PERITIA

Policy, Expertise and Trust

Measuring trust in social surveys

D8.6 Briefing Report

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Summary: Measuring trust in social surveys

Trust in institutions and individuals has featured in a wide range of social surveys across the world. Many of these questions have been repeated over multiple survey waves, in some cases offering trends that reach back decades. As such, these resources have become an important record of how trust is evolving across the globe, and its relationships to governance, democracy and political participation.

Questions in these surveys cover various forms of trust – from that placed in our family, friends and local communities (or more broadly 'interpersonal trust' in society), to the trust we place in institutions such as the government, police and the media and the individuals within them (such as politicians, scientists, and journalists). Yet there is wide debate about what these measures actually capture, key arguments in which are as follows:

- Survey measures of trust are typically one-dimensional, despite trust relationships being inherently complex.
- The situational dynamics of trust relationships are rarely manifest in survey questions.
- Response scales can mask complexity in trust relationships, particularly the nature of distrust.
- There is a gap between trust levels observed in surveys and behavioural manifestations of distrust. Observing low levels of trust in surveys does not necessarily signal a crisis of trust when it comes to behaviours, but may more accurately capture a 'culture of suspicion'.

This report addresses this question of how to operationalise complex concepts such as trust and trustworthiness within survey instruments, informed by a detailed review of the measures used in six major cross-country surveys[1] and related literature. We also test the implications of these findings by analysing new survey data generated by PERITIA, using measures that are informed by understandings of relational trust advanced in philosophy.

[1] The six cross-country surveys reviewed are: Eurobarometer (EB), European Social Survey (ESS), European Values Survey (EVS), International Social Survey Programme (ISSP), Wellcome Global Monitor (WGM) and the World Values Survey (WVS). Inclusion criteria can be found in the full D8.1 report.

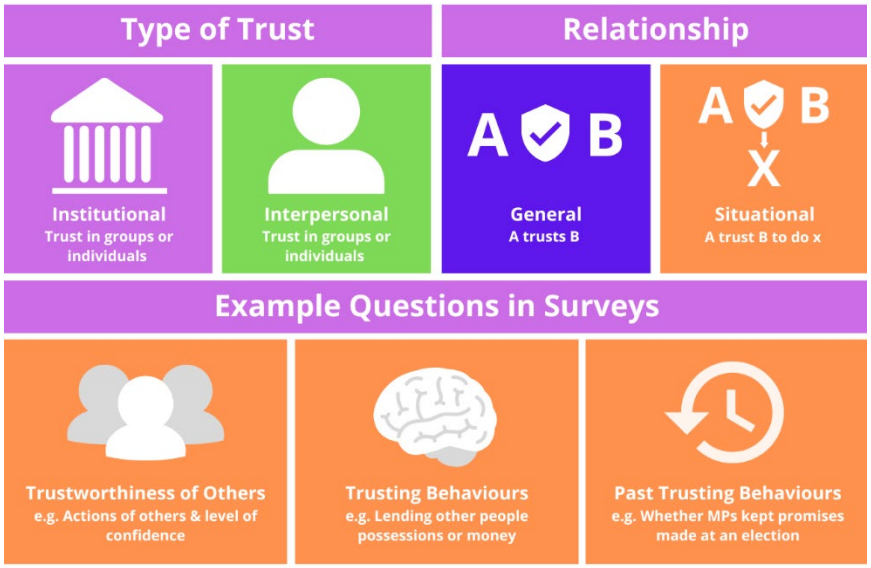
1 HOW IS TRUST MEASURED IN SOCIAL SURVEYS?

Social surveys often contain questions that ask respondents to assess levels of **institutional trust** (eg trust in government or scientists) and **interpersonal trust** (eg trust in friends, family or people generally). In both cases, these questions are usually general, with limited specification of the situation or context in which trust is enacted, and therefore referred to as **general trust** measures. However, there are examples where the context in which trust can be enacted is specified (eg providing accurate information on an issue), which we refer to as **situational trust** measures.

