

The Quantitative/Qualitative Debate — A False Dichotomy?

Quantitative

Qualitative

Tradition

Scientific

- “Science” = “Organised [rather than disorganised, presumably] body of knowledge”.
- Method of obtaining this not prescribed or proscribed.
- Science studies things at a variety of ‘levels’ from reductionist to holistic (e.g., depression: biological processes *and* experience of being depressed). Appropriate methods used at each level (e.g., can’t ask participant to say how much serotonin is being released at key synapses, but can’t use PET scanner to find out what depression means to them), and all levels studied.
- So, science uses both quantitative and qualitative methods where appropriate to get complete, organised body of knowledge.

Hermeneutic

- “Hermeneutics” = “the interpretation of religious texts”. So, in literal form, not able to tell us anything useful in psychology. (Note quasi-religious fervour of qualitative psychologists, though.) But in meretricious sesquipedalianism terms (the interpretation of the meaning of verbal behaviour), it fits perfectly well within the scientific tradition.
- Why, therefore, use it alone, when it could be used in conjunction with other appropriate methods to get the full picture?

Assump- tions

Quantitative

Psychological phenomena contain regularities to be discovered

- True. Our job is to try and work out what these might be, so that we can explain things, and hopefully as a result use these explanations to make the world a better place.

Qualitative

Many psychological phenomena are shifting, interrelated, intangibles

- “Shifting, interrelated” just means “very, very complex regularities” — which we want to discover, surely, rather than just give up because it’s too complicated! (Einstein actually said he was grateful he wasn’t a psychologist because there are too many variables, but he became a physicist instead, rather than a hermeneuticist.)
- Intangibles? The study of things that are not real are not the province of psychology.
- Also, everything is “socially constructed”. No: things *do* exist independently of how we talk to other people about them. E.g., depression really exists. (Schizophrenia, on the other hand, might be a social construction — our job is to find out, and we can only do this as scientists; as social constructivists we are limited to one explanation.)

**Methods,
Data Col-
lection**

Quantitative

Seeks cause-effect relationships

- Yes. A Good Thing because a) humans are naturally inquisitive and want to know why things are the way they are, and b) doing so allows us to take action and make the world a better place. Simply describing the world is relatively uninteresting and not very useful.

Data are standardised

- Not always. It depends what you're looking at, why, and the level of analysis you've adopted. For example, I may want to standardise synaptic measurements in depression so I can compare them with non-depressives and see if it's these differences that might be important, but I wouldn't want to standardise measurements of depressives' experiences of their life events, if I were looking for an explanation and thus an effective cure for a range of different individuals.

Qualitative

Seeks interpretations, meanings, descriptions

- Yes, but so does the scientific tradition — and it does other things too. Why limit yourself to just these, when you could go on and *explain* things too?

Data are naturally-occurring and grounded

- So are lots of scientific data, but science goes on to do other things too, in order to try to explain things fully. Why stop half way?
- Mainly based on what people say — how reliable is *that*?!?
- Or counting words in newspaper articles — how *psychological* is that?!?

Kinds of data

Quantitative

Material, behavioural. Measured in numbers

- Often, but not at all always, is this the case. It depends on the area of concern and level of analysis. Scientists may also look at the quality of our inner symbolic experience if it is appropriate.
- Don't be scared of numbers — they can be very revealing insofar as they may reveal patterns which point to explanations. Once you've graduated, you can always get a maths expert to do the sums for you — in the meantime, if you find them a problem, just bluff it, don't give up altogether just because your primary school teacher was useless.

Qualitative

Symbolic, inner experience. Exploration of qualities

- Yes, good things they are too. But why *only* use them and thereby not get a complete (possibly explanatory rather than just descriptive) picture?

Partici- pants

Quantitative

A sample from 10s to 1000s

- The sample size you need depends on the amount of variation in the population you intend to generalise to. Some (scientific) examples:
Gold doesn't vary, so a sample of 1 is fine.
Piaget thought that stages of development were universal, so a sample of 3 (his own children) was OK.
Freud thought we all neurotic in pretty much the same way, so a sample of half a dozen is OK. (He was wrong, of course.)
Short term memory doesn't vary much (between 5 and 9 items, regardless of what culture you live in) so samples of 20 are perfectly OK.
Relationship styles vary enormously, so samples of 1000s are probably a good idea if you're studying this.

