Wrong Assumptions, Poor Results: 
an Empirical Assessment of the Dimensionality of Political Knowledge

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Paul T. Weith, Central European University
Andre Krouwel, Free University of Amsterdam

Abstract

A considerable part of the literature on political knowledge generated conclusions the accuracy of which rests on the assumption that the construct is fundamentally unidimensional. Using data from a Dutch vote advice application (VAA) we demonstrate that the reliability of political knowledge measurements is highly sensitive to the content of the questionnaire items used. Domain-consistent political knowledge scales, that only tap into the respondents' knowledge of a single predefined political domain, and type-consistent ones – that only inquire about current issues, or only employ name/office recognition items – are significantly more reliable than the general scales that currently constitute the norm. We also find that the convergent validity of general scales, operationalized as relationship to education and political interest, is lower than that of domain specific ones. We draw ample support for our claims from the correlational properties of a matrix of 17 political knowledge items on over 3400 respondents.
Introduction

The political literacy of citizens has been central to the study of public opinion throughout the history of political science as a discipline. That more knowledgeable citizens are able to make better decisions than their less knowledgeable peers may appear borderline tautological; yet the bulk of the empirical evidence on information effects to date brings little support for such a grand conclusion. Consolidated representative democracies were found to be fully functional despite the alarmingly low levels of political knowledge among their citizens (Campbell et. al., 1960; Converse, 1964). The acquisition of political knowledge does not appear to overwhelmingly sway public opinion from one side of the political spectrum to another; Sturgis (2003) estimates a 3% aggregate change in vote choice in response to unrealistic increases in the public's level of political knowledge; Althaus (1998) finds that such increases would switch the majority support from one side of the spectrum to the other in the case of one out of five political issues. Overall, citizens seem to make almost equally good decisions regardless of their level of political knowledge (Lupia, 1994), or, alternatively, informed political decisions are almost as poor as uninformed ones. We argue that, to some extent, the failure to find substantively significant differences between the informed and the uninformed may stem from the use of imperfect metrics.

One possibility is that the excessive reliance on the quick recall abilities of respondents (Prior and Lupia, 2008) or the use of suboptimal formats for the survey tools that tap into the respondents' knowledge (Carpini and Keeter, 1993; Weith and Toka, 2011) reduce the reliability and validity of extant measurements. We argue that the shortcomings of current operationalizations may be even more far-reaching. It has been argued before that the dimensionality of political knowledge is not as straightforward as it was initially assumed (Iyengar, 1986; Smith, 1989), yet no consensus has ever been reached (Carpini and Keeter, 1993). If wrong assumptions are made regarding the dimensionality of the concept, all estimates for its effects will be biased.

We investigate the dimensionality of political knowledge using data we collected in March 2012 on an online sample of Dutch citizens of voting age. We use polychoric correlations between knowledge items grouped in nine cross-cutting classes (3x3) defined by the topic (issue domain) and type (chronic knowledge/current knowledge/name recognition) of information that the items inquire about. We find that correlations within classes are generally stronger than correlations across classes, and that the degree of specialization of knowledge scales accounts for roughly half of the variation in the reliability and convergent validity of the measurements. We also find that the more domain-specific or type-consistent a measurement of political knowledge, the stronger the relationship one finds
between political knowledge and education or political interest. We conclude that the assumption of unidimensionality does not hold on our data, and argue that the weak to very weak information effects that constitute the norm in the extant literature may underestimate real effects by making this assumption.

**Political Knowledge: From Concept to Measurement**

Political knowledge is defined as the amount of factual information about politics stored in the conscious memory of citizens (Carpini and Keeter, 1996). The considerable attention that political scientists have allocated to the study of political literacy stems from a long tradition of viewing representative democracy as a system that requires the constant political input of a cognitively engaged populace (Berelson, 1954). The normative claim to democratic legitimacy rests on the assumption that people know best what their interests are, and are capable of pursuing them through targeted political action upon careful scrutiny of the political alternatives facing them (Dahl, 1989; Bartels, 1996).

Knowing best what one's interests are, or successfully pursuing one's best interest, are notions that are hardly operationalizable with the available epistemic and methodological tools. Tentative proxies (see Lau and Redlawsk, 1997) and alternative ways of looking at the role of political knowledge in the democratic process (Bartels, 1996; Fishkin and Luskin, 1999) have been designed, but the much theorized formidability of knowledge as an indispensable ingredient for democracy is yet to be demonstrated.

