
Proseminar/Lektürekurs: John Stuart Mills *System of Logic* und seine Kritiker

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Beschreibung

Von den 6 Büchern, aus denen Mills 1843 erschienenen *System of Logic* besteht, ist keines auf so breites Interesse gestossen wie Buch III zum Thema Induktion. Mill entwickelt darin die Grundlagen einer wissenschaftlichen Methode, die mittels vier einfacher Regeln und unter Voraussetzung einer Hand voll universeller Prinzipien kausale Strukturen und Gesetzmässigkeiten ableitet. Vorläufer dieser vier Schlussregeln stehen spätestens seit Francis Bacon in der wissenschaftstheoretischen Debatte. Doch Mill vereinfacht, radikalisiert und verallgemeinert die Regeln in einer Weise, die zum Teil heftige Reaktionen auslöst. Die Auseinandersetzungen drehen sich um Fragen der grundsätzlichen Reglementierbarkeit wissenschaftlichen Schlussfolgerns, des Verhältnisses von Deduktion und Induktion, der Rechtfertigung induktiver Schlüsse oder der Funktion von Hypothesen beim Aufbau wissenschaftlicher Theorien. Diskussionsteilnehmer sind unter anderen John Herschel, W. Stanley Jevons, Francis H. Bradley und insbesondere William Whewell.

Durch eine Gegenüberstellung mit seinen Kritikern werden wir in dieser Veranstaltung die zentralen Thesen Mills herausarbeiten und seine Methode wissenschaftlichen Schlussfolgerns auf ihre Tauglichkeit prüfen.

Testatvoraussetzungen

Neben Selbstverständlichkeiten wie Präsenz in den Sitzungen und Lektüre der diskutierten Texte wird von den Teilnehmenden die Vorbereitung (inkl. einer kurzen mündlichen Darstellung) eines Thesenpapiers zu einer Sitzung sowie die Abfassung einer schriftlichen Arbeit von ca. 5 bis 10 Seiten Länge zu einem Seminarthema nach Wahl erwartet.

Programm

(Bei umfangreicheren Literaturblöcken stehen jeweils die mit > gekennzeichneten Texte im Zentrum unserer Diskussion.)

Die Texte stehen im Apparat zur Kopie und unter folgender Internetadresse zum Download bereit:

<http://www.philosscience.unibe.ch/lehre/event?id=110>

29.10. Einführung, Mills Logikverständnis

“Logic (...) is the science of the operations of the understanding which are subservient to the estimation of evidence: both the process itself of advancing from known truths to unknown, and all other intellectual operations in so far as auxiliary to this.” (Mill (1973), introduction, §7.)

- Mill, *System of Logic*, introduction, pp. 3-16.

5.11. Induktion vs. Deduktion – der Primat induktiven Schliessens

“(...) all sciences tend to become more and more Deductive, they are not, therefore, the less Inductive; every step in the Deduction is still an Induction. The opposition is not between the terms Deductive and Inductive, but between Deductive and Experimental. A science is experimental, in proportion as every new case, which presents any peculiar features, stands in need of a new set of observations and experiments – a fresh induction.” (Mill (1973), book II, ch. iv, §5.)

- Mill, *System of Logic*, book II, ch. iii-v, pp. 183-251

▷ ch. iii: pp. 183-189, §§4-5, §7; ch. iv: §§1-5, §7; ch. v: §1, §5.

12.11. Jevons Kritik an Mills Argumentation für den Primat der Induktion

“To sum up, there is nothing in logic which [Mill] has not touched, and he has touched nothing without confounding it.” (Jevons (1890), p. 204.)

- Jevons, *John Stuart Mill's Philosophy Tested*, ch. i, pp. 199-221.

19.11. Prinzipien und Regeln der Induktion

“Induction (...) may, then, be summarily defined as Generalization from Experience. It consists in inferring from some individual instances in which a phenomenon is observed to occur, that it occurs in all instances of a certain class; namely, in all which *resemble* the former, in what are regarded as the material circumstances. (Mill (1973), book III, ch. iii, §1.)

- Mill, *System of Logic*, book III, ch. i-iv, pp. 283-322.

26.11. Whewells Kritik an Mills Induktionsverständnis – die Whewell-Mill Debatte

“An induction is not the mere sum of the Facts which are colligated. The Facts are not only brought together, but seen in a new point of view. A new mental Element is superinduced, and a peculiar constitution and discipline of mind are requisite in order to make this Induction.” (Whewell (1858), book II, ch. v, p. 139).

