HOW TO FORMULATE A RESEARCH QUESTION

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In academia, everything depends on the research question: Its sound justification determines whether and how your work is relevant; how it is phrased dictates how an argument or empirical investigation must be constructed; and your answer – or partial answer – to it constitutes the contribution of any study, talk, paper, or book. Accordingly, research questions are incredibly costly to get wrong. Here are some thoughts and hints that should help you formulate good research questions.

A good research question...

▪ raises concerns that matter beyond the here and now [Relevance],
▪ for which you can think of possible answers [Structure],
▪ each of which requires a sentence [Complexity],
▪ you don’t know which of these answers are true [Openness],
▪ but the question already points to possible ways to find out [Feasibility].

To test whether you have got a good research question, ask yourself:

Relevance: Could I explain to my grandchildren, 50 years from now, why this was useful to know?

Structure: Can I think of reasons for different possible answers to my question?

Complexity: Is it possible to satisfyingly answer my question in less than a sentence?

Openness: Could I find out which answer is right by thinking, asking someone or looking it up?

Feasibility: Can I think of possible observations that would indicate which answer is correct?

If your answers are Yes, Yes, No, No, and Yes, you probably have a good research question.

By contrast, if you cannot think of any specific answer and reasons for it, your question lacks structure, and you haven’t read enough; if you can think of only one plausible or relevant answer, or there is a way to find the answer without doing research, your question lacks openness, and you didn’t move far enough beyond the known; if you can think of valid one-word answers, your question lacks complexity, and you haven’t sufficiently considered the implications of possible answers; if you cannot think of plausible observations that could render you confident that different answers are true, your question lacks feasibility, and you haven’t sufficiently considered what are suitable research strategies and data; and if you cannot think of any application of possible answers that are still valuable in a different time or context, your question lacks relevance, and you haven’t sufficiently considered which more general, theoretical phenomena and mechanisms your research addresses.

In the following, I will explain each point in somewhat more detail.
RELEVANCE

For a research question to be relevant, it needs to have some theoretical dimension: Knowing its answer needs to carry implications that reach beyond the specific case or data at hand, and help us understand some kind of phenomenon more generally. One mark of a relevant research question is that you can formulate it with or without referring to the specific case, data or context that you intend to study: You could easily replace your case with a different one, from a different setting or time, or phrase it in abstract, without reference to any specific case. To lift a question up from focusing on a specific case to a theoretically relevant question, you need to be able to replace everything in it that is case-specific by a more general concept. To find these concepts, ask yourself what the phenomenon you are studying is a case of: If you can think of your case as one out of an entire family of cases that are in some important way similar to yours, such that you could just as well do your study on one of these, you can define what these cases have in common – and hence, what is the more general phenomenon that you are studying. Likewise, if you can think of your study as one out of an entire family of investigations that are concerned with similar concerns, such that the answers that these have given provide parts of possible answers that might apply also to your study, you can define what scholarly literatures you are contributing to – and hence, what theoretical quests you are addressing. A good research question does not always have to be phrased in terms of abstract concepts – but you can always reformulate it such that it can be applied to an entire family of cases or situations, and that its answer is an answer also to related questions that others have asked and will ask in different settings and at different times.

▶ Relevance Test: Imagine that you explain your research to your grandchildren, or your pen pal on the other side of the world. If you can explain what you wanted to find out, and why knowing this is still potentially useful for them, although both know nothing about the world here and now that you are investigating, you have found a good research question.

STRUCTURE

For a research question to provide sufficient structure, it needs to already suggest what might be plausible answers. What might be plausible answers is constrained by three things: The concepts raised in the question, our prior knowledge, and the phrasing of the question (I'll deal with the latter point in the next section below). The concepts constrain possible answers by demanding what these answers must speak about: If a concept comes up in a question, it must be part also of the answer. Furthermore, concepts come with specific properties – for instance, sentiment can be positive or negative, but not wrong; newspapers can claim, frame, buy, sell, hire, fire, but they cannot think or vote. Whatever answers you may consider, they need to talk to the concepts that you raise – and if the kind of answers that you have in mind does not correspond to what those concepts that you raise demand, you need to change either the question or the kind of answers that you pursue. In addition, what we already know about these concepts and their interrelations shapes what makes sense to expect as plausible answers. Existing research on related phenomena may suggest parts of a likely answer; theoretical arguments may point to likely responses; more generally, your knowledge of existing research and theory not only suggests what might be suitable answers (or part of answers), but also offers you with
reasons which of these are more or less plausible, under what circumstances, and why. This does not mean that you can necessarily anticipate all possible answers, or even that the right answer is among your expectations – but if you cannot say at all what you expect, and why, you have not read enough.