One potential explanation is that there are multiple ways in which political knowledge may benefit representative democracy, and scholars to date were misguided to focus on just a handful of outcomes they deemed relevant (such as vote choice, issue positions, turnout, etc.). We can refute this claim at the outset, because any palpable individual level effect on democratic outcomes would take place through the mechanisms of political input that were extensively studied in the literature. If, for instance, knowledgeable citizens do not vote any differently from less knowledgeable ones, if their differential turnout rates do not distort the outcome of the election, or if the biases induced by political ignorance are random and cancel each other out on the aggregate level (Page and Shapiro, 1992), it is reasonable to conclude that democracy is procedurally sheltered from the evils of political ignorance. This conclusion is supported by the line of research concerned with the potential of cognitive heuristics

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1 Political knowledge, level of political information and political literacy are used interchangeably
2 Quasi-objective information about citizens may be retrievable in exhaustive amounts, but the way in which all the scraps of information combine into a coherent articulation of a specific political interest is likely to elude us for many years to come.
(Popkin, 1993) and cues (Lupia, 1994) to compensate for the partial information held by citizens.

An alternative explanation, that we elaborate throughout this paper, is that political knowledge may in fact be consequential but we have thus far failed to see the magnitude of its effects due to the noisy measurements we often employ. Attempts at refining the measurement of political knowledge have been made before (see Carpini and Keeter, 1993; Miller and Orr, 2008; Mondak, 2001), and several survey designs were found to be more effective than others in tapping into the political knowledge of respondents. We take this issue further and argue that the relatively low yield of studies on information effects also has causes beyond the technical level of survey design; assumptions about the nature of political knowledge as a concept may be routinely violated in the empirical literature.

**One Dimension or More?**

If knowledge is multifaceted, and it is composed of multiple dimensions that are imperfectly correlated, all relevant political domains need to be represented in the questionnaire if an unbiased measurement of political knowledge is sought (Nunnally, 1978; Carpini and Keeter, 1993). Failing to account for the separate underlying dimensions will result in lower measurement validity due to the oversampling of some topics to the detriment of others. Furthermore, the more correlated the underlying dimensions are, the lower the reliability of the measurement.

The main question posed previously in the literature is whether citizens are “specialists” or “generalists” (Zaller, 1986), and the reliability analyses performed at the time appeared to point unequivocally to the conclusion that the public conforms better to the “generalist” model (Zaller, 1986). Carpini and Keeter found that a one-factor model fits the data almost equally well as the five-factor model, and concluded that political knowledge is chiefly “general”, one-dimensional (1993). However, Iyengar (1986) finds that “special” scales of political knowledge interact significantly with one's position on political issues, usually outperforming the interaction with “general” knowledge. He also shows that different segments of society, defined by socioeconomic and demographic characteristics, differ significantly in their performance on domain-specific political knowledge quizzes.

Unidimensionality has been the default assumption ever since, and most studies allocate little or no space for diagnostic tests of its tenability. The plausibility of the assumption has likely waned with the recent advent of electronic media and the increased diversification of information sources (Prior, 2005). The 70s and 80s information environment was saturated with political news that every TV owner was exposed to on a regular basis – possibly due to a limited supply of TV channels, enabling a
process of passive learning (Zukin and Snyder, 1984). The media environment in the 21st century is starkly different; there is virtually no limit to the availability of political information for citizens who have permanent access to an internet connection. The diversification of media outlets observed at the turn of the century and discussed by Markus Prior (2005), represents merely a small scale innuendo of what the close-to-full penetration of the internet was about to engender. While the increased supply of media outlets gave citizens full control of their degree of exposure to political news (Prior, 2005), the internet allows them to self-select into ever more specialized exposure groups. If the media environment discussed by Zukin and Snyder (1984) was one in which hard political news was bundled together with soft news and entertainment; in the environment analyzed by Prior (2005) hard news is often separated from soft news or entertainment, but all political topics are bundled together; with full penetration of the internet, all bundles are split.

Kieskompas Data

We used a panel of Dutch voting age citizens who left an email address and indicated consent for being occasionally re-contacted after completing a Dutch online Vote Advice Application3. Some users of the website where the application was published – more than three million IPs – agreed to opt-in during the Dutch local elections in March 2010, while the other respondents opted into our panel during the parliamentary elections in May/June 2010. Since these respondents consented to renewed contact and have used an election website, we expect above average political knowledge and interest and also higher propensities to respond to survey participation.

