
AN EXPERIMENTAL COMPARISON OF TWO PERSPECTIVES ON THE CONCEPT OF NEED FOR ORIENTATION IN AGENDA-SETTING THEORY

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Need for orientation (NFO) is a key contingent condition for agenda-setting effects. Traditionally, this concept has been measured by two lower-order components, but a recent reconceptualization expanded it to three dimensions. The current experimental study tested how comparable the traditional and new NFO scales are, and how strongly they predict agenda setting. Findings indicate that both NFO scales are (1) reliable tools for predicting first-level agenda-setting effects, and (2) significantly correlated with each other. The question whether or not the new NFO scale predicts second-level agenda-setting effects, however, needs further exploration.

The 2008 U.S. presidential election marked the fortieth anniversary of agenda-setting research. In the years since the inaugural 1968 Chapel Hill study,¹ the theoretical map of agenda setting has been vastly expanded to encompass five distinct aspects of the theory, and researchers continue to open new domains for theoretical exploration.² Simultaneously, scholars also are returning to the basic concepts and propositions of agenda-setting theory to explicate them in greater detail. The focus here is on this latter trend, the explication in greater detail of need for orientation (NFO), one of agenda-setting theory's key concepts. Specifically, this is a comparative investigation of two perspectives on NFO—the long-standing and widely used conceptualization of need for orientation introduced by Weaver in the 1972 Charlotte study³ and a recent and expanded conceptualization of need for orientation introduced by Matthes.⁴

Literature Review

Defining NFO. In the civic arena, there are many situations where citizens feel a need for orientation. In primary elections to select a party's nominee for office, there sometimes are as many as a dozen candidates. Because it is a primary election, the orientating cue frequently

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used by voters—party affiliation—is moot. Much the same situation exists in bond elections and other referenda elections, as well as in many elections for lower-level offices that present non-partisan and, often, unfamiliar candidates. In all these circumstances and many others, voters frequently turn to the news media for orientation.

Not every voter feels this need for orientation to the same degree, of course. Some citizens desire considerable information before making their voting decision. Others desire no more than a simple orienting cue. Need for orientation was introduced as a contingent condition for agenda-setting effects in the 1972 Charlotte study, the first large-scale investigation of agenda setting.⁵ The central theoretical assumption is that this psychological concept describing individual differences in the desire for orienting cues and information explains differences in attention to the media agenda and, consequently, differences in the degree to which individuals accept the media agenda.

An individual's need for orientation in the original 1972 conceptualization was defined in terms of two lower-order concepts: relevance and uncertainty. Relevance is the initial defining condition. People have little or no need for orientation in numerous situations, especially in the realm of public affairs, because these situations are not perceived to be relevant. In situations where the relevance to the individual is low or even non-existent, the need for orientation is low.

Among individuals who, for whatever reason, perceive the relevance of a topic to be high—to keep matters simple, relevance is dichotomized here as either low or high—the level of uncertainty about the topic also must be considered. Sometimes, individuals already have all the information they desire about a topic. Their degree of uncertainty is low. This is the case for many public issues where public opinion is highly stable over long periods of time. In this circumstance, people usually do not ignore the news media, but they primarily monitor the news in order to detect any significant changes in the situation at hand. Under conditions of high relevance and low uncertainty, the need for orientation is moderate.

At other times, both relevance and uncertainty are high, for example, in the primary elections and referenda cited above. In theoretical terms, these circumstances define a high need for orientation.

The greater an individual's need for orientation in the realm of public affairs, the more likely he or she is to attend to the agenda of the mass media. Among Charlotte voters during the 1972 U.S. presidential election, for example, 79.8% of those with a high need for orientation were frequent users of newspapers, television, and news magazines for political information. In comparison, 62.5% of those with a moderate need for orientation and only 47.4% of those with a low need for orientation were frequent users of the mass media for political information. In turn, the greater the levels of need for orientation, the more likely these voters were to reflect the issue agenda of the media.

