

***A Genealogy of Scientific
Morality***

Virtues of Scientific Epistemology

Virtues of Scientific Epistemology

- 'the scientific stance is moralized, that is, the power to observe accurately becomes a moral as well as an epistemological virtue' (George Levine, *Dying to Know*)

Virtues of Scientific Epistemology

- ‘the scientific stance is moralized, that is, the power to observe accurately becomes a moral as well as an epistemological virtue’ (George Levine, *Dying to Know*)
- ‘In the 18th century, scientists were revered as paragons of the virtue of disinterestedness, both in the immediate sense of forsaking the motives of selfish gain and in the more remote sense of remaining serene in the face of public apathy and contempt’ (Lorraine Daston, “Objectivity and the Escape from Perspective”)

Virtues of Scientific Epistemology

- ‘the scientific stance is moralized, that is, the power to observe accurately becomes a moral as well as an epistemological virtue’ (George Levine, *Dying to Know*)
- ‘In the 18th century, scientists were revered as paragons of the virtue of disinterestedness, both in the immediate sense of forsaking the motives of selfish gain and in the more remote sense of remaining serene in the face of public apathy and contempt’ (Lorraine Daston, “Objectivity and the Escape from Perspective”)
- ‘the literary display of a certain sort of morality was a technique in the making of matters of fact. A man whose narratives could be credited as mirrors of reality was a *modest* man; his reports ought to make that visible’ (Simon Shapin & Steven Schaffer, *The Leviathan and the Air Pump*)

Scientific ideology conceals...

Scientific ideology conceals...

- The dynamic and transitory nature of scientific activity

Scientific ideology conceals...

- The dynamic and transitory nature of scientific activity
- The nature and character of historical figures

Nietzsche – Slave Morality

Nietzsche – Slave Morality

- *Ressentiment* – strategy of establishing an alternative morality of inverted values to gain power/authority

Nietzsche – Slave Morality

- *Ressentiment* – strategy of establishing an alternative morality of inverted values to gain power/authority
- ‘Slave morality says ‘no’ on principle to everything that is ‘outside’, ‘other’, ‘non-self’: and this ‘no’ is a creative deed. This reversal of the evaluating glance – this essential orientation to the outside instead of back onto itself – is a feature of resentment: in order to come about, slave morality first has to have an opposing, external world, it needs, physiologically speaking, external stimuli in order to act at all – its action is basically a reaction’ (Nietzsche, *Genealogy of Morality*)

***Nietzsche and the History and
Sociology of Science***

Nietzsche and the History and Sociology of Science

- Ascribing social explanations to epistemological or moral principles/foundations

Nietzsche and the History and Sociology of Science

- Ascribing social explanations to epistemological or moral principles/foundations
- Understanding cultural change to be inherently agonistic

Scientist and the Craftsman

- The Zilsel Thesis

Scientist and the Craftsman

- The Zilsel Thesis
- ***The Representational Idiom*** – scientific knowledge consists of objects, such as models or theories which can stand in a representational relation to the world

Scientist and the Craftsman

- The Zilsel Thesis
- ***The Representational Idiom*** – scientific knowledge consists of objects, such as models or theories which can stand in a representational relation to the world
- ***The Performative idiom*** – Because scientific activity consists of operations aiming to bring about possible states of the world, scientific knowledge consists of skills rather than propositional content.

The Unity of Art and Science

- Bacon - For like as man's disposition is never well known till he be crossed, nor Proteus ever changed shapes until he was straightened and held fast; so too the passages and variations of nature cannot appear so fully in the liberty of nature *as in the trials and vexations of art* (*The Advancement of Learning*)

The Unity of Art and Science

- Bacon - For like as man's disposition is never well known till he be crossed, nor Proteus ever changed shapes until he was straightened and held fast; so too the passages and variations of nature cannot appear so fully in the liberty of nature *as in the trials and vexations of art* (*The Advancement of Learning*)
- Boyle - 'And why should we willfully exclude those productions of the fire, wherein the chemist is but a servant to nature, from the number of natural bodies? And indeed, since there is no certain diagnostic agreed upon, whereby to discriminate natural and factitious bodies and constitute the species of both, I see not why we may not draw arguments from the qualities and operations of several of those that are called factitious...' (*The Origins of Forms and Qualities According to the Corpuscular Hypothesis*)

Collaboration or Division?