Our data was collected by recontacting this panel between March 5 and March 15, 2012 as a separate wave, using the online services of SurveyGizmo (http://www.surveygizmo.com). Out of the initial sample of 8145 respondents, 3466 participated in this wave of our panel, 70 percent of them filled out the questionnaire before we sent the first reminder on March 11. A second reminder was sent on March 13, and the survey was closed on March 15 when the daily increase in the response rate fell below 1 percent.

We tested the respondents' knowledge of three political issue-domains, using six items on economy and finance, six on immigration and international issues and five on welfare and pensions. The selection of domains was based on informal conversations with Dutch experts; to the extent that they diverge from the true underlying structure of Dutch politics, our dimensionality tests may be encumbered by elevated type II errors. The quiz items were also designed to test three types of political

3 www.kieskompas.nl (see Krouwel et al, 2012 for a full description)
knowledge: chronic knowledge, referring to political issues that have mostly remained unchanged over a significant period of time; name/office recognition, where respondents were asked to link the name of politicians to their respective offices and vice versa; and knowledge about current affairs. The ordering of the questions is random with regard to types and domains. We randomized the format of the questions – open-ended, multiple choice with four response categories, and true/false questions – assigned in one of our two batteries of knowledge items. The exact wording of the questions is listed in Appendix 1.

**Empirical Tests and Results**

The standard approach to testing hypotheses about the dimensionality of knowledge constructs is confirmatory factor analysis (Carpini & Keeter, 1993). In order to get meaningful results from a CFA, one needs to have extensive knowledge about the conceptual dimensionality of the construct at hand (Carpini and Keeter, 1993). We have little prior knowledge of the potential factor structure underlying general political knowledge and our research is chiefly exploratory, thus making CFA unfit for our purposes. Exploratory factor analysis, on the other hand, would reveal factors that may or may not be related to the *domain- or type-* dimensionality of the data. There is no reason to expect, for instance, that the first 9 factors retrieved by an EFA would align well with our 3x3 categorization of the items. There are several other properties of the data that can affect the results of a factor analysis, such as the discrimination and difficulty of items, or the amount of guessing that is allowed (Smith, 1991). In fact, under the assumption of unidimensionality, several factors are likely to arise, thus making it hard to establish the conditions under which the null hypothesis should not be rejected.

Alternatively, a joint-effect approach as the one described previously (Iyengar, 1986) can be employed in order to shed light on the dimensionality of knowledge relevant with regard to a given response variable. Applying this method would allow us to see whether a hypothesized effect of political knowledge is better estimated with a domain-specific scale or a general one. This can be a good tool for substantive research papers investigating specific knowledge effects, but it does not suit the methodological purpose of our article. We chose an iterative method that allows us to have an intimate understanding of the results at every intermediate step of the analysis, that does not restrict the scope of our results to specific research questions and makes relatively few distributional assumptions.

**Test I.**
We used 5 questionnaire items for each *domain* and *type*. We computed polychoric correlations (Olsson, 1979) between all possible *domain*-specific four-item additive knowledge scales (the respondents' count of correct answers to the four items) and the remaining item from their *domain* category: economy, international or welfare. For each *domain*, thus, we measured the association between all combinations of four items and the fifth. The resulting coefficients reflect the extent to which issue-specific scales are internally consistent; henceforth *in-correlations*.

We further computed polychoric correlations between these four-item scales and all the items pertaining to other issue-domains (ex: four-item scales drawn from the “economy” category were correlated with all items outside the “economy” category). These scales show to what extent issue-specific scales approximate a general notion of political knowledge; we call them *out-correlations* because they reflect scale consistency across issue-domains.

We run the same computations for question *type* – knowledge of current affairs, chronic knowledge and name or office recognition. In order to avoid confusing the effect of *type* with that of *domain*, we tried to keep the three categories of *type* balanced with regard to the *domain* of the items within. As this is not fully achievable for groupings of five elements of three kinds, we approximated a balanced composition by dropping one “economy-finance” item from the “current affairs” category. We ended up with category “chronic knowledge” having “economy-finance” underrepresented by one item, “current affairs” underrepresenting the “welfare” category by one item, and a fully balanced six-item “name or office recognition” category. The logic of these concerns implies a hierarchical relevance of the two categorizations, with *domain* hierarchically superior to *type*. This may or may not be supported by the data, yet the issue is not relevant for the purposes of the study.