Figure 1 outlines the concept of need for orientation and summarizes the level of agenda-setting effect found among Charlotte voters during the 1972 U.S. presidential election. During the summer months as

the campaign took shape and, again during the fall campaign, agenda-setting effects increased monotonically with the strength of the need for orientation.⁶ This same pattern of agenda-setting effects was found in a Japanese mayoral election.⁷

An Expanded Conceptualization of NFO. In its core idea, agenda setting refers to the ability of the news media to focus public attention on a few key "objects" (whether public issues, political candidates, countries, companies, etc.). Agenda setting may operate also at a wider scope, in the sense that the media can influence the audience regarding the "attributes" of those same objects, by providing and emphasizing some of their characteristics and traits. These attributes, in turn, can be classified along two dimensions. Substantive attributes refer to specific cognitive components of an object, and affective attributes refer to evaluations and assessments of an object.⁸ For agenda-setting studies about the transfer of salience for issues, these theoretical concepts distinguish between the "the issue itself (i.e., what to think about), specific aspects or frames of an issue (i.e., how to think about) and, finally, specific journalistic evaluations (i.e., what to think)."⁹

In accordance with these components of agenda-setting theory, Matthes argued that the concept of need for orientation also can be conceptualized in terms of three components.¹⁰

First, corresponding to the first level of agenda setting, there is need for orientation toward the issue or object itself. This is the focus of the concept of need for orientation and the operational measures introduced in 1972.¹¹

Second, there can be need for orientation in regard to specific aspects of an issue. This dimension takes into account the second level of agenda setting, the attributes of the issue or object under consideration.¹² For example, someone with a high need for orientation in regard to an issue is likely to also want to know which aspects of the issue are important.

Third, there can be need for orientation in regard to journalistic evaluations. These can be explicit evaluations, as in commentaries and editorials, or implicit evaluations that are reflected in the selection of facts and sources for a news story.

Taken together, these three components constitute Matthes' new version of the concept of need for orientation. Matthes found that these three components are highly correlated (the correlations range from +.70 to +.88) and asserted that to measure the strength of NFO for an individual, the scores for the items representing these dimensions can be summed to create a single NFO score.¹³ In an investigation of public opinion and media use regarding the issue of unemployment in Germany, Matthes found that the strength of NFO measured by this composite scale predicted basic first-level agenda-setting effects.¹⁴ However, the strength of NFO measured by the composite scale did not predict media effects at the second level of agenda setting, the affective attribute of the unemployment issue.

Matthes' new look at the NFO has obvious utility in testing its reliability and validity as a measurement construct. This new approach also

FIGURE 1
Need for Orientation and Agenda-setting Effects

RELEVANCE:		Low	High	
		↓	↓	
				UNCERTAINTY:
			Low	High
			↓	↓
Need for Orientation:		Low	Moderate	High
<u>Charlotte, N.C.</u>				
<i>Agenda-</i>	June	+ .15	+ .35	+ .41
<i>Setting</i>	October	+ .29	+ .59	+ .68
<i>Effects</i>	<u>Japan</u>	+ .39	+ .62	+ .86

Note: Reprinted from Maxwell McCombs, *Setting the Agenda: The Mass Media and Public Opinion* (Cambridge, UK: Polity Press, 2004).

pointed at the importance to consider NFO for different aspects of agenda setting, namely, issue and attribute levels. Still, this new approach needs further discussion and clarification. Matthes posits three new aspects of NFO, "'orientation towards issues,' 'orientation towards facts,' and 'orientation towards journalistic evaluations.'" ¹⁵ This could be interpreted as meaning that the concept is defined through the specific aspects of the process to which this need is directed. This would be a micro-version of NFO, in contrast to the broader macro-version introduced by Weaver. It makes sense when we talk about refining the measurement of NFO to better capture the elements related to a need. However, we can easily add other aspects that would require a new operational dimension of NFO. For example, the type and strength of arguments contained in media messages could play a role in producing media effects. A need is a psychological state, and as such, it should be defined through intrinsic qualities of a mental condition, not through the aspects of reality toward which it is directed.

