

1 The concepts "subjective" and "objective" in Berger and Berger(1988) related to Donald Gillies's concepts "fully objective", "artefactual", "intersubjective" and "subjective".

Gillies's spectrum of probability interpretations – from fully objective to subjective

To compare different kinds of probability interpretations Gillies(2000:2) first introduces the distinction between epistemic interpretations, taking probability to be concerned with the knowledge or belief of human beings, measuring degree of knowledge or degree of (rational) belief, and objective interpretations, which take probability to be a feature of the objective material world.

He also argues for a pluralist view of probability where one interpretation of probability is valid in one particular context, and another in another, and that there are intermediate cases of probability interpretations, giving a more continuum-like spectrum, so probability interpretations can be (1) fully objective: the probability of radioactive decay follows a Poisson process independent of humans (2) artefactual: objective, but not human independent; probabilities result from interactions between humans and nature (3) intersubjective: probabilities represent the degree of belief of a social group which has reached a consensus and (4) subjective, where probabilities represent the degrees of belief of particular individuals.

Another aspect of the Gillies approach which is of interest when discussing the B&B paper: is that for him a probability interpretation is objective if "the probabilities are associated with repeatable conditions which have independent outcomes", and that this means that objective interpretations (Gillies favourite here is the "long run propensity theory") is the one to use in the natural sciences and the subjective (mainly the intersubjective approach) is correct in the social sciences and economics.

The Berger and Berry (here called "B&B") approach put into the Gillies scheme

In the Gillies scheme the B&B interpretation is an individual subjective one. A problem with the B&B paper is that "objectivity" is used often but not defined. Maybe you could find that B&B wants to achieve an "objective" approach by explicitly expressing the subjective elements (in Bayesian methodology (such as the choice of a prior and the "p0") and also making "hidden" subjectivity in frequentist approaches explicit (design dependence, p-value dependence on subjective researcher choices etc).

It would probably be fruitful to incorporate the intersubjective interpretation of Gillies in Bayesian approaches and one can wonder why this seems to not be wide-spread.

The Gillies proposition that different probability interpretations should be used in different research areas is also interesting, although I guess it demands much more thought and revisions before it could be applied in practice. B&B main focus is on the subjectivity of the researcher, not on the possible expectations and social interactions in the subjects studied. Finally, the lack of uses of intersubjective approaches in statistics today might also be a consequence of the present conflict between different schools of thought: no consensus.

2 Main conclusions and arguments in Morrison, Stettler and Andersson(2004)

An overall conclusion is that the vignette techniques (including mock records and mock questionnaire testing) are "under-used" in establishment surveys and in cognitive research on such surveys: applying-adapting these methods could give better estimates.

For cognitive research and survey design development specific conclusions are related to the establishment survey conditions ("the real world"):

<u>"Real establishment world"</u>	<u>Article conclusions and advice</u>
data tend to be factual, financial info, employment figures	use mock record testing rather than vignettes
match between survey concepts and record definitions may be problematic -- also: exploration of technical concepts with complex definitions (p 337)	study the handling of mock records and the record retrieval process vignettes allow insight into how definitions are used and formed
labor-intensive survey response makes it hard for a researcher to observe the process	traditional think-aloud cognitive interview cannot be used – use retrospective interviews to get reasons for deviations from correct responses
need for info on how to design electronic instruments used in surveys	user requirements can be obtained by observation of vignette handling
many communication steps (p 332)	vignettes make observation of communication steps possible
rare situations	vignettes lead to identification of these
response variation errors	vignettes provide a common and constant stimulus across respondents and have "correct answers" so analysis of error determinants is possible

More concrete advice for the use of vignettes in establishment surveys are that they should be brief, ambiguous and use respondents' own words and language.

The authors' arguments for generalization of the findings are few, but since they use "typical situations" in their empirical examples and sometimes specify atypical deviating conditions it may be possible to find out when generalization is possible. They also specify what the main differences are between establishment and household surveys so from this you might find out which results from household survey studies might be applicable for establishment surveys.