Finally, we compare *in-correlations* to *out-correlations* with two-tailed independent sample *t*-tests; both by category and by categorization (for instance, by category: *in*- vs. *out-correlations* for “economy-finance”; by categorization: *in*- vs. *out-correlations* for all domains pooled together). We expect *in-correlations* to be systematically stronger than *out-correlations* if political knowledge is multi-dimensional AND we successfully predicted its underlying dimensionality. We expect no significant differences if political knowledge is one-dimensional; significant results that do not point in the direction we predicted suggest that the concept displays a multidimensionality that we did not anticipate accurately. All results from this stage of the analysis are presented in Table 1. below.

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4 In order to avoid overrepresenting or underrepresenting some of the domains, we had to exclude from the analysis the 6h items from the “economy and finance” and “international and immigration” categories.
Thus, with anticipated poor sensitive domains operationalized analysis of the effect of reliability, their correlation with education and political interest. The same procedure is repeated for the possible combinations of five items are included.

We use the information on the domain composition of all 5-item scales to predict their reliability, their correlation with education and political interest. The same procedure is repeated for the analysis of the effect of type composition on our outcomes of interest.

We also correlate Alpha with a measure of type-specificity and domain specificity, operationalized as the maximum of the three count variables corresponding to types, respectively domains of each 5-item scale. The relationship between the specificity variables and Alpha is highly sensitive to the empirical accuracy of our preselection of knowledge dimensions. A null result is highly inconclusive for these tests, because it can be interpreted as evidence for unidimensionality, or for a poor preselection of domains and types. A significant positive relationship indicates correctly anticipated multidimensionality; a significant negative relationship indicates that at least one of the anticipated dimensions is very inconsistent, or even multidimensional. However, the slopes we find with our regression models with the count variables as predictors can be used to diagnose such results, thus we focus primarily on the latter. All results for this stage of the analysis are presented in Table 2.

\[ t = \frac{\bar{x} - \mu}{s / \sqrt{n}} \]

\[ df = n - 1 \]

\[ *=p<0.05; \cdot = p<0.1; a=\text{economics and finance}; b=\text{welfare an pensions}; c=\text{international and immigration issues}; A=\text{chronic knowledge}; B=\text{current issues}; C=\text{name/office recognition} \]

### Test II

Table 1. In-correlations and Out-correlations for Issue-domains and Knowledge Types

<table>
<thead>
<tr>
<th>In-correlations vs. out-correlations for issue-domains</th>
<th>In-correlations vs. out-correlations for type of knowledge</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overall</td>
<td>Issue a</td>
</tr>
<tr>
<td>----------</td>
<td>---------</td>
</tr>
<tr>
<td>t-test</td>
<td>0.72</td>
</tr>
<tr>
<td>df</td>
<td>16.09</td>
</tr>
</tbody>
</table>

\[ *=p<0.05; \cdot = p<0.1; a=\text{economics and finance}; b=\text{welfare an pensions}; c=\text{international and immigration issues}; A=\text{chronic knowledge}; B=\text{current issues}; C=\text{name/office recognition} \]

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5 The same items were used for this stage of our analysis as the previous stage. The excluded items are among the weakest correlates of the full 17-item scale (0.2 – 0.3); thus, their exclusion is not likely to bias our estimates towards rejecting unidimensionality.
below.

Note that we generally expect a positive slope for all count variables, under the assumption that the type and domain categories, designed to approximate the possible dimensions of political knowledge in Dutch politics, were accurately anticipated prior to data collection. If, however, some categories are more meaningful than others, we are likely to find some positive and some negative slopes. This would happen due to the comparative nature of our regression tests conferred by the fact that each count variable is a perfect linear combination of the other two. Statistically or substantively insignificant effects are expected either if political knowledge is indeed one-dimensional or if none of the categories we anticipated corresponds to real dimensions of knowledge.

### Table 2. Effects of domain- and type-composition of scales on measures of reliability and validity

<table>
<thead>
<tr>
<th>Issue-domain composition</th>
<th>Type composition</th>
</tr>
</thead>
<tbody>
<tr>
<td>DV: Alpha Correlation with education Correlation with interest</td>
<td>DV: Alpha Correlation with education Correlation with interest</td>
</tr>
<tr>
<td>Count b 0.075* 0.015* 0.022*</td>
<td>Count A 0.052* 0.033* 0.018*</td>
</tr>
<tr>
<td>Count c 0.043* 0.019* 0.008*</td>
<td>Count C 0.136* 0.004* 0.038*</td>
</tr>
<tr>
<td>Adj. ( R^2 ) 0.427 0.433 0.729</td>
<td>Adj. ( R^2 ) 0.600 0.577 0.682</td>
</tr>
<tr>
<td>( df ) 3000 2999 2999</td>
<td>( df ) 4365 4364 4364</td>
</tr>
</tbody>
</table>

