John Stuart Mill
and the Method of Investigation Proper to Economics

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6 June 2016
John Stuart Mill

British philosopher, one of the most influential and systematic in the XX century. His contribution spanned logic, philosophy of science, ethics, economics, political philosophy, social theory.

Member of the Parliament (1865-68), public figure in spreading liberal political ideas and pressing for liberal reforms.

Advocate of empiricism, utilitarianism, liberalism.

Born in 1806 in Pentonville (London), son of James Mill (1773-1836).

Exposed to extremely demanding education, shaped by the father’s utilitarian principles.

Intellectual and emotional crisis in 1826-1830.

Role of Harriet Taylor, married in 1851.

He died in Avignon in 1873.
Contributions

Logic and Philosophy of Science

*System of Logic, Ratiocinative and Inductive* (1843); *An Examination of Sir William Hamilton’s Philosophy* (1865)

Methodology of Economics

“On the Definition of Political Economy (And on the Method of Investigation Proper to it)” (1836), in *Essays on Some Unsettled Questions of Political Economy* (1844)

Economics

*Principles of Political Economy* (1848)

Moral philosophy

*On Liberty* (1859); *Utilitarianism* (1863)

Political Philosophy and Social Theory

*Considerations on Representative Government* (1861); *The Subjection of Women* (1869)

Others

*Autobiography* (1873)
Intellectual background

- Philosophical Radicalism: Jeremy Bentham (1748-1832), James Mill (1773-1836)
  - Utilitarianism applied to issues of social reforms
  - Liberalism

Individual actions or institutional roles are judged in terms of their effects on human happiness. Good actions and good institutions maximize human happiness.

- Universal scope of utilitarianism: everyone’s happiness matters
- Egalitarian concept: everyone’s happiness matters equally

Philosophical radicalism challenged traditional institutional privileges of class
J.S. Mill transformed the tradition of the radicals, defending a view of utilitarianism “with a human face”

Role played by the education imposed by his father and the psychic crisis he had in his twenties.

He rejected the psychological hedonism and egoism of Bentham and his father.
Mill’s as an economist

- *Principles of Political Economy with some of their Applications to Social Philosophy* (1848)

Textbook in economics between David Ricardo’s *On the Principles of Political Economy and Taxation* (1817) and Alfred Marshall’s *Principles of Economics* (1890)

It represents a synthesis of Ricardo’s economic thought with some important innovations:

- role of demand in determining prices
Mill as philosopher of science

A System of Logic, Ratiocinative and Inductive (1843)

- Emphasis on the importance of induction
- Five canons of induction:
  1. method of agreement;
  2. method of difference;
  3. joint method of agreement and differences;
  4. method of residue;
  5. method of concomitant variation.
On the Definition of Political Economy and the Method of Investigation Proper to It

- written around 1830
- first published in 1836 in the *London and Westminster Review*
- re-published in 1844 in the *Essays on Some Unsettled Questions of Political Economy*

5 essays: (i) on trade, (ii) on consumption vs. production, (iii) on productivity, (iv) on profits and interest, (v) on the definition and method
The question of definition

Some recent definitions*:

Economics is the study of **economies**, at both the level of individuals and of society as a whole (Krugman and Wells, 2004)

Economics is the study of how human beings **coordinate** their wants and desires, given the decision-making mechanism, social customs, and political reality of the society (Colander, 2006)

Economics is the study of how society manages its **scarce** resources (Mankiw 2001)

...social science that studies the **choices** that individuals, businesses, governments, and entire societies make as they cope with scarcity (Bade and Parkin 2002)

...the study of **human behavior**, with a particular focus on human decision making (Gwartney, Stroup, Sobel, MacPherson 2006)

The question of definition

A possible solution:

*Economics is what economists do (Jacob Viner, cit. in K. Boulding 1941)*

- Do we need a definition? The meaning of a concept could be the use we make of it with their "family resemblances" (Wittgenstein 1953)
- But definitions convey what economists see as the right focus of the analysis, its method and attitude.
Most influential definition (neoclassical economics):

*Economics is the science which studies human behaviour as a relationship between ends and scarce means which have alternative uses.* (Lionel Robbins, *Essay on the Nature and Significance of Economic Science*, 1932).