Less prevalent approaches also include asking about:

- The **trustworthiness of others**, as manifest in perceptions of their actions (such as taking advantage of you/others);
- **Confidence** in institutions such as parliament or the civil service;
- **Self-reported trusting behaviours**, such as lending money or personal possessions to friends.

Some scholars advocate for more complex measures of trust, combining different aspects of trustworthiness rather than relying on one simple question. These might include perceptions of traits such as competence, character, goodwill, general trustworthiness and forms of fairness (Besley et al., 2020).



2 HOW SHOULD WE INTERPRET LEVELS OF TRUST REPORTED IN SOCIAL SURVEYS?

Measures of trust in social surveys are a good source of general population level estimates. They can be helpful to compare trust levels between countries and across time, often in ways qualitative approaches are unable to achieve. But there are inherent complexities in how we should interpret these measures.

The simplicity of trust measures in time-series and comparative surveys is often necessary to obtain comparable responses from participants. Yet such rigidity can result in uncertainty around how respondents interpret the meaning of different questions. For example, the extent to which respondents can distinguish between the different types of institutions or interpersonal relations asked within surveys has been questioned. The OECD found of the 18 institutions listed in the institutional confidence measures in the World Values Survey (WVS), 5 factors account for 65 per cent of the total variance (OECD, 2017) suggesting there may be little benefit to making defined distinctions between specific institution types.

But it is not just the types of objects in which trust is placed where conceptual clarity might be impacted. Below we focus on two aspects that have been widely debated on measuring trust in social surveys: the difficulty translating complex ideas into understandable survey measures; and how questions are interpreted by respondents. These relate to broader concepts of 'validity' and 'measurement error' in survey design.

Definition: Validity and Measurement Error

An item or instrument is said to be **"valid"** when measures or results correspond with real-world observations (Anastasi, 1950). In measuring trust, two dimensions of validity are potentially problematic:

1. **Construct validity**, which refers to how well the instrument can measure the underlying concept of interest (Cronbach & Meehl, 1955).
2. **Content validity**, referring to whether the instrument captures all relevant aspects of the underlying concept (Haynes et al., 1995; Lynn, 1986).

Measurement error refers to a difference between what is observed and the "truth". This can occur for many reasons, including how respondents interpret survey questions (Groves 2010; Tourangeau, 2003).

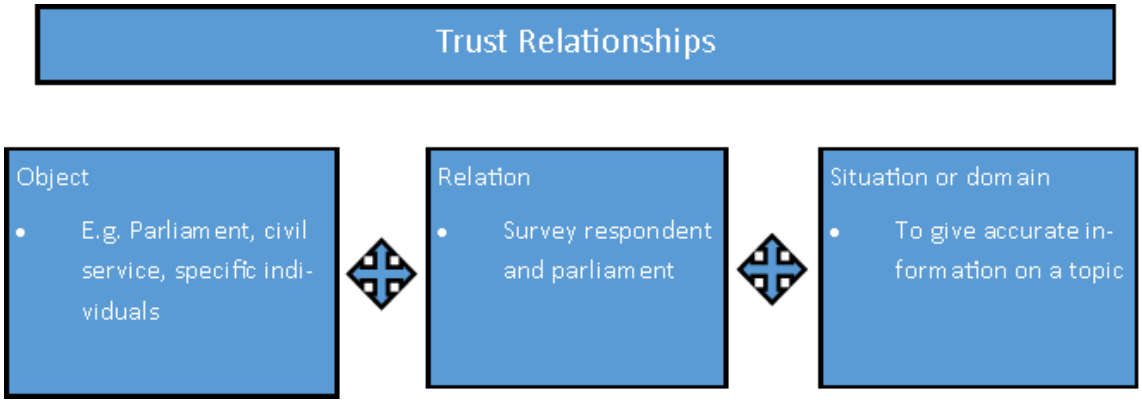
Survey measures of trust are typically one-dimensional, despite trust relationships being inherently complex