*=p<0.05; b= welfare an pensions; c=international and migrational issues; A=chronic knowledge; C=name/office recognition

The range of the count variables exceeds that of Alpha by a factor of 5, and that of correlation coefficients by a factor of 5/2. Standardization would have render the scales meaningless, therefore all variables were kept on their original scale. In all models where Alpha was not used as dependent, it is used as control.

### Discussion

We find that in-correlations are systematically stronger than out-correlations for the categories

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6 It may be reasonable to suspect that the categorization of component items over a large number of iterations would conceal a considerable amount of information about the specific selection of items that produced the statistics we reported. The observed variance of alpha is generated by the selection of items in the composition of the scale; any linear function of the selection of items would be a successful predictor of alpha. One iteration cannot possibly generate sufficient information for us to link the category-composition of the scale to its item-composition, as the former is a very crude summary of the latter. With more iterations, however, this crude summary can conceivably provide enough information for a better-than-random guess. In order to test this assertion, we estimated the effect of the number of iterations on the explanatory power of a model analogous to the ones in the table, and found no relationship significantly different from 0.
of knowledge “type”, both separately and for the three of them pooled together, generally significantly so (see Table 1. above). The pattern is less clear in the case of issue-domains; overall, in-correlations are not significantly stronger than out-correlations. Knowledge about economic or financial issues correlates better with items on non-economic issues than it does with other economic knowledge items, leading to our failure to reach statistical significance for the t-test on in-correlations and out-correlations for the pooled issue-domains. We intuitively interpret this result as evidence for the heterogeneity of political-economic interests that respondents may have: few people are interested in all things related to economic or financial matters; however, many people are attentive to political information that is relevant for their particular field of activity. Knowledge of economic policies related to agricultural subsidies does not necessarily entail knowledge about the taxation of automotive imports. Out-correlations are stronger than in-correlations for the category of “international and immigration”, but the result is not significant.

Type specificity and issue-domain specificity, operationalized as the maximum of the three count variables for each scale, predict only a trivial amount of variance in reliability and convergent validity. All adjusted R-squares and coefficients are essentially 0, only reaching statistical significance due to the generous number of degrees of freedom. We thus dedicate the rest of this discussion to the interpretation of the substantively relevant results presented previously, namely, the estimates for the effects of the domain- and type- composition variables on our outcomes of interest.

Using two out of three count variables for both types and domains we managed to predict 42 percent of the variance in alphas for the latter and 60 percent for the former. A scale constructed by adding up the correct answers to five name-recognition items is expected to generate a Cronbach’s Alpha that is no less than .68 higher than the same estimate for a scale with no name-recognition items in its composition. Fully consistent scales for knowledge of international and immigration issues have a reliability higher by roughly .21 than the reliability of scales that do not include any items from this category. Of all the parameters estimated for the prediction of alpha, the latter is the weakest one.

The results for our tests of external validity are equally staggering, even though the effects appear to be much weaker at face value. Our count variables explain roughly 70 percent of the variance of the correlation coefficient between knowledge and interest, and 50 percent of the variance of the correlation with educational attainment. The control for alpha is responsible for approximately 0.1 of the adjusted R squares. We find that a 5-item name-recognition quiz of political knowledge is likely to produce a correlation with political interest that is stronger by .19 than the same estimate for a scale that has no name-recognition items in its composition. At the other extreme, name-recognition quizzes will produce scales that correlate with education no better than scales built without any name-
recognition items – a maximum difference of .02. Drawing more items of the “chronic knowledge” type will produce scales that correlate better with education, but would not augment the correlation between knowledge and interest by more than .09.

The relevance of the relationship between the count variables cannot be overstated. Each of our count variables can be obtained by subtracting the value of the other two from the total number of items in the scale (5). Both the size and the positive sign of the coefficients reported in the table above and discussed in this section are partially driven by our choice of baseline, reference category. Given the positive effects that we find for the two count variables included in the models, it is reasonable to expect that the excluded variable would have an insignificant or negative effect on our outcomes of interest.