Although the face validity of these new measures of NFO seems evident, it is important to provide stronger evidence for their construct validity, and this has not been done up to this point. As Stamm noted, "To go beyond face validity requires us to relate the instrument to other measures of the same attribute. An instrument that correlates with scores on another measure of the attribute provides some evidence of concurrent validity." ¹⁶

Hypotheses and Research Questions

The primary goal of this research is to compare these two measures of NFO, both to examine the degree of correlation between them, as well as to compare the predictive strength of the traditional NFO scale¹⁷ and the new perspective measured by the three dimensions of Matthes' NFO scale.¹⁸ As a preface to this comparison, we advance three hypotheses that replicate the findings from the previous research discussed above.

H1: The traditional NFO scale will predict basic first-level agenda-setting effects.

H2: The three dimensions of the new NFO scale will be positively correlated with each other.

H3: The new NFO scale will predict basic first-level agenda-setting effects.

Then, moving to the central focus of this study:

H4: The new NFO scale and the traditional NFO scale will be positively correlated.

RQ1: What is the comparative strength of the new NFO scale and the traditional NFO scale in predicting the strength of basic agenda-setting effects?

Method

Experimental Design. To investigate the four hypotheses and the research question, we designed an experiment to create basic agenda-setting effects, a necessary condition for comparing the two approaches to NFO. This particular study capitalizes on the ability of controlled experiments to test the constructs that constitute the underlying theoretical model of agenda setting. The experimental tradition in agenda-setting research was established by Iyengar and his colleagues,¹⁹ who modified the content of news videotapes to produce shifts in issue salience among participants. Subsequent studies in agenda setting have used print articles as experimental stimuli.²⁰ The new study reported here falls into the latter group.

A post-test-only design was employed to measure the presence of agenda-setting effects. There is always a possibility that the post-test-only design will not account for pre-existing differences in dependent variables. However, the randomization process used in the experiment offers much stronger protection to internal validity. There were three treatment conditions, and in each one of them participants read six news stories. For each treatment, half of the stories were about one of three issues under consideration (drug abuse, crime, and global warming), which were read at the beginning, the middle, and at the end of the treatment. Interspersed were the stories about the other two issues. The

TABLE 1
Experimental Design

Random Assignment	Condition	Pre-test Measures
Group 1	3 stories about global warming* 2 stories about drug abuse 1 story about crime	Traditional NFO scale New NFO scale
Group 2	3 stories about drug abuse* 2 stories about crime 1 story about global warming	Traditional NFO scale New NFO scale
Group 3	3 stories about crime* 2 stories about global warming 1 story about drug abuse	Traditional NFO scale New NFO scale

* Measures of the salience of these three issues were measured after exposure to the experimental stimuli.

presentation of the stories addressed two considerations. First, agenda-setting effects frequently occur after extensive news coverage of an issue.²¹ Second, experiments can induce primacy-recency effects. The literature suggests that a treatment message might have a stronger effect either when it is read first or last.²² To strengthen the possibility of creating agenda-setting effects, the articles about the key issues for each treatment condition were read first and last by the participants. Table 1 provides further details about the research design.

The experimental treatment was pretested with a small group of University of Regina in Canada students. All of them managed to complete questionnaires in a forty-minute period, and none of them complained of fatigue.

Participants. One hundred nineteen students (participants' age ranged from 19 to 27 years old) from the Faculty of Arts at the University of Regina were recruited for the experiment, which was conducted during class time. The principal investigator explained that the goal of the study was to identify the types of news writing styles that will appeal to young adults and that participation in the study was completely voluntary. Participants were randomly assigned to the three conditions. Prior to distributing the set of six news stories, the participants received paper-and-pencil questionnaires measuring their NFO toward each issue. One hundred eleven questionnaires were turned in, six of which were either spoiled or incomplete. One hundred five questionnaires were used for the data analysis (N for drugs = 35; N for crime = 33; N for warming = 37).

