The Campaign for Real Social Science: Restoring Science to the Social Sciences

A paper for the Campaign for Real Education

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Author's Biography

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Where is the science in the social sciences?

Where is the science in the social sciences? In recent decades, the British social sciences have been reduced to social studies.

This is not just a matter of literacy. Teaching the "social sciences" as mere "social studies" is to the detriment of (ironically) society.

Academic programmes that call themselves "social scientific" but ignore the science inevitably decline into mere storytelling, unsound agendas, and purely philosophical discourse.

These programmes have robbed British students of the opportunity to develop useful research and analytical skills. This helps to explain complaints from employers about the useless skills offered by graduates. Taking the science out of the social sciences has left Britain with a society guided by fashionable opinions, conventional wisdom, hearsay, assumptions, and prejudices.

Even the "Campaign for Social Science" does not define the social sciences with any reference to science – instead it lists some subject areas. The "Campaign for Social Science" (launched by the Academy of Social Sciences in 2011) effectively consists of posting testimonials online about how important are psychologists, for example, to the economy. It is not

a campaign to promote the scientific skills that would differentiate an empirical psychologist from the rash of subjective Neo-Freudian nonsense out there.

Similarly, BBC Radio 4's "Thinking Allowed" programme claims to review the social sciences (it is the only programme on either radio or television to claim this), but actually reports whatever non-scientific sociology fits the presenter's social and political agendas.

What is social science?

The word science essentially means a replicable way of verifying knowledge (also known as empiricism). In more practical detail, this usually involves carrying out observations, developing theories that could explain the observations, and looking for evidence to support a theory – all in a replicable way.

Scientific skills are not remote exotic skills of rare use. You do not need to be a hard scientist or natural scientist (a biologist, chemist, or physicist) to use scientific skills. In fact, scientific skills are natural: humans develop scientific skills as children, when they test how different objects interact. When children start to talk, they quickly demand or offer evidence during an argument. Any parent or teacher who has encouraged children to prove that they have washed their hands by showing their clean hands has essentially helped children to understand the value of evidence. Anybody who has asked how a meal was prepared or how a room was painted has essentially engaged with replicability.

Science can be applied anywhere. I use the term "social scientific" to refer to the application of science to the study of human society. Most formal professions and academic disciplines study human society, including the formal social sciences (economics, politics, psychology, sociology, anthropology), the humanities (academic disciplines that study human culture, such as history), the liberal arts (the traditional core disciplines, such as philosophy and literature), and the professions (such as law and business).

Scientific skills are demanded in professions and endeavours that contain no explicit reference to science. For instance, managerial skill sets now routinely include "performance measurement." Much research is now differentiated as "evidence-based." In each case, the approach is fundamentally scientific; if we could not replicate it, how would we know whether performance is being measured effectively or whether the research is truly evidence-based?

The confusion and conflation of social science

Any definition of the social sciences as simply the study of human society is illiterate. To make that definition literate, we would need to rename the social sciences as "social studies," but not all social students are social scientists. For instance, social historians study human society in the past, but they would not claim that the topic alone makes them social scientists.

Consider these two contrasting departments that claim to be social scientific – one literately, the other illiterately. First, Loughborough University's Department of Social Sciences accommodates social psychology, sociology, social policy, criminology, and media and communications, without controversy - all these subjects are societal and fall within the formal social sciences.

Now compare King's College London's Faculty of Social Science & Public Policy, which includes the Institute of Contemporary British History (history is not a science, any way you cut it, although historians can benefit from scientific skills), Defence Studies and War Studies (both

are divestments from history with partisan agendas without teaching scientific skills), education and professional studies, geography (this conflates the natural sciences with the social), management, political economy, and "social science, health, and medicine" (which conflates social sciences with applied sciences).

Agenda-driven fields pretending to be social sciences

Unfortunately, social issues are inherently agenda-driven. Most social phenomena are observed as **issues** (things that need to be resolved). The issue that prompts research also usually prompts an agenda. By contrast, the natural sciences tend to start with observations of physical phenomena, so they are naturally more evidence-based.

