

# Science in the public interest: Its meaning and continued significance

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# 1. Introduction

Three ideal-typical models of science:

(i) Autonomous science

(ii) Commodified science

(iii) Public-interest science

Claim: a serious critique of commodified science needs to address the issue of public-interest science.

That is: we need a convincing response to the request for the social legitimacy of science.

## 2. From (aggregated) individual to supra-individual interests

*The liberalist doctrine:*

- (i) Society is fully constituted by its individual members.
- (ii) Individual people are, or should be, free to further their individual interests.
- (iii) The only (legitimate) types of constraint on their freedom are: nature and the freedom of other individuals.
- (iv) All non-individual interests are some kind of aggregated individual interests. They are no more than “the short-term aggregated desires of stereotypical self-seeking individuals”.  
(Box 2007, 586)
- (v) Hence, there are no (genuine) public interests.

*A counterexample:*

Consider Mr. Freeman, who is terribly annoyed by the recent role of large financial institutions and decides to stop all his bank transactions and switch completely to cash transactions.

Unfortunately, the consequences are disastrous.

Apparently, Mr. Freeman's freedom is severely constrained by the existence and power of the (international) financial system; and, more generally, by a host of *large infrastructural systems* (transportation, energy, water management, communication, health care, and so on).

*Key features of large infrastructural systems:*

- (i) They both *enable* and *constrain* the actions of many individual people;
- (ii) They are socio-technological and manmade, not natural;
- (iii) Once realized, they exhibit a strong inertia;
- (iv) They are multi-purpose, but never all-purpose systems.

*Basic claim:*

Large infrastructural systems constitute *social resources*, and they represent *supra-individual* interests that are irreducible to (an aggregate of) the interests of current members of society.

*The argument:*

The availability of the relevant social resources:

(a) depends, in part, on unintended consequences of decisions and actions of current members of society;

(b) depends, in part, on decisions and actions of dead members of earlier society;

(c) affects the future members of society, whose interests are as yet unknown.

### 3. From supra-individual to public interests

(a) A supra-individual interest may be:  
privatized, communal, or public.

(b) Arguing for public interests involves taking a normative stance.

(c) However, as soon as the non-existence of supra-individual interests has been shown to be a myth, *democratic* liberalists and communitarians cannot consistently deny the significance of public interests.

## *What is a public interest?*

Preliminary issues:

(a) 'x has an interest in y' usually means that y is a matter of importance, or concern, to x.

Crucial aspect: interests are relational (an item of interest and an interested person, group or species).

(b) Who is the public? I submit: all the people who are, or may come to be, affected by the issues at stake.

In typical cases this will be a *large* and *indeterminate* number of people, sometimes including the current world population and even some future generations.

*Two types of public interest:*

1. An interest in realizing and maintaining states of affair of basic significance, which affect all members of the public more or less equally and which are democratically judged to be of public import.
2. An interest in realizing and maintaining states of affair of basic significance, which do not affect all members of the public equally but which are nevertheless democratically judged to be of public import.

Thus, what is claimed to be a public interest and how it may be realized is never a mere 'matter of fact', but essentially requires democratic, normative support.

## 4. What is “science in the public interest”?

*Type 1 public-interest science:*

In which specific ways can science contribute to realizing and maintaining states of affair of basic significance, which affect all members of the public more or less equally?

The relational character of the notion of interest implies that the item of interest needs to be specified by relating it to the context of the interested people.

This, in turn, means that there is not one, unique answer to the above question, but rather an open-ended list of possible specifications.

*Three possible specifications:*

(a) Public funding alone is not sufficient for public-interest science.

(b) Contribution to vital environmental issues is of public interest.

Yet, ascertaining what counts as such a contribution is not merely a scientific but also a cultural and political matter, which requires democratic support.

(c) More generally: public-interest science should help us to cope with the *complexity* and *uncertainty* of our (current and future) society. This requires a robust knowledge infrastructure characterized by *diversity*, in the sense of being optimally multi-purpose and open-ended.

*Three further specifications:*

(c1) Going beyond short-term, economic interests requires the slow science of *basic research*, especially its openness to novel, future situations.

(c2) Diversity is a basic criterion in current US science policy, but not in the focus-and-mass approach of the Netherlands (and the EU).

(c3) *Open access science* may increase the diversity, and hence the public interest, of the current physical and life sciences, but *not* of the current humanities and social sciences.

*Type 2 public-interest science:*

In which specific ways can science contribute to realizing and maintaining states of affair of basic significance that *do not affect all members of the public equally*, but may be democratically judged to be of public import?

*Two possible specifications:*

(a) Science driven by the intellectual curiosity of its practitioners is not, by itself, of type-2 public interest.

(b) The invention or improvement of so-called *research technologies* could be of type-2 public interest.

Such research activities “are oriented primarily toward technologies which facilitate both the production of scientific knowledge and the production of other goods. The instrument systems developed by research-technologists strike us as especially general, open-ended, and flexible. When tailored effectively, research-technology instruments potentially fit into many niches and serve a host of unrelated applications. Their multi-functional character distinguishes them from many other devices which are designed to address specific, narrowly defined problems in a circumscribed arena in and outside of science.” (Joerges and Shinn, 2001b, 3)

Note: even patenting law and regulation acknowledge the public significance of general research results.

## 5. Concluding remarks

### *(a) Some practical issues:*

For practical purposes, it seems prudent to focus on:

- the exclusion of projects that are *not* of public interest;
- such projects that serve public interests *better* than extant rivals.

### *(b) Some theoretical issues:*

- the future-orientation of basic science seems to set apart public-interest science from technology, and it seems to imply a critique of the notion of technoscience.
- conceive of public-interest science as a relational rather than either an intrinsic or an instrumental value.
- how is public-interest science related to the idea of scientific *knowledge* as a public good?