Materials. Stories were taken from existing newspapers and edited to 400 words or fewer each. The articles about the issue of global warming addressed such aspects as the necessity to immediately reduce global warming effects in Canada, the possible damage to the Canadian

economy from strict policies to limit carbon emissions, and flora change across Canadian provinces due to global warming. The articles on the issue of drug abuse highlighted the fact that unintentional deaths from prescription and illegal drug abuse were a leading cause of accidental deaths in the country, reported the results of a national study on "drug-infestation" among Canadian high school students, and detailed the rising number of illegal sales of prescription drugs over the Internet. The stories about the issue of crime emphasized the prevalence of weapons and a lack of police personnel in British Columbia, the rise in criminal activity on Canada's public transportation systems, and recent spikes in the homicide rate in Toronto.

All nine stories were pre-tested with a group of journalism students at the University of Regina. All of them correctly identified what was the central issue of each article.

Measures. The study used previously developed scales to measure issue salience—the key dependent variable—well as both versions of the NFO measures, the key independent variables. In order to facilitate the statistical analyses, all the variables were operationalized as continuous.

Issue Salience. To test for basic agenda-setting effects, participants' beliefs about the importance of the three issues—drug abuse, crime, and global warming—were measured in the post-experimental questionnaire, using two items borrowed from traditional agenda-setting studies.²³ Participants were asked to rate on a 5-point scale how important the following issues were as a problem facing their country today: drug abuse, crime, global warming, the economy, education, elections in Canada, healthcare affordability, immigration, the war in Afghanistan, national unity, poverty, and terrorism. In addition to the MIP question, participants also rated on a 5-point scale the extent to which they thought these issues were deserving of additional government action. For each issue, the scores on both items were added to create an index of public salience. The internal consistency for these two measures was satisfactory across the three issues of concern in the study (drug abuse: $r = .72$; crime: $r = .73$; global warming: $r = .51$).

Traditional NFO. Before reading the news stories, participants were asked questions that measured separately the relevance and uncertainty toward each of the issues depicted in the stories they were about to read. Relevance was gauged by a three-item set of 5-point semantic differential scales. The items were anchored by "no concern to me / a lot of concern to me," "irrelevant to me / relevant to me," and "uninteresting to me / interesting to me." The scores were combined into additive scales of relevance of each issue, all of which exhibited high internal reliabilities (drug abuse: $\alpha = .83$; crime: $\alpha = .81$; global warming: $\alpha = .83$). Uncertainty was measured by asking participants to rate on a 5-point scale "How much do you know about [issue named]?" (anchored by "nothing" and "a lot") and "How confident are you about your knowledge of [issue named]?" (anchored by "not confident" and "confident"). Both items were reverse coded, so that a higher number indicated more uncertainty, and summed to form index scores of uncer-

tainty about each issue (drug abuse: $r = .71$; crime: $r = .72$; global warming: $r = .39$).

To create the traditional measure of NFO, the relevance scores were first squared and then multiplied by the uncertainty scores. This formula was used to reflect the notion that at low levels of relevance, NFO is low, while at higher levels of relevance, uncertainty must be taken into consideration. At the same time, the formula produces a variable measured at the continuous level, rather than at the ordinal level, which has been the most common approach in the existing literature.

New NFO. The pre-experimental questionnaire applied a shortened version of the NFO scale developed by Matthes to cover three dimensions: NFO toward the issue, toward the facts of an issue, and toward journalistic evaluations. The Matthes NFO subscales toward issues, facts, and evaluations had three questions each, and this study's version contained two questions about NFO toward each of these factors. Questions that had the lowest factor loadings and squared multiple correlations in Matthes' original analyses of the scales were omitted in the shortened version used in this study.²⁴