In recent decades many new disciplines have been recognized on campuses, such as "war studies," "peace studies," and "ethnic studies." Often they arise from dissatisfaction with an established social science's neglect of some field or issue. In other words, they arise from agendas. Some of these agendas are justifiable: "women's studies" arose from neglect of female issues. However, agendas tend to agenda-driven research, which tends to neglect evidence, tends to neglect other issues, and tends to reverse the prejudices against which the original agendas had rebelled.

Agenda-driven anti-scientific trends are not confined to the new fields alone. They have emerged in previously respected applied sciences, such as the scandal-ridden profession of social work, some of whose professors are more interested in female chauvinist, anti-commercialist, and anti-elitist agendas than the empiricism of good practice.

Academic campuses, health systems, financial systems, politics, and courts have colluded towards fashionable agendas – away from the scientific skills that could prove or disprove these agendas. Agendas tend to be founded on opinions, beliefs, conventional wisdom, assumptions, anecdotes, biases and fallacies, and self-interests – not replicable evidence.

The campaigns against social science

Unfortunately, social sciences are undermined by many myths and over-reactions, of which I explain nine below: the myth of exoticism, the over-valuation of subjectivity, sophism, the myth of incompatibility with creativity, relativism, instrumentalism, metaphysics, the myth that science perpetuates power, and lazy pretentions to be social scientific without the burdens.

Exoticism

Some people would lead you to believe that social scientific skills are rare competencies that a person is either born with or not. Many people were never taught these skills, so they naturally view them as exotic or vague; other people have acquired these skills but prefer to claim exceptional, inaccessible talents, rather than admit to their hard work and the many mistakes they made along the way to greatness.

Unfortunately, many educators assume that students have learned scientific skills in high school, or that they will acquire them gradually by experience, but such expectations are unrealistic and unhelpful. The essentials of science are natural, such as experimentation and evidence, but scientific skills still need to be developed and practiced deliberately, otherwise they become unstable. Science takes disciplined commitment to a learned set of skills that do not come easily – the educator is responsible for developing these skills, not for leaving them to

chance. The skills need to be practiced, maintained, and held accountable throughout the lifetime of a project, a programme of instruction, and a career.

Subjectivity

The current fashion is to over-value subjective experience over objective knowledge, as if objectivity is impossible or inferior. Subjective research is based on personal experiences and judgments, while objective research is not. If someone were to write a recommendation for reforming a police force based entirely on his or her experiences in the police, then the project would be entirely subjective. Someone else might write a recommendation for reforming the police force based on independent data on police activities and crime – this would be a more objective approach.

These approaches are complementary. Objective approaches are more likely to be replicable, so clearly should be favoured in any field that claims to offer common knowledge, rather than personal experience, but we can allow for personal experience in other domains.

Indeed, science is not necessarily appropriate in creative, interpretive, or philosophical endeavours. Genuinely original creations are usually protected from replication (ethically and legally). Subjective interpretations or experiences are not perfectly replicable. Philosophy (the reasoned study of fundamental issues) is not necessarily replicable or even factual.

The problem arises when people assert that creativity, subjectivity, and philosophy are inherently superior to science, or that science is antagonistic to these things. A scientist is unlikely to assert the converse; a scientist just asserts that science is the best approach if we want to agree common knowledge.

Creativity

Some decades ago, a fashion emerged for opposing scientific skills on the grounds that they repressed subjective creativity and experiences, but these grounds are ignorant: one could develop both one's scientific skills and one's subjective creativity or experience, at the same time, in different domains or professions, without compromise.

Science and art are not mutually exclusive; in fact, they are complementary and even mutually beneficial – think of Leonardo da Vinci. Some of the greatest artists have excelled because they learnt to apply science to art, such as the chemistry of paints, the physics of light, or the psychology of characters in a narrative.

Relativism

Science favours positivism, which values knowledge derived from observations that others could replicate. By contrast, others (known as **relativists**) criticize any claim that any person's or culture's observation could be replicated by another; thus, they offer their own observations or intuition as personal and unreplicable.

The relativist position is unambitious and egotistical. Relativists mischaracterize positivism as absolute positivism, which would deny that anything could be known unless it could be observed in a replicable way. Absolute positivism is dissatisfying because it does not allow for things that cannot be observed replicably, such as possibilities, past experiences, future trends, risks, and subjective experiences. We do not need to be an absolute positivist to be a scientist, we just need to favour positivism wherever we want to share common knowledge. We

can still allow for knowledge derived from other subjective experiences – this allows us to quote from other people's experiences, for instance.