- Focus on optimal allocation of given resources (no reference to the process of production)
Mill’s definition

▷ Classical economics: wealth-based definition

  cfr. Adam Smith’s (1776) Inquiry into the Nature and Causes of the Wealth of Nations

  cfr. Jean-Baptiste Say’s (1803) definition: political economy as “science” that treats “the production, distribution, and consumption of wealth”

▷ Political economy is defined by Mill as

“The science which traces the laws of such of the phenomena of society as arise from the combined operations of mankind for the production of wealth, in so far as those phenomena are not modified by the pursuit of any other object” (Mill 1844: V.39)
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Mill’s definition

➢ **Wealth**

“Wealth is defined all objects useful or agreeable to mankind, except such as can be obtained in indefinite quantity without labour.” (Mill 1844: V.14)

➢ **Science vs. art** (cfr. positive-normative distinction or Hume’s Guillotine)

*Science* and *art* “differ from one another as the understanding differs from the will, or as the indicative mood in grammar differs from the imperative. The one deals in facts, the other in precepts. *Science* is a collection of *truths*; *art*, a body of *rules*, or directions for conduct. The language of science is, *This is*, or, *This is not*; *This does*, or *does not*, happen. The language of art is, *Do this*; *Avoid that*. *Science* takes cognizance of a *phenomenon*, and endeavours to discover its *law*; *art* proposes to itself an *end*, and looks out for *means* to effect it.

*If, therefore, Political Economy be a science, it cannot be a collection of practical rules; though, unless it be altogether a useless science, practical rules must be capable of being founded upon it.*” (V.8-9)
Are there laws in economics?

“Everything which can possibly happen in which man and external things, are jointly concerned, results from the joint operation of a law or \textit{laws of matter}, and a law or \textit{laws of human mind}.” \(^{(V.23)}\)

- The accumulation of wealth depends on some laws, e.g. law of diminishing returns or the “population principles”

- According to Mill, laws are statement of \textit{tendencies} since \textit{disturbing causes} might interfere

- Laws and \textit{causes}

- How do we learn about laws or causal tendencies?
In *A System of Logic* (1843, book VI), Mill argues that his canons of induction cannot be applied to social sciences.

This concept is reiterated in the essay on the definition and method:

There is a property common to almost all the moral sciences, and by which they are distinguished from many of the physical; this is, that *it is seldom in our power to make experiments in them*. In chemistry and natural philosophy, we can not only observe what happens under all the combinations of circumstances which nature brings together, but we may also try an indefinite number of new combinations. This we can seldom do in ethical, and scarcely ever in political science. We cannot try forms of government and systems of national policy on a diminutive scale in our laboratories, shaping our experiments as we think they may most conduce to the advancement of knowledge. We therefore study nature under circumstances of great disadvantage in these sciences; being confined to the limited number of experiments which take place (if we may so speak) of their own accord, without any preparation or management of ours; in circumstances, moreover, of great complexity, and never perfectly known to us; and with the far greater part of the processes concealed from our observation. (Mill 1844: V.51)
The consequence of this unavoidable defect in the materials of the induction is, that we can rarely obtain what Bacon has quaintly, but not unaptly, termed an experimentum crucis. (Mill 1844: V.52)

The impracticality of economic experiments is due to “immense multitude of the influencing circumstances, and our very scanty means of varying the experiments” (V.54)
The practical problem of induction in economics (cfr. Guala 2006)

How to cope with complexity?

When an effect depends upon a concurrence of causes, those causes must be studied one at a time, and their laws separately investigated, if we wish, through the causes, to obtain the power of either predicting or controlling the effect; since the law of the effect is compounded of the laws of all the causes which determine it. (V.38)

Focus on a particular aspect of human behaviour: the desire of improving and maximizing wealth
What is now commonly understood by the term ‘Political Economy’ is not the science of speculative politics, but a branch of that science. It does not treat of the whole of man’s nature as modified by the social state, nor of the whole conduct of man in society. It is concerned with him solely as a being who desires to possess wealth, and who is capable of judging of the comparative efficacy of means for obtaining that end. It predicts only such of the phenomena of the social state as take place in consequence of the pursuit of wealth. It makes entire abstraction of every other human passion or motive; except those which may be regarded as perpetually antagonizing principles to the desire of wealth, namely, aversion to labour, and desire of the present enjoyment of costly indulgences. These it takes, to a certain extent, into its calculations, because these do not merely, like other desires, occasionally conflict with the pursuit of wealth, but accompany it always as a drag, or impediment, and are therefore inseparably mixed up in the consideration of it. Political Economy considers mankind as occupied solely in acquiring and consuming wealth; and aims at showing what is the course of action into which mankind, living in a state of society, would be impelled, if that motive, except in the degree in which it is checked by the two perpetual counter-motives above adverted to, were absolute ruler of all their actions. (V.38)
Ceteris paribus