Participants rated their level of agreement with each item using a 5-point response scale (anchored "strongly disagree" and "strongly agree"). NFO toward the issue was measured with the following statements: "I want to be instantly informed about recent developments," and "It is important for me to observe this issue constantly" (drug abuse: $r = .74$; crime: $r = .74$; global warming: $r = .66$). NFO toward the facts of an issue was gauged with the statements "I want to know about many different aspects of this topic" and "I would like to be thoroughly informed about specific details" (drug abuse: $r = .62$; crime: $r = .66$; global warming: $r = .59$). Lastly, NFO toward journalistic evaluations was measured with these two items: "I attach great importance to commentaries on this topic" and "It is interesting to see how several journalists comment on this issue" (drug abuse: $r = .64$; crime: $r = .62$; global warming: $r = .59$).

The order of asking the questions for both scales was randomized, to try to reduce the potential redundancy effects.

As previously noted, the existence of an agenda-setting effect is a necessary condition for testing the four hypotheses and research question that are the focus of this study, especially the core hypothesis and research question examining the validity of the new measures. By employing three different issues in the design of the experiment, we hoped to replicate the investigation of these hypotheses and research question across a variety of issues. However, preliminary analysis of the data revealed an agenda-setting effect only for the issue of drug abuse; that is, the issue salience for drug abuse was significantly higher [$F(2, 86) = 3.0, p = .055$] for the group that read three stories about this issue ($M = 7.81, sd = 1.49$) than for both the group that read two stories ($M = 7.38, sd = 1.93$) and one story only about this issue ($M = 6.58, sd = 2.28$).

Results

TABLE 2
Regression Analysis of Agenda-setting Effect on Need for Orientation

Model	Variables	Standardized Beta Coefficient	t value	VIF	R ²	N
1	Traditional NFO Scale	.27**	2.22	1.00		
	Manipulation	.33***	2.64	1.00	.18	57
2	New NFO Scale	.17*	1.32	1.02		
	Manipulation	.34***	2.64	1.02	.13	57
3	New NFO Subscale: Toward Issues	.25**	2.01	1.01		
	Manipulation	.34***	2.72	1.01	.16	57
4	Traditional NFO Scale	.25**	1.88	1.11		
	New NFO Scale	.09	.69	1.13		
	Manipulation	.34***	2.69	1.02	.18	57
5	Traditional NFO Scale	.23**	1.80	1.07		
	New NFO Subscale: Toward Issues	.20*	1.54	1.08		
	Manipulation	.34***	2.80	1.01	.21	57

Notes: The agenda-setting effect was measured with an additive index of responses to two questions, "How important is the drug issue as a problem facing this country today?" and "To what extent do you think the drug issue deserves additional government action?" Scores range from 2 (none) to 10 (a lot).

Due to the exploratory nature of this research, probability levels of $p < .10$ are also indicated.

* $p < .10$; ** $p < .05$; *** $p < .001$ (one-tailed).

Consequently, the analyses reported here are based on need for orientation toward the issue of drug abuse and the strength of the subsequent agenda-setting effect regarding this issue only. The failure to achieve agenda-setting effect for the issues of global warming and crime are reviewed in the discussion section.

H1 asserting that the traditional NFO scale will predict basic first-level agenda-setting effects, was supported: A zero-order correlation revealed that there was a monotonic increase in agenda-setting effects as need for orientation increased ($r = .33, p < .05$).

H2, which predicted that the three dimensions of the new NFO scale will be positively correlated, was supported. The average inter-item correlation for the six items was positive and strong ($r = .59, p < .001$). In other words, the six items could be combined into a highly reliable scale (Cronbach's $\alpha = .90$).