Instrumentalism

Philosophical **instrumentalism** views theory as useful in itself, without needing to explain anything real. Instrumentalism does not regard observational approaches as necessary, such as experiment, empiricism, positivism, and physical measurement, even though some instrumentalists allow for these approaches.

Instrumentalism without observation is justifiable if the aim is to be prescriptive, but becomes confusing when instrumentalism claims to be theoretical, descriptive, or normative. A prescription does not need to be descriptive—one could prescribe an ideal society without observing anything like it. For research to be theoretical, it must explain some facts; in other words, it must be descriptive. Instrumentalism is described inaccurately as **normative** research because it often aims to explain what people normally should do or would do. However, prescriptive research does not need to be normative; we could prescribe an ideal society without expecting any such society to materialize.

Metaphysics

Another schism in philosophy is between metaphysical and physical approaches. **Metaphysics** is a late ancient branch of philosophy examining the physical world—in this sense, metaphysics includes much of early science. However, science later separated from metaphysics, leaving metaphysicists to reason about the physical world in largely non-empirical ways, while **physical approaches** are based on observations of physical things.

Many theorists conceptualize abstract things, without admitting or realizing that they are being metaphysical. For instance, unscientifically-minded sociologists, political theorists, and historians conceptualize human groups as exercising "power" or seeking "power," but critics reject the concept of power as too abstract (it cannot be observed directly), and instead focus on observations, particularly of tangible behaviors, such as trade.

Power

Some researchers and educators have criticized the literal social sciences for perpetuating traditional "power" structures, because scientific approaches are more burdensome than personal intuition, and corporations and governments tend to have the resources to invest in them. Yet scientific skills are fundamental skills without any agendas of their own. If a true social hero wants to stand against power, he or she would be best advised to apply science to prove his or her case. Unfortunately, society today is full of people with subjective opinions, beliefs, and prejudices that they egotistically hold up as enlightened just because they oppose the supposedly "powerful."

Sophists

People who argue cleverly but deceptively have a derogatory name: Sophists (from the ancient Greek term *sophistes*, meaning a "sage," from *sophos*, meaning "clever"). In ancient Greece, Sophists claimed to be able to argue any position, sold their services as lawyers or teachers, and were in demand by unscrupulous lawyers and politicians. Given less clever or attentive audiences, these clients could win legal cases and political positions using oratory that was not necessarily logical or truthful – hence the contemporaneous complaint about ancient

Greek democracy: "the tyranny of the orator." Modern-day sophism can be seen in distasteful obfuscatory political and legal discourse – think of Tony Blair and Cherie Blair.

Sophism is usually a conscious choice, but can also arise from a separate choice in favour of subjectivity. People who attempt to abandon all science in favour of the subjective end up lost in the rabbit hole of egotistical pretentions, in which the pretence of enlightenment, or the style of argument, is more important than substantive knowledge.

Lazy pretentions

Many subjective commentators on social issues call themselves social scientists because they want the credibility suggested by the term "scientist," without the burdens of the scientific process. This is a similar motivation to the pseudo-democrat, who wants the legitimacy suggested by leading a democracy, without the accountability of free and fair elections.

How to be social scientific

Science can be applied anywhere. Science is just an approach towards knowledge – the topic or field does not matter.

An approach is a way of reaching something. An approach to knowledge is a way of achieving that knowledge. Many approaches exist – the scientific approach is not always appropriate, and I would not assert that science is the only approach – the main assertion of this pamphlet is that in any field that claims to be social scientific then the approach must be scientific, for literal, ethical, and intellectual reasons. We must stop tolerating claims that mere anecdotes, stories, opinions, prejudices, and other subjective positions can be offered as social scientific.

