Forsa)

Deutsche scheuen weiterhin das Risiko

▶ Sparbuch, Bausparvertrag, Grundstücke und Immobilien sind die beliebtesten Anlageformen, Gold erreicht bei der Beliebtheit fast ein Allzeithoch

Berlin - 72 Prozent der Deutschen denken in Zeiten der Schuldenkrise beim Thema Geldanlage an Sicherheit. Nur 13 Prozent wollen damit etwas verdienen, neun Prozent haben eine längerfristige Bindung ihres Vermögens vor Augen. Die Top drei beim Anlegen sind das Sparbuch, der Bausparvertrag sowie Grundstücke und Immobilien. Das geht aus einer Umfrage des **Meinungsforschungsinstituts Forsa** hervor, deren Ergebnisse am Freitag veröffentlicht worden sind. Das Institut hat im Dezember des Vorjahres mit 1.000 repräsentativ für die Bevölkerung ab 15 Jahren ausgewählten Personen Face-to-face-Interviews geführt. Danach gefragt, wo man am besten in nächster Zeit Geld anlegen soll, nannten 51 Prozent das Sparbuch. Der Bausparvertrag kam auf 47 Prozent. Grundstücke und Immobilien sowie Häuser und Wohnungen haben in den vergangenen zwölf Monaten deutlich an Attraktivität gewonnen und kamen nun auf 38 bzw. 33 Prozent. Gold erreichte mit 28 Prozent fast das Allzeithoch einer Erhebungen von 1996 mit 30 Prozent. 21 Prozent würden in eine Lebensversicherung investieren und 19 Prozent in einen Prämiensparvertrag. Für Kunst, Schmuck und Antiquitäten als Geldanlage können sich neun Prozent der Befragten und damit fast doppelt so viele wie im Dezember 2010 (fünf Prozent) begeistern. Auf den Plätzen folgen Wertpapier- und Investmentfonds mit sechs Prozent sowie Anleihen, Wertpapiere und Aktien mit jeweils fünf Prozent. Schlusslichter sind Unternehmensbeteiligungen, Investmentzertifikate und Devisen mit je drei Prozent. Das Streben nach Sicherheit ist laut Forsa aktuell enorm hoch. 72 Prozent der Bevölkerung wollen, dass ihr Angespartes garantiert sein soll. Damit wurde der Top-Wert vom März 2009 fast wieder erreicht. Die Vorstellung mit Geldanlagen derzeit etwas verdienen zu wollen, ist hingegen gering. Als auffällig werten die Meinungsforscher die wieder erstarkte Tendenz zum längerfristigen Anlegen, wenn auch auf niedrigem Niveau. (APA)

Figure 2: Stimulus material: Quality press (ZEIT) – Unknown (Spectra)

Deutsche scheuen weiterhin das Risiko

Sparbuch, Bausparvertrag, Grundstücke und Immobilien sind die beliebstesten Anlageformen, Gold erreicht bei der Beliebtheit fast ein Allzeithoch

Berlin - 72 Prozent der Deutschen denken in Zeiten der Schuldenkrise beim Thema Geldanlage an Sicherheit. Nur 13 Prozent wollen damit etwas verdienen, neun Prozent haben eine längerfristige Bindung ihres Vermögens vor Augen. Die Top drei beim Anlegen sind das Sparbuch, der Bausparvertrag sowie Grundstücke und Immobilien. Das geht aus einer Umfrage des Meinungsforschungsinstituts Spectra hervor, deren Ergebnisse am Freitag veröffentlicht worden sind.

Das Institut hat im Dezember des Vorjahres mit 1.000 repräsentativ für die Bevölkerung ab 15 Jahren ausgewählten Personen Face-to-face-Interviews geführt. Danach gefragt, wo man am besten in nächster Zeit Geld anlegen soll, nannten 51 Prozent das Sparbuch. Der Bausparvertrag kam auf 47 Prozent. Grundstücke und Immobilien sowie Häuser und Wohnungen haben in den vergangenen zwölf Monaten deutlich an Attraktivität gewonnen und kamen nun auf 38 bzw. 33 Prozent. Gold erreichte mit 28 Prozent fast das Allzeithoch der Erhebungen von 1996 mit 30 Prozent. 21 Prozent würden in eine Lebensversicherung investieren und 19 Prozent in einen Prämiensparvertrag.

Kunst, Schmuck, Antiquitäten

Für Kunst, Schmuck und Antiquitäten als Geldanlage können sich neun Prozent der Befragten und damit fast doppelt so viele wie im Dezember 2010 (fünf Prozent) begeistern. Auf den Plätzen folgen Wertpapier- und Investmentfonds mit sechs Prozent sowie Anleihen, Wertpapiere und Aktien mit jeweils fünf Prozent. Schlusslichter sind Unternehmensbeteiligungen, Investmentzertifikate und Devisen mit je drei Prozent.