H3, which stated that the new NFO scale will predict basic first-level agenda-setting effects, was partially supported. When using the additive index with the three subscales combined, the positive correlation between the participants' score on the new NFO scale and the salience of the drug abuse issue was not statistically significant ($r = .18, p < .20$). However, when employing only the first dimension of the new NFO scale, which is most directly concerned with basic or first-level

agenda setting, the correlation only approaches standards of significance ($r = .23, p < .10$).²⁵

H4, stating that the new NFO scale and the traditional NFO scale will be significantly correlated, was supported. The zero-order correlation was $.27, p < .05$. The relationship was basically the same between the traditional NFO scale and the first sub-dimension of the new NFO scale (i.e., NFO toward issues) ($r = .26, p < .10$).²⁵

The research question about the comparative strength of the new NFO scale and the traditional NFO scale in predicting the strength of basic agenda-setting effects was examined using multiple regression analysis. As shown in Table 2, five different models were estimated. In the first three models, the traditional NFO scale, the new multidimensional NFO scale, and the new NFO subscale toward issues were entered separately as single predictors. When analyzed this way, all three variables were positive, significant predictors of agenda-setting effects. When the traditional NFO scale and the new NFO scale were entered simultaneously as predictors of agenda-setting effects (model 4), the traditional NFO scale ($\beta = .25, p < .05$) was a stronger predictor of agenda-setting effects than the new NFO scale ($\beta = .09, p < .20$). However, when the traditional NFO scale was entered along with only the first sub-dimension of the new NFO scale (model 5), both scales were close in predicting agenda-setting effects (traditional NFO scale $\beta = .23, p < .05$; new NFO towards issues $\beta = .20, p < .10$).

Discussion

Previous studies established that the need for orientation is one of the most important contingent conditions for agenda-setting effects to take place. Recent studies²⁶ expanded the application of this motivational factor to the second level of agenda setting and tested the reliability and validity of new NFO scales. However, this work raised questions about how comparable the traditional and new NFO scales are, how strongly they predict agenda-setting effects, and what constitutes the dimensions of NFO. The current study sought to validate both the traditional and new NFO scales and test them as predictors of basic agenda-setting effects.

First, to lay the foundation for this analysis, it was demonstrated that the traditional NFO scale, based on relevance and uncertainty toward issues, predicts first-level agenda-setting effects. Greater NFO was correlated with greater agenda-setting effects. These results confirm established knowledge about the strong predictive power of the traditional scale, even when analyzing this variable at the continuous level instead of the more common ordinal level of measurement.

Second, the new NFO scale tested here is also a reliable tool. Its three dimensions—NFO toward issues, toward specific aspects of issues, and toward journalists' evaluations of issues—were strongly correlated, confirming Matthes' conclusions about the internal reliability of this new measure.²⁷

Third, the first dimension of the new NFO scale, which was designed to test the kind of effects tested in this study, also predicted first-

level agenda setting. Higher scores on this scale were positively associated with higher issue salience. The results of these replications should not surprise because agenda-setting effects have been detected with the use of various methodologies. As Wanta and Ghanem put it, "Methodological artifacts had little impact on the magnitude of effects found in agenda-setting research."²⁸

Turning to the core questions of this study, the traditional NFO scale performs better than the new NFO scale when predicting first-level agenda-setting effects. However, when only the first sub-dimension of the new NFO scale is used (i.e., NFO toward issues), both the traditional and new scales perform about equally. Thus, studies interested in basic agenda-setting effects can use either scale.

It should be noted that the new NFO scale also was designed as an instrument that can detect agenda-setting effects on the level of attributes, which traditional operationalizations of NFO do not explicitly take into account. The results here for issue salience did not demonstrate any significant role of the new NFO scale for the sub-dimensions "orientation towards facts" and "orientation towards journalistic evaluations." This is consistent with recent results by Matthes,²⁹ who concluded that the new "NFO [scale] explains the amount of information seeking, but not the tone of the information that individuals are looking for."

In this study agenda-setting effects were obtained only for the drug abuse issue, not for the global warming and crime issues. A key reason for these outcomes is that a one-session experiment with exposure to only three news stories on an issue is a moderately weak tool to heighten the salience of that issue for the participants, and a more elaborate design could help detect the effects better. It also should be noted that the stories about drug abuse contained some elements about crime as well. The participants may have connected these two issues, conflating the effects of the news stories on the salience of the drug abuse issue.