To follow a social scientific project from start to finish, I suggest the following nineteen steps:

1. Scoping the topic
2. Justifying the project
3. Finding sources
4. Evaluating sources
5. Reviewing literature
6. Reviewing knowledge
7. Analyzing phenomena, situations, and issues
8. Reviewing arguments
9. Evaluating and building theories
10. Modeling causal and other processes
11. Generating hypotheses
12. Designing a methodology
13. Choosing methods
14. Conducting tests
15. Gathering data
16. Evaluating evidence
17. Drawing conclusions
18. Structuring your report
19. Writing your report with clarity and style

1. Scoping

Scoping means defining what you intend to examine. A scope is a bounded view of something. In order to establish your scope, you should try to establish:

- The boundaries around your research
- The topic on which you plan to focus within those boundaries

2. Justifying

Your scope will help you communicate your research to others, but communicating is not the same as justifying its value. *Value* is the worth of something from one perspective. You must justify your research to others – a **justification** is the quality of being agreeable to others. Justifying holds you accountable to others, thereby avoiding the egotistical self-segregation of the anti-scientific social student.

You can justify your topic better by claiming that it is as many as possible of the following five things:

- Interesting
- Important (it should be consequential, salient, fashionable, practically employable or applicable, and policy-relevant)
- Improving
- Challenging
- Resolving a gap in our knowledge

3. Finding sources

To find sources for your knowledge, you should select the most useful and necessary readings - the readings that are most pertinent to your topic.

4. Evaluating sources

In reviewing literature, you should prioritize the readings that are closest in time to the direct observations of interest (as found in primary sources), or closest in time to present comprehension of current knowledge (as found in secondary sources). Throughout, you should read without bias, except to favour objective observations and scientific skills.

5. Reviewing literature

Any review of source should start with a description of the sources themselves.

6. Reviewing knowledge

The purpose of reviewing literature is to review knowledge of relevance to your topic, not just to describe sources.

7. Analysing knowledge

Knowledge needs to be analysed, that is, the subject needs to be identified, disaggregated, categorized or classified, compared and contrasted, and related to other things or its parts.

8. Reviewing arguments

An argument is the content of one party's attempt to persuade another party. Unlike a theory, an argument does not need to fit any facts. Thus, an argument, unlike a theory, can be purely hypothetical or counterfactual. A theory must explain at least some of the facts. For instance, I could argue prescriptively about how a researcher should behave ethically – this

argument does not need to fit any facts about how researchers really behave. A theory about how people behave must fit some of the facts about how people behave.

Ideally, an argument should be logical (this essentially means that the conclusion is guaranteed by the premises), true (the propositions conform with observations), strong (the conclusion is probabilistic or deterministic given the premises), and lacking in fallacies or biases.

9. Evaluating and building theories

A theory is not the same as an argument, even though these terms are often conflated. While an argument does not need to fit any facts, such as a purely hypothetical argument, a theory must fit some facts.

A theory may be derived from philosophy, but while philosophy needs to be reasonable, it does not need to be factual. Be aware that these terms too are often mixed up. For instance, many political scientists continue to refer to "political theory" and "political philosophy" interchangeably as a field, but these terms are not literal synonyms.

10. Modeling causal and other processes

A model represents a theory with variables or constants and the relationships in between. A **model** is an imperfect representation of something. If it were a perfect representation, it would be the same as the thing. Something that is the same as something else is really a copy, not a model. This is important to remember, because to criticize a model as imperfect would be unfair. We could criticize a model for being too simplistic or inaccurate to be useful, but we should not criticize a model just for being imperfect.

11. Generating hypotheses

A model helps to specify the hypothesis: this is the unproven proposition that is subject to test. Usually it is the conclusion or one of the final deductions from a theory.

12. Designing a methodology

A **method** is a technique for investigating or testing. A **methodology** is a collection of methods that is prescribed or used as appropriate for particular conditions.

Under scientific principles, methods should be *replicable* in the sense that other people could perform the same method in order to confirm or falsify your results. In practice, this implies two obligations:

- You should be testing in such a way that others could replicate it for themselves.
- You should describe your test in sufficient detail that a reader would understand how to replicate the test.

13. Choosing methods

Many methods are available, which I cannot review here, but I will share the two most important objectives in designing a method: it should be both as controlled and natural as possible. While the common differentiation between quantitative and qualitative methods is often vague or misleading, the differentiation between control and naturalness is always insightful. A **control** is something we do to maintain or change a condition. Without our control, everything would be **natural**—existing in nature without us affecting it. Controls are useful in helping us to test what we mean to test and to replicate a test, but naturalness is desirable so that we observe something as it is naturally rather than as we have affected it.