Most survey measures treat trust as one-dimensional – that is, there is either a presence or absence of trust (Bauer et al., 1994). However, the decisions we make to place our trust in people and institutions are rarely so simple: there are multiple meanings of trust and trustworthiness, and large variation in how they are applied in different contexts. In some languages, there are also multiple words that signal trust. And studies have shown empirically that frames of 'trust' versus 'confidence' are almost indistinguishable (ONS, 2016). All of this raises questions about the validity of trust measures.

To combat this, some studies advocate for using respondents' **evaluation of multiple traits as proxies for capturing perceived trustworthiness**, rather than a single, general trust measure. For example, multi-factor trust items have been tested to measure public perceptions of scientists, taking into consideration views of their competence, character, general trustworthiness, goodwill and dispositions towards fairness (Besley et al., 2020). Similarly, Hendricks, Kienhues & Bromme (2015) propose that asking about the specific dimensions of expertise that groups might hold (such as 'integrity' or 'benevolence') may be a more effective way of measuring trust when it comes to studying experts encountered online.

The situational dynamics of trust relationships are rarely captured in survey questions

Many theoretical models define trust relationships as being constituted of three elements: the subject (ie the person doing the trusting), the target or object (the person entrusted) and the situation or domain in which they are being asked to trust them (Van der Meer & Zmerli, 2017; Citrin & Stoker, 2018). This dynamic is often summarised in philosophical literature as a "three-place relation" (cf Baier 1986; Jones, 2019): A trusts B to do X.



While these **situational dynamics** are important, they are often absent from survey measures of trust. Dommett & Pearce (2019) note that major survey infrastructure typically measures trust at a 'macro level' (eg using objects like 'parliament' and asking respondents whether they trust them or not), without context. Measurement at this level is often unable to define stable categories, and some researchers therefore argue that greater attention at a micro-level may be more effective in exploring individual drivers of trust.

There can also be ambiguity in how the object of trust is perceived by respondents – illustrated well in examples of questions around scientists and experts. Responses to questions about trust in scientists and science are often found to be predicted by levels of understanding, education, and exposure to science (Bauer et al., 2000), suggesting that people with different levels of education and exposure to science may have different understandings of what a scientist is. Dommett & Pearce (2019) argue that the ambiguity of reference is not often recognised in survey findings, and can give an unwanted correctness to how results are represented, "overlooking the possibility that citizens may not hold stable, well-formed opinions on a given issue" (Dommett & Pearce, 2019: 671).

Response scales can mask complexity in trust relationships, particularly the nature of distrust

A degree of measurement error occurs within response scales. Research by Devine et al. (2020) finds that the distinction between mistrust (sceptical attitudes) and distrust (a belief individuals are behaving unethically) is often masked in response scales. This means a degree of heterogeneity exists among responses that fall at the "untrusting" end of traditional response scales in trust questions. For example,

surveys usually measure the presence of political trust by distinguishing between trusting and non-trusting respondents, but not between those who are sceptical and actively distrusting (Mishler & Rose, 1997). Low trust rankings may therefore not necessarily solely indicate distrust or alienation.

There is a gap between trust levels observed in surveys and behavioural manifestations of distrust

One of the trade-offs that come with generalised trust measures is their relative weakness in predicting trusting behaviours. O'Neill (2002) argues that general measures of trust do not correlate with an 'active refusal of trust' or 'conclusive evidence of reduced trustworthiness'. Rather, levels of low trust observed in social surveys may be better described as indicators of a 'culture of suspicion'.

Glaeser et al. (2000) find interpersonal trust measures to be relatively weak predictors of trusting behaviour. Though they do find that trust levels reported in the attitudinal surveys correlated with the *trustworthiness* of the participant themselves in experimental settings.