Does this mean that the NFO dimensions dealing with attribute agenda setting are not useful instruments? Not necessarily. The second-level effects might be secondary to the effects taking place with issue agenda setting. We also know that agenda-setting effects accumulate over time because of increased coverage of an issue. It might be that the first exposure to certain information leads to heightened awareness and subsequent perceived issue importance while only after repetitious exposure do the second-level agenda-setting effects begin to appear to build up. It is possible that a time-series experiment would reveal the NFO role in such effects. In any event, second-level agenda-setting effects were not measured in this study. It is early to dismiss the other two dimensions as irrelevant to predicting agenda-setting effects because the salience of attributes is more subtle than the salience of large issues.

Matthes also contended that relevance and uncertainty are not dimensions of NFO, but lower-order concepts.³⁰ The analysis in this paper indicates that such a reconceptualization does not seem persuasive. Furthermore, the suggested replacement of the traditional NFO scale by combining the three elements of the new NFO scale does not

look compelling either. This is not to say that the new scales focused on the second-level of agenda setting have no role in the study of attribute agenda-setting effects. That is yet to be investigated.

This study is not free from limitations. A one-session experiment might not account for potentially greater agenda-setting effects. A post-test-only design does not allow for capturing change in participants' evaluations of issues. Future research could address these limitations by enhancing the number of news stories presented to participants, employing a pre-test-post-test experimental design, and conducting a series of sessions over time to detect accumulated agenda-setting effects. It also might be interesting to compare the role of NFO as a determinant of agenda-setting effects with the psychological mechanism proposed by the Elaboration Likelihood Model (ELM), as both employ some similar operationalizations.

In conclusion, there is overwhelming empirical evidence here for the concurrent validity of the traditional NFO scale and the first dimension of Matthes' scale (orientation toward issues). Although the strongest evidence is in the Model 5 analysis (Table 2), where the two measures are directly compared, the same conclusion can be drawn from a comparison of the results from Model 1 and Model 3 and for H1 and H3, as well as the results for H4. For measuring basic agenda-setting effects, the results indicate that the traditional macro-NFO scale continues to be an instrument of choice, rather than the more narrowly focused orientation toward issues measures. As simultaneous measures of all three new NFO dimensions have not yielded compelling evidence so far, it is recommended that separate attribute and journalistic evaluation NFO scales be examined in regard to second-level effects.

NOTES

1. Maxwell McCombs and Donald Shaw, "The Agenda-Setting Function of Mass Media," *Public Opinion Quarterly* 36 (summer 1972): 176-87.

2. Maxwell McCombs, *Setting the Agenda: The Mass Media and Public Opinion* (Cambridge, UK: Polity Press, 2004).

3. David Weaver, "Political Issues and Voters' Need for Orientation," in *The Emergence of American Political Issues: The Agenda-Setting Function of the Press*, ed. Donald Shaw and Maxwell McCombs (St. Paul, MN: West Publishing, 1977), 107-20; David Weaver, "Audience Need for Orientation and Media Effects," *Communication Research* 3 (July 1980): 361-76.

4. Jorg Matthes, "The Need for Orientation towards News Media: Revising and Validating a Classic Concept," *International Journal of Public Opinion Research* 18 (fall 2006): 422-44; Jorg Matthes, "Need for Orientation as a Predictor of Agenda Setting Effects: Causal Evidence from a Two-Wave Panel Study," *International Journal of Public Opinion Research* 20 (winter 2008): 440-53.