The ideal method is completely controlled by the researcher, and entirely unaffected by the researcher's control (it remains natural). This ideal is practically impossible. As we impose more control, we tend to affect the thing we are observing. For instance, in order to observe how nurses perform in their medical roles, we could rely on our own eyesight, ears, touch, conversations, and thoughts as we follow them around. Our observations would seem natural, but we would be affecting our subjects by following them around, getting in their way, making them self-conscious, and interacting with them. If we wanted to be sure that the thing remained entirely natural, we would withdraw in order to avoid affecting the thing, but total withdrawal would leave us no opportunity to observe. This trade-off is between control and naturalness.

In practice, we can try to combine sufficient control and naturalness in one method, or we can combine a more controlled method with a more natural method. Triangulation is the use of more than one method in the study of the same thing. (In some professions, triangulation is known as "validation.")

14. Conducting tests

A **test** is any attempt to establish something. Some people use this term loosely to describe everything a researcher does, but the useful specific meaning is the testing of hypotheses, which is why you should get in the habit of referring to your test separately from the method chosen for the test. For instance, you could be testing a hypothesis with several methods—a survey, an experiment, a historical case study, in which case you would have one test and three methods.

15. Gathering data

The term **observation** has two meanings:

- The process of gaining information through the senses or instruments
- One item of information produced from the observing process

Measurement is the process of collecting observations. Measurements should be:

- **Replicable**: Other researchers should be able to reproduce the observation using the same processes and instruments.
- **Valid**: The measurements should measure whatever you intended or claimed to measure.
- **Reliable**: The process of measurement and its performance must not vary between different measurements.
- **Recorded**: All measurements should be stored just as they were produced by the process.
- **Reported**: The process and the products should be reported accurately in sufficient detail that consumers could understand and reproduce what you did.

16. Evaluating evidence

Data become **evidence** when used to support some proposition. People often confuse data with evidence, because most of the time we are collecting data with intent to use them as evidence for something. Data can be valuable enough as interesting information or *intelligence* (processed information). **Evidence** is information used to support some proposition. We could use evidence to justify our proposed topic, to suggest that the literature has failed to explain something, to show that a method does not work, or to prove a hypothesis.

17. Drawing conclusions

A **fact** is an item of information that is true. In practice, a fact is a datum proven true. The term *fact*, when used literally and properly, means something that is true without any reservation. In other words, a fact is literally true, so the term is not literally up to dispute. Yet assertions of fact are up for dispute.

From facts you can reach findings, and from findings you can reach conclusions.

18. Structuring your report

The product of the research could be a written report or verbal briefing, which should have at least four parts: an introduction or preview of your scope; a review of the knowledge, theories, or policies that could solve the issue in the scope; a description of the methodology used to test your hypothesis and the data resulting from the test; and a conclusion or review of the whole project.

19. Writing your report with clarity and style

Finally, the product needs to be presented literally, but also with a style that is accessible and compelling.

Recommendations for stakeholders

The previous section advised you on how you can be social scientific. This section concludes this pamphlet with seven recommendations to promote social science.

1. Social scientific skills should be taught as a compulsory course during secondary education or by the first year of an undergraduate degree programme.

The first year of an undergraduate programme is the latest opportunity to learn social scientific skills; I would prefer them to be compulsory in secondary schools, so that students can make informed choices about a higher education or profession before they apply.

If every student and professor thought ahead to all the research projects that are required during coursework, he or she would realize the value of learning the skills by the start of any higher education. Any higher education demands research, analysis, and writing from the start, so it is amazing how rarely the skill set is taught.

Fortunately, more and more institutions of higher education are requiring their students to demonstrate some research skills. Many degree programmes now require students to pass at least one approved course in such skills. Many programmes now demand a final research project (a thesis or dissertation or capstone project).

2. School managers should validate the courses that claim to teach social scientific skills.

Too often, courses that are supposedly about social scientific skills are actually limited to coaching students towards picking a topic for their research, or a device for holding the student's hand on the way to delivery of some end-of-programme dissertation or thesis.