The fit of our models is not affected by the choice of count variables included in the specification; it is thus the most relevant finding of our paper. We find that the issue-domain and type composition of knowledge scales accounts for roughly half of the variation in reliability and convergent validity. This finding is highly improbable if political knowledge is unidimensional. Both classifications (by issue-domain and by question type) appear to be meaningful, but not equally so. The type-composition of political knowledge scales appears to have stronger effects than the issue-domain composition both on the reliability and the validity of the measurement.

Our findings suggest that treating political knowledge as a unidimensional concept is not only misguided but may also be consequential. Lower reliability translates into elevated type II errors; it is conceivable that existing information effects were previously obscured by imperfect measurements. Lower validity can increase both type I and type II errors, depending on the hypothesis being tested. A
study on the acquisition of political knowledge in the Netherlands would probably fail at finding a
strong effect of education on knowledge operationalized as ability to link the names of politicians to the
offices they hold. Conversely, a much stronger effect is likely to be found if knowledge is
operationalized as ability to answer questions about the political system, political parties, and other
chronic features of their political system. However, depending on the outcome to be explained and on
the issue-dimensionality of the polity under scrutiny, other biases and error structures may apply.

This brings us to an important nuance of our findings. The anticipated dimensionality of
political knowledge that we subsequently tested in this article reflects idiosyncrasies of the Dutch
system and perhaps of a few more countries in the world. The issue-domains and types covered with
our set of knowledge questions is by no means exhaustive, a more comprehensive selection could yield
even stronger results. Other dimensions are likely to be relevant in other countries. The conclusion to
take away from our results concerns not the effects of particular types or domains on the reliability and
validity of the resulting scale, but rather the untenability of the assumption of unidimensionality for
political knowledge constructs.

One point of potential criticism need to be addressed. Our data is generated by an opt-in sample
of relatively politically sophisticated Dutch internet users. If the segmentation of political knowledge is
a function of the diversification of information sources, as argued earlier in this article, our sample is
likely to display elevated levels of specialization – multiple dimensions. Notwithstanding the accuracy
of this claim, the rate of internet penetration has run unabated ever since its advent and it is likely to
become the main source of political information in the near future. The internet has already achieved
close to full penetration in The Netherlands (Eurostat report STAT/12/185, 2012), and other countries
are catching up. Our analysis can also be criticized on the grounds that generally knowledgeable and
politically interested people self-selected into our sample; our results may only hold on highly
sophisticated samples. We find essentially no difference in results across the levels of political
knowledge and political interest; but replication on representative data is needed for a more conclusive
diagnostic.

Conclusions

How come that knowing more about the subject does not help one make better decisions? One
solution is to conclude that no decision is better than the other, thus citizen input in general and the vote
in particular are meaningless products of a system desperate to legitimize its existence. If this is true,
democracy is a scam. Another solution is to conclude that, due to the cognitive limitations of humans (confirmation bias, availability bias, halo effects, framing and priming, etc.) they are simply not capable of distinguishing between otherwise distinct political alternatives. If this is true, democracy is too good a system for us; we do not live up to its standards. There is, however, a less cynical, more anthropologically optimistic solution to our problem: we fail at measuring the impact of political knowledge on our variables of interest.

The good functioning of democracy was long believed to require a relatively politically informed citizenry. No empirical study to date managed to present convincing evidence in support for the indispensability of political literacy. On the contrary, an increasing body of evidence suggests that specific cues and cognitive heuristics can compensate for citizens' lack of knowledge of politics to the extent that the uninformed can mimic the behavior and attitudes of their more politically informed peers. Notwithstanding the significant progress made over the last decades in the effort to understand the mechanisms underlying information effects, the measurement of political knowledge remains problematic. Beyond the multiple sources of error stemming from imperfections at the level of survey design, the mismeasure of knowledge can also arise from making wrong assumptions about its dimensionality. Poor measurements always lead to underestimations and overestimations of true phenomena, they obscure existing effects and reveal false ones.

Political knowledge is generally assumed to be unidimensional; whoever is able to name the prime minister of France is more likely to know the unemployment rate in their country of citizenship. We argue that this is potentially false, especially in light of the increased diversification of information sources, allowing for an increased specialization of citizens' interests (Prior, 2005), be they political or not. We investigate the dimensionality of political knowledge on a large $N$ opt-in sample of Dutch voting age citizens. We first compare the association between political knowledge items within a certain topic to the association across topics, and find that knowledge about one political domain is often more predictive of further knowledge within the same domain rather than others. We then test the relationship between the domain-specificity of a political knowledge quiz and its reliability and convergent validity, and find that the more domain specific a quiz is, the more reliable and valid it is. The same patterns arise when we classify items by “question type” as opposed to “issue-domain”. Around 50 percent of the variance in reliability and convergent validity can be accounted for with variables summarizing the “types” or “domains” of the items used in the measurement of knowledge.