5. Weaver, "Political Issues and Voters' Need for Orientation."

6. Weaver, "Audience Need for Orientation and Media Effects."

7. Toshio Takeshita, "Agenda-Setting Effects of the Press in a Japanese Local Election," *Studies of Broadcasting* 29 (1993): 193-216.
8. Maxwell McCombs and Salma Ghanem, "The Convergence of Agenda Setting and Framing," in *Framing Public Life: Perspectives on Media and Our Understanding of the Social World*, ed. Stephan Reese, Oscar Gandy, and August Grant (Mahwah, NJ: Lawrence Erlbaum Associates, 2001), 67-81.
9. Matthes, "The Need for Orientation towards News Media,"
10. Matthes, "The Need for Orientation towards News Media,"
11. Weaver, "Political Issues and Voters' Need for Orientation."
12. Salma Ghanem, "Filling in The Tapestry: The Second Level of Agenda Setting," in *Communication and Democracy: Exploring the Intellectual Frontiers in Agenda-Setting Theory*, ed. Maxwell McCombs, Donald Shaw, and David Weaver (Mahwah, NJ: Lawrence Erlbaum Associates, 1997), 3-14; Guy Golan and Wayne Wanta, "Second-Level Agenda Setting in the New Hampshire Primary: A Comparison of Coverage in Three Newspapers and Public Perceptions of Candidates," *Journalism & Mass Communication Quarterly* 78 (summer 2001): 247-59.
13. Matthes, "The Need for Orientation towards News Media"; Matthes, "Need for Orientation as a Predictor."
14. Matthes, "Need for Orientation as a Predictor."
15. Matthes, "The Need for Orientation towards News Media," 429.
16. Keith Stamm, "Measurement Decisions," in *Mass Communication Research and Theory*, ed. Guido Stempel III, David Weaver, and G. Cleveland Wilhoit, (Boston: Allyn and Bacon, 2003), 129-46, 138.
17. Weaver, "Audience Need for Orientation and Media Effects"; Weaver, "Political Issues and Voters' Need for Orientation."
18. Matthes, "The Need for Orientation towards News Media"; Matthes, "Need for Orientation as a Predictor."
19. Roy Behr and Shanto Iyengar, "Television News, Real-World Cues and Changes in the Public Agenda," *Public Opinion Quarterly* 49 (spring 1985): 38-57; Shanto Iyengar and Donald Kinder, *News That Matters: Television and American Opinion* (Chicago: University of Chicago Press, 1987); Shanto Iyengar, Mark Peters, and Donald Kinder, "Experimental Demonstrations of the 'Not-So Minimal' Consequences of Television News Programs," *American Political Science Review* 76 (December 1982): 848-58.
20. Sean Aday, "The Frame-Setting Effects of News: An Experimental Test of Advocacy versus Objectivist Frames," *Journalism & Mass Communication Quarterly* 83 (winter 2006): 767-84; Spiro Kiouisis, Philemon Bantimaroudis, and Hyun Ban, "Candidate Image Attributes: Experiments on the Substantive Dimension of Second Level Agenda Setting," *Communication Research* 26 (August 1999): 414-28; Wayne Wanta, "The Effects of Dominant Photographs: An Agenda-Setting Experiment," *Journalism Quarterly* 65 (spring 1988): 107-11.
21. Iyengar and Kinder, *News That Matters*.
22. Kenneth Bordens and Irwin Horowitz, *Social Psychology* (Mahwah, NJ: Lawrence Erlbaum Associates, 2002).
23. McCombs, *Setting the Agenda*.

24. Matthes, "The Need for Orientation towards News Media."

25. Due to the exploratory nature of this research, the level of significance at $p < .10$ was reported as "approaching" the standards of significance and allowing for further investigation.

26. Matthes, "The Need for Orientation towards News Media"; Matthes, "Need for Orientation as a Predictor."

27. Matthes, "The Need for Orientation towards News Media."

28. Wayne Wanta and Salma Ghanem, "Effects of Agenda Setting," in *Mass Media Effects Research: Advances through Meta-analysis*, ed. Raymond Preiss, Barbara Gayle, Nancy Burrell, Mike Allen, and Jennings Bryant (Mahwah, NJ: Lawrence Erlbaum Associates, 2006), 37-51, 46.

29. Matthes, "Need for Orientation as a Predictor," 450.

30. Matthes, "The Need for Orientation towards News Media."

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