- Pure economic theory studies economic behaviour under the condition that non-economic motives remain unchanged;

- It omits the disturbing (secondary) causes

Mäki (1998) points out that this latter clause could be called *ceteris absentibus*
How do we know that the desire of acquiring and consuming wealth is a crucial and constant occupation in human behaviour? by introspection:

*The desires of man, and the nature of the conduct to which they prompt him, are within the reach of our observation. We can also observe what are the objects which excite those desires. The materials of this knowledge every one can principally collect within himself; with reasonable consideration of the differences, of which experience discloses to him the existence, between himself and other people* (V.56)
Once we know the first principles of economic phenomena, we can derive the consequences by deduction. This means that in Mill’s view economics is an *a priori* science:

“Since, therefore, it is vain to hope that truth can be arrived at, either in Political Economy or in any other department of the social science, while we look at the facts in the concrete, clothed in all the complexity with which nature has surrounded them, and endeavour to elicit a general law by a process of induction from a comparison of details; there remains no other method than the *a priori* one, or that of abstract speculation.” (V.55)
Mill recognizes a role of the observation but only at the stage of applying the theory to a particular case:

“By the method *a priori* we mean (what has commonly been meant) reasoning from an assumed hypothesis; which is not a practice confined to mathematics, but is of the essence of all science which admits of general reasoning at all. To verify the hypothesis itself *a posteriori*, that is, to examine whether the facts of any actual case are in accordance with it, is no part of the business of science at all, but of the *application* of science.” (V. 45)
"When the principles of Political Economy are to be applied to a particular case, then it is necessary to take into account all the individual circumstances of that case; not only examining to which of the sets of circumstances contemplated by the abstract science the circumstances of the case in question correspond, but likewise what other circumstances may exist in that case, which not being common to it with any large and strongly-marked class of cases, have not fallen under the cognizance of the science. These circumstances have been called disturbing causes." (V. 58)
“Having now shown that the method a priori in Political Economy, and in all the other branches of moral science, is the only certain or scientific mode of investigation, and that the a posteriori method, or that of specific experience, as a means of arriving at truth, is inapplicable to these subjects, we shall be able to show that the latter method is notwithstanding of great value in the moral sciences; namely, not as a means of discovering truth, but of verifying it, and reducing to the lowest point that uncertainty before alluded to as arising from the complexity of every particular case, and from the difficulty (not to say impossibility) of our being assured a priori that we have taken into account all the material circumstances.” (V.62)
“The error, when there is error, does not arise from generalizing too extensively; that is, from including too wide a range of particular cases in a single proposition. Doubtless, a man often asserts of an entire class what is only true of a part of it; but his error generally consists not in making too wide an assertion, but in making the wrong kind of assertion: he predicated an actual result, when he should only have predicted a tendency to that result — a power acting with a certain intensity in that direction. With regard to exceptions; in any tolerably advanced science there is properly no such thing as an exception. What is thought to be an exception to a principle is always some other and distinct principle cutting into the former: some other force which impinges against the first force, and deflects it from its direction. There are not a law and an exception to that law — the law acting in ninety-nine cases, and the exception in one. There are two laws, each possibly acting in the whole hundred cases, and bringing about a common effect by their conjunct operation. If the force which, being the less conspicuous of the two, is called the disturbing force, prevails sufficiently over the other force in some one case, to constitute that case what is commonly called an exception, the same disturbing force probably acts as a modifying cause in many other cases which no one will call exceptions.” (V.75)
Tendency laws in economics are additive as in physics, according to Mill (1843)*:

“The laws of the phenomena of society are, and can be, nothing but the laws of the actions and passions of human beings united together in the social state. Men, however, in a state of society, are still men; their actions and passions are obedient to the laws of individual human nature. Men are not, when brought together, converted into another kind of substance, with different properties; as hydrogen and oxygen are different from water, or as hydrogen, oxygen, carbon, and azote are different from nerves, muscles, and tendons. Human beings in society have no properties but those which are derived from, and may be resolved into, the laws of the nature of individual man. In social phenomena the Composition of Causes is the universal law.”

Conclusions

What is alive and what is dead in Mill’s philosophy of economics?

▷ Up-to-date:

- emphasis on realism and causality
- awareness of complexity of economics
- chemical method (emergent properties)
- multi-variate nature of happiness

▷ To be updated:

- role of empirical evidence and causal inference
- view of experiment
- composition of causes, emphasis on linearity
- homo oeconomicus

▷ Query: which combination of points is part of the “methodology of mainstream economics”? 