So far as such a course teaches any skills at all, it will probably teach a single skill that the professor has picked up without proper training (questionnaires and interviews are particularly over-represented here).

Remember how wide and deep is the actual skill set required for social scientific work, as indicated in the nineteen-step process in the previous section. Consider how few of those skills

are being taught if the teacher only guides the student towards a topic (only the first of the nineteen steps), or teaches the student how to design a questionnaire (only one of a dozen methods of gathering observations that could be taught under the thirteenth step – choosing methods).

School managers should not rely on an educator's claim to be a social scientist, but should wonder whether that claim is based on the now common misunderstanding that social studies are the same as social sciences. In truth, many professors who claim to work in the social sciences do not have any scientific skills, although they may offer plenty of knowledge regarding the history or historiography of a topic.

3. Academic institutions should departmentalize social studies separately from social sciences.

We need to better differentiate the scientific study of society from the mere study of society. A course in social scientific skills should be compulsory for all students of either social studies or social science, so they can make an informed choice for themselves, without becoming locked into social studies by a lack of social scientific skills.

4. Academic institutions should actively reward the social scientist over the agenda-driven pseudo-scientists.

The reward could take the form of promotion, research funding, or temporary leave from work in return for teaching social scientific skills, for instance.

This favour towards social science is a justifiable bias. The term "bias" just means favour towards something. It is not a necessarily negative word, although biases towards unjustifiable agendas should be judged as negative. Our goal should not be to eliminate all biases – this goal would be unrealistic and misguided. The modern false goal of eliminating all biases has encouraged progressive conformity around simplistic opposition to over-simplified biases, which has hypocritically reversed rather than eliminated these biases. For instance, think about how fashionable is any declared opposition to racism, but this laudable but simplistic goal will typically end up hypocritically blaming one race (usually the majority) for racism against another race (usually a minority), in other words reversing the racism in order to counter racism (a circular, self-defeating enterprise), while ignoring racism by the minorities. Consider the recommendation in December 2013 by Universities UK, which represented more than 130 of Britain's institutions of higher education at the time, that institutions could segregate public talks by gender, after several colleges in Leicester and London accommodated the supposed right of a conservative minority of Muslims to segregate the genders, before belatedly reversing their decisions in response to inexplicably delayed realization of their infringement of gendered rights.

Progressive conformity has also stifled genuine freedom of speech and expression, including universities, school boards, and publishers banning books or certain words in books (take the Oxford University Press' ridiculous warning to readers of school books that mention of pigs, pork, or sausages could offend certain religions), or the increasing censure of professors for unfashionable comments.

Readers might be wondering how one could possibly choose what to favour in a world of increasingly diverse opinions. Science does not offer a panacea, and one should not choose sides in a scientific dispute unless one develops the functional expertise to judge between them, but one should always choose a scientific approach over a non-scientific agenda. "Scientificness"

always offers a better measure than fashionability, popularity, or conformity with a particular agenda. We cannot eliminate biases, we just need to favour the justifiable biases: a bias towards science over non-science in the production of knowledge is as justifiable a bias as I can think of. Our goal should be to minimize unjustifiable biases and maximise justifiable biases. We should favour scientific over anti-scientific approaches, just as we should favour human well-being over human harm.

5. National governments and local councils should differentiate funding for social science from mere social studies.

Authorities that certify or fund academic institutions should favour petitioners who can prove that their agendas favour the social sciences over social studies. This implies no agenda to terminate social studies; it implies a legitimate bias in favour of social science over non-scientific social studies.

6. The Academy of Social Sciences should start promoting the social sciences as sciences, not just a list of social topics.

The Academy of Social Sciences needs new leadership in general. It is not an academy in any education sense; it is hardly an academy in any research sense; it is not a union of social scientists; and it does not certify or fund other institutions. It seems to be well-resourced, including funding from corporate sponsors – enough to pay salaries to various programme leaders who claim not to have the resources to perform any genuine campaigning, beyond the essentially cost-free posting of testimonials online or a briefing to the odd governmental minister.

7. All of us, as consumers and voters, should raise our voices to demand real social science.

You do not need to be a social scientist to realise the value of social science or to demand real social science from your educators, officials, and broadcasters. All of us should demand that they – on society's behalf – should favour scientific rather than non-scientific agendas.