The specific domains considered in this article, and potentially the “types” as well, may not travel well from one polity to another, but the inescapable conclusion that knowledge is multidimensional is unlikely to reflect idiosyncrasies of the Dutch polity. If our assertion is true, and an
increased diversity of information sources leads to an increased segmentation of political knowledge, the full penetration of internet will even increase the salience of our findings.

Issue-specific scales may enable us to find empirical support for theories that were previously wrongly discarded due to suboptimal measurements resting on unsubstantiated assumptions. The choice of political knowledge items should be informed by the hypotheses to be tested, since the notion of a “general political knowledge” is likely to fail at accounting for much of the variance that it is theoretically expected to. Political literacy may be more important for the functioning of democracy than we think. Nationally representative data is needed for further generalizations of our results.
References:


APPENDIX:

1. Some of the following persons are ministers in the current Dutch government. Can you indicate which of them are? Tip: at least one and up to three of the following persons are ministers:

   Answer: Geerd Leers, Maxime Verhagen, Edith Schippers

2. Can you indicate whether the following statement is true?
   The retirement age in the Netherlands has recently increased from 68 to 69 years.

   Answer: The statement is not correct

3. Can you indicate whether the following statement is true?
   Approximately one third of the Dutch population is of Dutch origin

   Answer: the assertion is not correct

4. What is the current inflation rate to the best of your knowledge?

   Answer: 2.5%

5. Can you indicate whether the following statement is true?
   The current Dutch government debt amounts to approximately 50 percent of the Dutch Gross Domestic Product (GDP)

   Answer: The statement is not correct

6. How high do you think the state pension for single elderly people is?

   Answer: 70% of the net minimum wage

7. In 2004 ten countries joined the European Union (EU). In 2007 two more countries joined. In December 2011, negotiations with a new Member State were concluded, and it is expected to join the EU in July 2013. Do you know which country this is?

   Answer: Croatia

8. Can you mention the economic sector most benefit from European funding?
9. The economic sector most benefit from European grants:
10. The economic sector most benefits from European agricultural subsidies

   Answer: agricultural, agriculture, the assertion is true

11. Can you name the country that is currently Chairman of the Council of the European Union?
12. The current chairman of the Council of the European Union:
13. The current chairman of the Council of the European Union, Denmark is

   Answer: Denmark, Denmark, the assertion is true
14. You can see the current position of Uri Rosenthal in the Cabinet Rutte call?
15. The position of Uri Rosenthal in the Cabinet Rutte is that of:
16. The current position of Uri Rosenthal in the Cabinet Rutte, is that of Minister of Foreign Affairs

Answer: Foreign Minister, Minister of Foreign Affairs, the assertion is true

17. Can you name the office held by Jan Kees de Jager in the Cabinet Rutte call?
18. Which of the following offices does Jan Kees de Jager hold in the Cabinet Rutte?
19. The office held by Jan Kees de Jager in the Cabinet Rutte is that of Minister of Finance

Answer: Minister of Finance, Minister of Finance, the assertion is true

20. Can you name the office held by Henk Kamp in the Cabinet Rutte call?
21. Which of the following offices does Henk Kamp in the Cabinet Rutte?
22. The office held by Henk Kamp in the Cabinet Rutte is that of Minister of Social Affairs and Employment

Answer: Minister of Social Affairs and Employment, Minister of Social Affairs and Employment, the assertion is true

23. How high is the current unemployment rate in the Netherlands (percentage)?
24. Unemployment in the Netherlands is currently about:
25. Unemployment in the Netherlands is about 5 percent

Answer: 6; 6%, the assertion is not correct

26. If you think of all parties in the House, which will be the least likely to oppose a tax on businesses?
27. Of all parties in the House is the least likely to oppose a tax on businesses:
28. Of all parties in the House, the SP is least likely to oppose a tax on businesses

Answer: SP, SP, the assertion is true

29. A significant part of the cost of health insurance for workers is covered by their employer. What percentage of the total cost of health insurance is covered by employers?
30. A significant part of the cost of health insurance for workers covered by their employer. What percentage of the total cost of health insurance is covered by employers?
31. Approximately 60 percent of the cost of health insurance for workers covered by their employer

Answer: 50, 50%, and the assertion is not correct
1. Sommige van de onderstaande personen zijn minister in de huidige Nederlandse regering. Kunt u aangeven welke personen dit zijn? Tip: minimaal één en maximaal drie van de onderstaande personen zijn minister in de regering:

Antwoord: Geerd Leers; Maxime Verhagen; Edith Schippers

2. Kunt u aangeven of de volgende bewering klopt? De pensioenleeftijd in Nederland is onlangs verhoogd van 68 naar 69 jaar.