Qualitative

Sample could be one person or more

- The use of the word "sample" here shows that there is an implicit population in mind, and that generalisations are being made. So one person may or may not be enough, depending on the variation in the population. But to *only* use small samples will often lead to false generalisations being (implicitly) made. And if you're *not* going to generalise to more than one person, why am I wasting my tax money funding your extremely limited research?

Type of analysis

Quantitative

Statistical

- Often, but by no means always. For example, conformity: Asch measured the amount of conforming and performed a statistical analysis (or at least he worked out the means for each group) to see *how much* conformity occurred under different conditions, but then he asked his participants about their experience to find out *why* they conformed.

Qualitative

Analysis of meanings

- The scientific tradition does this too when appropriate — why limit yourself to just this?

**Role of
researcher**

Quantitative

Objective

- Yes — it's a quite reasonable assumption (unless you are deluded, terminally egocentric, a teenager, or all three), that there is a permanently-existing world which is independent of you and your views and conversations about it, and which will continue after you are gone. Our job is to explain what this world is.
- Scientists are aware that observation may affect the events being observed (e.g., Heisenberg's Uncertainty Principle), but this is taken into account when interpreting the data.

Qualitative

Subjective

- Qualitative researcher Bannister says that we cannot be truly unbiased, so we shouldn't even try to be, and scientists who think they are being objective are deluded, power-crazed or both. He is wrong. Gould says that a properly-trained scientist will be aware that they have biases but, instead of giving up, they try hard to find out what these biases are and to set them aside. He knows they will fail to do this completely, but with a number of scientists with different biases working on the same problem independently, these biases will tend to cancel out, and we will arrive, eventually, at a reasonable approximation of the truth. Indeed, instead of "objectivity", many scientists (e.g., Houellebecq) are now using the term "reasonable intersubjectivity" — if a number of observers observe pretty much the same thing, it's probably real.

	<u>Quantitative</u>	<u>Qualitative</u>
Kinds of outcomes	<p>Associations, cause-effect relationships. Lead to theories and general laws</p> <ul style="list-style-type: none"> • Yes — a Good Thing, because having explained things, we can then use this knowledge to make the world a better place. 	<p>Patterns of meaning, explanations, descriptions. Transient, indexical, reflexive.</p> <ul style="list-style-type: none"> • Patterns of meaning and description are only half of what we need to know — we also need explanations (it includes this above too, but it's not true: hermeneutics is about interpretation, science is about explanation. When an explanation <i>is</i> put forward, the qualitative researcher is obliged to write that it is just their own personal view, and

that it is no more valid than any other half-baked view which anyone else might have come up with, even when the evidence that they might be right is staring them in the face.)

- Transient. Interpretations only apply to one participant in one place, and only today with that particular researcher. So why am I wasting my tax money funding this research?
- Indexical. Jargon.
- Reflexive. OED: “Grammatical term meaning referring back to the subject of the sentence”. For example: “I *myself* was studying what this means to me”. Thus, navel-gazing. (In fact, as we have seen, scientists reflect on their work too, they just don't bore the reader with their reflections.)
- Discursive. A term not mentioned above, but frequently encountered in qualitative literature. However, using a “discursive methodology” doesn't mean “interpreting what people say” — the OED defines discursive as “rambling or digressive”, which it usually is.

So, the so-called quantitative vs. qualitative research methods debate is a false dichotomy.

Currently, psychology is dividing into two factions:

Scientific

- Uses both quantitative and qualitative research methods to try to describe and explain how the world really is.

Post-modern/New paradigm

- Uses only some of the range of methods available, only describes the world in terms of how the researcher sees it.

The side you chose is up to you, but bear in mind that scientific thinking, which came about during the Enlightenment, meant that society's decision-making was more likely to be done on the basis of evidence and not the whim of powerful groups in society.

For example, many doctors “feel” that electroconvulsive therapy is a good thing, and are still dishing out about 12,000 doses a year in the UK. The evidence shows, however, that cognitive therapy is equally effective — and does far less damage — and that much of the ECT effect may be psychological too.

Which do you fancy then — subjective, or objective?