More recently O'Neill (2018) has argued that what general measures of trust fail to capture are the 'directions of fit' in trust claims. While we may seek to place warranted trust in the claims, commitments and competence of institutions, these judgements are often not informed by detailed evidence. More often, reputational awareness and heuristics are relied upon when making judgements on trust. The unconscious shortcuts respondents take in assessing trustworthy claims is therefore an important factor to consider in the validity of a given measure.

4 HOW CAN WE IMPROVE MEASURES OF TRUST?

We need to recognise the challenge of translating complex concepts into simple questions, how interpretation differs across individuals and cultures, and the trade-off between the specificity of measures and their relevance to very big questions on, for example, trust in government or science. While these limitations are important, they do not mean that survey measures tell us nothing of value about levels, trends and drivers of trust. Rather, it is helpful to have these limitations and trade-offs in mind when designing new studies: we cannot solve them but can make more informed design choices.

In PERITIA, we have experimented with incorporating questions capturing **key dimensions of relational trust advanced in philosophy**, alongside more traditional measures as explored in this report. These include:

1. **Reliance –** A disposition to depend on someone coming through for you in a particular way (Alonso, 2014; Holton, 1994, 65-7; Smith, 2010, 146; c.f. Thompson, 2017)
2. **Competence –** Relying on someone because they judge that person to have some kind of specialist knowledge or skills that are relevant to the context (Jones, 1996; McLeod, 2020)
3. **Normative expectations –** An expectation from the trustor that the trustee should follow through on what they have been trusted to do (Thompson, 2017). An alternative approach suggests this relates to the presumption of goodwill on the agent being relied upon (Baier, 1986). Others also claim this aspect of trust involves an expectation around some shared values, norms or interests between the trustor and trustee (Lahno 2001, McLeod 2002, 2020).

Within the PERITIA survey we designed multiple questions relating to trust in the government, scientists and a range of actors involved in policy making. This involved both a series of general trust measures, as well as bespoke questions capturing the different philosophical dimensions of trust outlined above. We then tested how closely related these measures were by conducting exploratory factor analysis (EFA) on a range of items relating to trust, focusing on the government generally, the government when handling climate change, climate scientists and covid-19 scientists.

We found that:

- Consistent with research cited above, the best way to reduce measurement error around concepts of trust was to reduce questions on the different philosophical areas of trust into a single composite scale of trust for each policy actor. This therefore suggested that the most accurate way to measure trust was to combine different questions about trust into a single, generic measure.
- Having a general disposition to trust a policy actor was significantly related to also having a strong assessment of their level of competence, motives, moral character or shared values.
- In an empirical and practical sense, it may not be possible to separate different philosophical dimensions of trust within large n survey data as distinct phenomena. Rather, they are highly correlated, suggesting that these measures capture similar concepts, even if we see differentiation between responses on individual measures.
- This process shows the validity in combining different types of questions around trust in order to create robust measures, which can then be used in more complex statistical modelling and segmentation.

5 REFERENCES

Alonso, F. (2014) What is Reliance? Canadian Journal of Philosophy 44, 2: 163-183.

Anastasi, A. (1950). The concept of validity in the interpretation of test scores. *Educational and Psychological Measurement*, 10(1), 67-78.

Baier, A. (1986). Trust and Antitrust. *Ethics*, 96(2), 231-260.

Bauer, M., Durant, J., & Evans, G. (1994). European Public Perceptions of Science, *International Journal of Public Opinion Research*, 6(2), 163–186. doi:10.1093/ijpor/6.2.163

Bauer, M. W., Petkova, K., & Boyadjieva, P. (2000). Public knowledge of and attitudes to science: Alternative measures that may end the "science war". *Science, Technology, & Human Values*, *25*(1), 30-51.