Das Streben nach Sicherheit ist laut Spectra aktuell enorm hoch. 72 Prozent der Bevölkerung wollen, dass ihr Angespartes garantiert sein soll. Damit wurde der Top-Wert vom März 2009 fast wieder erreicht. Die Vorstellung mit Geldanlagen derzeit etwas verdienen zu wollen, ist hingegen gering. Als auffällig werten die Meinungsforscher die wieder erstarkte Tendenz zum längerfristigen Anlegen, wenn auch auf niedrigem Niveau. (APA)

Figure 3: Items for the extent of credibility

Dimension	Items	Cronbach's α
Attractiveness *M* = 2.78 (*SD* = 0.83), *n* = 146	• *Für mich war das Lesen des Artikels unangenehm.* • *Meiner Meinung nach ist der Artikel unterhaltsam.* • *Ich musste mich überwinden, den Artikel vollständig zu lesen.* • *Das Thema des Artikels ist lebensnah.* • *Es hat mir Freude bereitet, den Artikel zu lesen.*	α = .71
Transparency *M* = 2.73 (*SD* = 0.86), *n* = 146	• *Ich kann mir durch den Artikel ein vollständiges Bild vom Thema machen.* • *Der Artikel ist transparent und durchschaubar geschrieben.* • *Ich habe das Gefühl, dass mir keine Informationen vorenthalten werden.* • *Der Artikel schließt wichtige Informationen für den Leser mit ein.* • *Ich kann den Entstehungsprozess der im Artikel präsentierten Studie nach vollziehen.*	α = .80
Similarity *M* = 3.06 (*SD* = 0.89), *n* = 140	• *Die Aussagen des Artikels über das Geldanlage-verhalten entsprechen meinen Vorstellungen.* • *Die Informationen des Artikels stimmen mit meinen Ansichten überein.* • *Ich teile die im Artikel vertretene Einschätzung* • *Meine Auffassung über das Thema „Geldanlagen" deckt sich mit dem Inhalt des Artikels.* • *Meine Sichtweise über das Geldanlageverhalten gleicht den Aussagen des Artikels.*	α = .93
Trustworthiness *M* = 3.01 (*SD* = 0.86), *n* = 142	• *Ich bin überzeugt davon, dass das präsentierte Ergebnis des Meinungsforschungsinstituts der Wahrheit entspricht.* • *Auf die Informationen im Artikel ist meiner Meinung nach Verlass.* • *Meiner Meinung nach ist der Artikel ehrlich.* • *Ich denke, dass die Sachverhalte im Artikel ausgewogen dargestellt sind.* • *Ich glaube, dass die im Artikel dargestellte Umfrage in erster Linie einen Nutzen für den Leser bieten soll.*	α = .86
Competence *M* = 3.08 (*SD* = 0.86), *n* = 144	• *Der Artikel erscheint mir seriös.* • *Der Artikel wirkt gründlich recherchiert.* • *Der Artikel geht in die Tiefe.* • *Der Artikel stellt Dinge verzerrt dar.* • *Der Artikel informiert unparteiisch und neutral*	α = .85

Figure 4: Items for the personal importance of credibility dimensions

Dimension	Items	Cronbach's α
Attractiveness *M* = 4.00 (*SD* = 0.90), *n* = 149	• *Das Thema des Artikels ist attraktiv für mich.* • *Es kostet mich aufgrund des Themas keine Überwindung, den Artikel vollständig zu lesen*	α = .68
Transparency *M* = 4.31 (*SD* = 0.60), *n* = 149	• *Der Artikel ist transparent geschrieben.* • *Ich kann mir durch den Artikel ein vollständiges Bild vom Thema machen*	α = .60
Similarity *M* = 2.35 (*SD* = 1.08), *n* = 148	• *Das präsentiere Ergebnis der Meinungsforschungsstudie ist ähnlich zu meiner bisherigen Vorstellung zum Thema.* • *Ich teile die im Artikel vertretene Meinung*	α = .84
Trustworthiness *M* = 4.38 (*SD* = 0.70), *n* = 149	• *Ich halte das im Artikel präsentierte Ergebnis der Meinungsforschungsstudie für vertrauenswürdig.* • *Ich bin überzeugt davon, dass das präsentierte Ergebnis des Meinungsforschungsinstituts der Wahrheit entspricht.*	α = .66
Competence *M* = 4.48 (*SD* = 0.61), *n* = 149	• *Ich gehe davon aus, dass das präsentierte Ergebnis der Meinungsforschungsstudie kompetent und objektiv erhoben wurde.* • *Der Artikel erscheint mir seriös*	α = .54

Figure 5: Items for comprehensibility and motivation (control measures)

Dimension	Items	Cronbach's α
Comprehensibility *M* = 3.21 (*SD* = 0.92), *n* = 133	• *Der Artikel ist eindeutig formuliert.* • *Der Artikel ist verständlich.* • *Der Artikel verknüpft Zusammenhänge nachvollziehbar.* • *Der Artikel hat eine logische Struktur, er ist schlüssig aufgebaut.* • *Der Artikel kann komplexe Sachverhalte erklären.*	α = .60
Motivation *M* = 2.24 (*SD* = 0.80), *n* = 142	• *Der Artikel spricht mich an.* • *Der Artikel ist interessant.* • *Der Artikel ist für mich von Bedeutung.* • *Der Artikel ist aufregend.* • *Insgesamt gesehen gefällt mir der Artikel.*	α = .85

Figure 6: Credibility attribution as formula

$$C_r = \frac{\sum_{d=1}^{n} E_d I_d}{n}$$

- C_r is the *credibility* attributed to a public opinion research result *r* published in a newspaper article.
- E_d is the *extent* to which a credibility *d* is occurring in a newspaper article.
- I_d is the personal *importance* of a credibility dimension *d*.
- *n* is the number of credibility dimensions used to assess the credibility of result *r*. (In our study *n* = 5)