▶ **Structure Test:** Try to think of possible answers (or parts of possible answers) to your question, and explain why it makes sense to expect this. For a second, assume for each possible answer that it is true, and consider what this means for your question. If you can think of different possible answers, for which you can think of sound reasons, but they mean very different things for your question, you have found a good question.

**COMPLEXITY**

For a research question to advance our understanding, it needs to require a story, or at the very least, a sentence as an answer. What kind of answer is required depends on how your question is phrased:

- If you ask why, your answer must state reasons;
- If you ask how, your answer requires a description;
- If you ask under which circumstances, your answer requires a specification of conditions.

All of these kinds of questions, and several more, necessarily require at least a sentence as an answer. By contrast, how much can be answered by a quantity, when by a time, and ‘does…?’ or ‘is…?’ can usually be answered by Yes or No. There are, of course, situations when also these may be part of a valid answer – however, there is quite little that one can learn from these answers. Knowing whether, when, or how much is interesting only if that answer, in turn, means something that requires a sentence to formulate: Does this answer mean that a specific argument holds, that a theory needs to be refined, that we can ask new questions? Usually, if your question can be answered in one word, it is wise to then formulate for a few possible answers would mean – and then revise the question to ask directly for these sentences as possible answers. This does not mean that all questions that can be answered in one word are bad research questions – however, if that is the case, there need to be some important implications of either answer, which can be formulated in a sentence.

▶ **Complexity Test:** Consider whether your research question can be answered in one word. If any suitable answer requires at least one full sentence, or an entire story, you found a good research question.

**OPENNESS**

For a research question to be open, it needs to be such that you cannot answer it without doing the research. If you can only think of one possible answer, or all possible answers are equivalent – that is, if you think about what these answers mean, they all mean the same – it is not an open question. Likewise, if you can answer your question by thinking, remembering something, using google, or using your telephone joker, it is not a good research question. Sometimes, it may be admissible to ask questions that you can answer entirely by reading up on the academic literature. However, if finding the answer is only a matter of finding the relevant source, then somebody already conclusively answered the question, such that it is no longer open. By contrast, if there are already some answers offered in the literature, but you can raise sound reasons why these answers cannot yet be regarded as...
conclusive, then you still can make a contribution by offering your own investigation – either by reviewing the existing literature and arguing which given answers appear more convincing, or by building upon the existing literature to add your own empirical evidence: As long as it is conceivable that existing answers are incomplete or wrong, there are open questions to be asked.

▷ **Openness Test:** Try to think of different plausible answers to your question and what they mean for your research. If you can think of good reasons supporting different answers, which cannot be true at the same time and raise different implications, you have found a good research question.

**FEASIBILITY**

For a research question to be feasible, it needs to point toward a specific strategy suitable for determining which answer is correct. Sometimes, that path requires reading, sometimes, it requires logical argument, sometimes asking people will help, sometimes you can find an answer by collecting materials or examining existing data, and sometimes you need to conduct specific tests or experiments. Often, there is more than one path that can lead to possible answers; in this case, the next question is whether either avenue will already be able to provide a suitable answer, or whether you need to combine multiple strategies to say anything meaningful. To decide what strategies, data and analyses are suitable to answer your question, imagine possible outcomes of these investigations and ask yourself if, based on such findings, you could confidently answer your research question. For some questions, this is structurally impossible. For instance, if you ask a question starting with “Can…?”, any investigation must have either of two possible outcomes: It can show that something happened – in which case you can conclude that it indeed “can” happen; or it can show that something did not happen – in which case you cannot conclude that it cannot happen – you can only say that it did not happen here, but there may always be a case when it will. The question is thus not researchable. Likewise, questions that require access to data that does not exist or cannot possibly be obtained are not researchable. For instance, we cannot interview infants, nor can we interview people who have since died; so questions that require us to do so cannot be researched, unless we can devise some workaround. We cannot access metaphysical phenomena – so we cannot study them. Sometimes, it is conceivable to study something, but it is practically, legally, or ethically infeasible – in which case, you may again search for alternative avenues. If such are unavailable, you need to rephrase your question. This does not mean that questions that reach beyond the presently feasible are generally unsuitable – however, in such cases, you should always be able to phrase more specific questions that contribute to addressing the big, overall question, but that themselves point to a path toward a possible answer that you can actually follow.

▷ **Feasibility Test:** Think of possible observations that you might plausibly make in the course of a specific form of investigation. If you can think of plausible observations that, if you found them, would render you confident that different possible answers to your questions are true, you have found a good research question.