Besley, J. C., Lee, N. M., & Pressgrove, G. (2020). Reassessing the Variables Used to Measure Public Perceptions of Scientists. *Science Communication.* doi:10.1177/1075547020949547

Citrin, J., & Stoker, L. (2018). Political Trust in a Cynical Age. *Annual Review of Political Science*, 21, 49-70. doi:10.1146/annurev-polisci-050316-092550

Cook, T. E., & Gronke, P. (2005). The Skeptical American: Revisiting the Meanings of Trust in Government and Confidence in Institutions. *The Journal of Politics,* 67(3), 784-803. doi:10.1111/j.1468-2508.2005.00339.x

Cronbach, L. J., & Meehl, P. E. (1955). Construct validity in psychological tests. *Psychological bulletin*, 52(4), 281-302.

Devine, D., Gaskell, J., Jennings, W., & Stoker, G. (2020). Exploring Trust, Mistrust and Distrust. Retrieved from

Dommett, K., & Pearce, W. (2019). What do we know about public attitudes towards experts? Reviewing survey data in the United Kingdom and European Union. *Public Understanding of Science*, 28(6), 669-678.

Glaeser, E. L., Laibson, D. I., Scheinkman, J. A., & Soutter, C. L. (2000). Measuring Trust. *The Quarterly Journal of Economics*, 115, 811-846. doi:10.1162/003355300554926

Groves, R. M. & Lyberg, L. (2010). Total Survey Error: Past, Present and Future. *Public Opinion Quarterly*, 74(5), 849-879. doi:10.1093/poq/nfq065.

Haynes, S. N., Richard, D., & Kubany, E. S. (1995). Content validity in psychological assessment: A functional approach to concepts and methods. *Psychological assessment*, 7(3), 238.

Holton, R. (1994) Deciding to Trust, Coming to Believe, Australasian Journal of Philosophy, 72(1): 63–76.

Jones, K. (1996) Trust as an Affective Attitude. Ethics, 107(1): 4–25.

Jones, K. (2019). Trust, distrust, and affective looping. *Philosophical Studies,* 176, 955-968. doi:10.1007/s11098-018-1221-5

Kienhues & Bromme (2015)

Lahno, Bernd (2001) On the Emotional Character of Trust, Ethical Theory and Moral Practice, 4(2): 171–189.

Lynn, M. (1986) Dermination and Quantification of Content Validity. *Nursing Research,* 35(6), 382-386.

McLeod, C. (2002) Self-Trust and Reproductive Autonomy, Cambridge, MA: MIT Press.

McLeod, C. (2020) "Trust," Stanford Encyclopaedia of Philosophy.

Mishler, W., & Rose, R. (1997) Trust, distrust and skepticism: Popular evaluations of civil and political institutions in post-communist societies. *The journal of politics*, 59(2), pp418-451.

OECD (2017). *OECD Guidelines on Measuring Trust*, OECD Publishing, Paris. http://dx.doi.org/10.1787/9789264278219-en

ONS (2016). "Measuring National Well-being in the UK: Domains and Measures", Office for National Statistics, London

O'Neill, O. (2002). *Reith Lectures: A Question of Trust*. Cambridge: Cambridge University Press.

O'Neill, O. (2018). Linking Trust to Trustworthiness. *International Journal of Philosophical Studies*, 26(2), 293-300. doi:10.1080/09672559.2018.1454637

Smith, M.N. (2010) Reliance, Nous 44, 1: 135-147.

Thompson, C. (2017) Trust without Reliance, Ethical Theory and Moral Practice 20: 643–655.

Tourangeau, R. (2003). Cognitive aspects of survey measurement and mismeasurement. *International Journal of Public Opinion Research*, 15(1), 3-7.

van der Meer, T. W. G., & Zmerli, S. (2017). The deeply rooted concern with political trust. In T. W. G. van der Meer & S. Zmerli (Eds.), *Handbook on Political Trust* (pp. 1-15). Cheltenham: Edward Elgar Publishing.

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