Antwoord: De bewering klopt niet

3. Kunt u aangeven of de volgende bewering klopt? Ongeveer één derde van de Nederlandse bevolking is niet van oorsprong Nederlands

Antwoord: De bewering klopt niet

4. Hoe hoog is de inflatie momenteel volgens u?

Antwoord: 2.5%

5. Kunt u aangeven of de volgende bewering klopt? De huidige Nederlandse staatsschuld bedraagt ongeveer 50 procent van het Nederlandse Bruto Binnenlandse Product (BBP)

Antwoord: De bewering klopt niet

6. Hoe hoog is volgens u de AOW-uitkering voor alleenstaande ouderen?

Antwoord: 70% van het netto minimumloon


Antwoord: Kroatië

8. Kunt u de economische sector noemen die het meest profiteert van Europese subsidies?
9. De economische sector die het meest profiteert van Europese subsidies is:
10. De economische sector die het meest profiteert van Europese subsidies is landbouw

Antwoord: landbouw; landbouw; de bewering klopt

11. Kunt u het land noemen dat momenteel voorzitter is van de Raad van de Europese Unie?
12. De huidige voorzitter van de Raad van de Europese Unie is:
13. De huidige voorzitter van de Raad van de Europese Unie is Denemarken
14. Kunt u de huidige positie van Uri Rosenthal in het Kabinet-Rutte noemen?
15. De positie van Uri Rosenthal in het Kabinet-Rutte is die van:
16. De huidige positie van Uri Rosenthal in het Kabinet-Rutte, is die van minister van buitenlandse zaken

Antwoord: minister van buitenlandse zaken, minister van buitenlandse zaken, de bewering klopt

17. Kunt u de funcie van Jan Kees de Jager in het Kabinet-Rutte noemen?
18. Welke van de onderstaande functies vervult Jan Kees de Jager in het Kabinet-Rutte?
19. De functie van Jan Kees de Jager in het Kabinet-Rutte is die van:

Antwoord: minister van financiën; minister van financiën; de bewering klopt

20. Kunt u de functie van Henk Kamp in het Kabinet-Rutte noemen?
21. Welke van de onderstaande functies vervult Henk Kamp in het Kabinet-Rutte?
22. De functie van Henk Kamp in het Kabinet-Rutte is die van minister van sociale zaken en werkgelegenheid

Antwoord: minister van sociale zaken en werkgelegenheid; minister van sociale zaken en werkgelegenheid; de bewering klopt

23. Hoe hoog is momenteel de werkloosheid in Nederland (in procenten)?
24. De werkloosheid in Nederland is momenteel ongeveer:
25. De werkloosheid in Nederland is ongeveer 5 procent

Antwoord: 6; 6%; de bewering klopt niet

26. Als u denkt aan alle partijen in de Tweede Kamer, welke zal dan het minste voorstander zijn van een belastingverlaging voor het bedrijfsleven?
27. Van alle partijen in de Tweede Kamer is de minst waarschijnlijke voorstander van een belastingverlaging voor het bedrijfsleven:
28. Van alle partijen in de Tweede Kamer is de SP het minst waarschijnlijk voorstander van een belastingverlaging voor het bedrijfsleven

Antwoord: SP; SP; de bewering klopt

29. Een belangrijk deel van de kosten van de ziektekostenverzekering van werknemers wordt gedekt door hun werkgever. Hoeveel procent van de totale kosten van een ziektekostenverzekering wordt volgens u door werkgevers gedekt?
30. Een belangrijk deel van de kosten van de ziektekostenverzekering van werknemers wordt gedekt door hun werkgever. Hoeveel procent van de totale kosten van een ziektekostenverzekering wordt volgens u door werkgevers gedekt?
31. Ongeveer 60 procent van de kosten van een ziektekostenverzekering van werknemers wordt gedekt door hun werkgever

Antwoord: 50; 50%; de bewering klopt niet