- Whewell, *Novum Organon Renovatum*, book II, ch. iii-v, pp. 122-144, ch. vi, pp. 160-177, book III, ch. v, pp. 210-217.

- Whewell, *Of Induction, with Especial Reference to Mr. J. Stuart Mill's System of Logic*, pp. 265-285.
- ▷ *Novum Organon Renovatum*, book II, ch. iv-v, pp. 129-144; *Of Induction, with Especial Reference to Mr. J. Stuart Mill's System of Logic*, pp. 266-277.

3.12. Das Gesetz der Kausalität

“The Law of Causation, the recognition of which is the main pillar of inductive science, is but the familiar truth, that invariability of succession is found by observation to obtain between every fact in nature and some other fact which has preceded it.” (Mill (1973), book III, ch. v, §2).

- Mill, *System of Logic*, book III, ch. v, §§1-9, pp. 323-348.

10.12. Die vier Methoden experimentellen Schliessens (I)

“If an instance in which the phenomenon under investigation occurs, and an instance in which it does not occur, have every circumstance in common save one, that one occurring only in the former; the circumstance in which alone the two instances differ is the effect, or the cause, or an indispensable part of the cause, of the phenomenon.” (Mill (1973), book III, ch. viii, §2).

- Mill, *System of Logic*, book III, ch. vii-viii, pp. 379-406.
- ▷ ch. vii & ch. viii, §§1-2.

17.12. Die vier Methoden experimentellen Schliessens (II)

“Whatever phenomenon varies in any manner whenever another phenomenon varies in some particular manner, is either a cause or an effect of that phenomenon, or is connected with it through some fact of causation.” (Mill (1973), book III, ch. viii, §6).

- Mill, *System of Logic*, book III, ch. vii-viii, pp. 379-406.
- ▷ ch. viii, §§3-7.

14.1. Die Kritiker von Mills Methodologie

“These methods are the only means of proving the connection of cause and effect, yet the methods depend for their validity upon our assurance of the certainty and universality of that connection, that is, upon the universal law of causation.” (Jevons (1890), p. 252.)

- Jevons, *John Stuart Mill's Philosophy Tested*, ch. iii, pp. 250-267; ch. v, pp. 295-299.
- Bradley, *The Principles of Logic*, book, II, ch. iii, pp. 355-369.
- Whewell, *Of Induction, with Especial Reference to Mr. J. Stuart Mill's System of Logic*, pp. 285-291.
- ▷ Jevons, Bradley

21.1. (Kausal-)Erklärungen

“The deductive operation by which we derive the law of an effect from the laws of the causes, the concurrence of which gives rise to it, may be undertaken either for the purpose of discovering the law, or of explaining a law already discovered.” (Mill (1973), book III, ch. xii, §1).

- Mill, *System of Logic*, book III, ch. xii-xiii, pp. 464-483.

28.1. Der Streit um die Funktion von Hypothesen

“An hypothesis is any supposition which we make (either without actual evidence, or on evidence avowedly insufficient) in order to endeavour to deduce from it conclusions in accordance with facts which are known to be real; under the idea that if the conclusions to which the hypothesis leads are known truths, the hypothesis itself either must be, or at least is likely to be, true.” (Mill (1973), book III, ch. xiv, §4).

“Hypotheses have so often been prejudicial to the genuine pursuit of truth, that they have fallen into a kind of obloquy; and have been considered as dangerous temptations and fallacious guides.” (Whewell (1858), book II, ch. v, p. 148).

- Mill, *System of Logic*, book III, ch. xiv, §§4-7, pp. 490-508.
- Whewell, *Novum Organon Renovatum*, book II, ch. v, pp. 144-160.

4.2. Abschlussdiskussion

Literatur

- Bradley, Francis Herbert: *The Principles of Logic*, Band I, London: Oxford University Press 1922 (1883).
- Jevons, W. Stanley: John Stuart Mill's Philosophy Tested, in: Adamson, Robert (Hrsg.): *Pure Logic and Other Minor Works*, Macmillan 1890, 198–299.
- Mill, John Stuart; Robson, J. M. (Hrsg.): *A System of Logic. Ratiocinative and Inductive*, Toronto: University of Toronto Press 1973, Collected Works of John Stuart Mill.
- Whewell, William: *Novum Organon Renovatum*, London: Parker and Son 1858, Bd. II der 3. Ausgabe von *The Philosophy of the Inductive Sciences*.
- Whewell, William: Of Induction, with Especial Reference to Mr. J. Stuart Mill's System of Logic, in: Butts, Robert E. (Hrsg.): *Theory of Scientific Method*, Indianapolis: Hackett 1989 (1848), 265–308.