Collaboration or Division?

- Galileo - 'We know that the Fleming who was first to invent the telescope was a simple maker of ordinary spectacles who, casually handling lenses of various sorts, happened to look through two at once, one convex and the other concave, and placed at different distances from the eye. In this way he observed the resulting effect and thus discovered the instrument. But I, incited by the news mentioned above, discovered the same thing by means of reasoning'

Collaboration or Division?

- Galileo - 'We know that the Fleming who was first to invent the telescope was a simple maker of ordinary spectacles who, casually handling lenses of various sorts, happened to look through two at once, one convex and the other concave, and placed at different distances from the eye. In this way he observed the resulting effect and thus discovered the instrument. But I, incited by the news mentioned above, discovered the same thing by means of reasoning'
- Bacon – 'If many useful discoveries have been made by some chance or through some favorable circumstance, by men who were not looking for them and were engaged on some other matter, then no one can doubt that much more would be discovered by men who were actively engaged in looking for them, and doing so in a methodical, not an impulsive or desultory way'

Conditions of Production

Conditions of Production

- Indexicality - capacity of crafted objects to reflect the conditions of their production

Conditions of Production

- Indexicality
- '(The) Christian humility which we saw expressed in the first character of Gothic work (is) its rudeness. For as that resulted from a humility which confessed the imperfection of the *workman*, so this naturalist portraiture is rendered more faithful by the humility which confesses the imperfection of the *subject*. The Greek sculptor could neither bear to confess his own feebleness, nor to tell the faults of the forms that he portrayed. But the Christian workman, believing that all is finally to work together for good, freely confesses both and neither seeks to disguise his own roughness of work, nor his subjects roughness of make' (John Ruskin, *The Stones of Venice*)

Metis

Metis

- Skill, experience, subtle wit and quick judgment

Metis

- Skill, experience, subtle wit and quick judgment
- Applies to shifting and ambiguous situations

Metis

- Skill, experience, subtle wit and quick judgment
- Applies to shifting and ambiguous situations
- ***Not*** rule or method based

Metis

- Skill, experience, subtle wit and quick judgment
- Applies to shifting and ambiguous situations
- **Not** rule or method based
- Goal directed – aiming for a standard of excellence (*arête*)

Artisanal Virtues

- Active, creative (employs personal judgment)

Artisanal Virtues

- Active, creative (employs personal judgment)
- Seeking to create artifacts that reflects the activity of the maker

Artisanal Virtues

- Active, creative (employs personal judgment)
- Seeking to create artifacts that reflects the activity of the maker
- Interested agency

Rules and Method

Rules and Method

- ‘where people exercise power by divine right or personal charisma, they will rarely allow their judgment to be supplanted by standardized, objective calculations. Objectivity empowers weak authorities, even as it constrains them’ (Theodore Porter, *Trust in Numbers*)

Rules and Method

- ‘where people exercise power by divine right or personal charisma, they will rarely allow their judgment to be supplanted by standardized, objective calculations. Objectivity empowers weak authorities, even as it constrains them’ (Theodore Porter, *Trust in Numbers*)
- ‘In some ways the observance of rules and the using of criteria resemble the employment of spectacles. We look through them but not at them. And as a person that looks much at his spectacles betrays that he has difficulties in looking through them, so people who appeal much to principles show that they do not know how to act’ (Gilbert Ryle, *Knowing How and Knowing That*)

Disinterested Agency

- Collaboration

Disinterested Agency

- Collaboration
- ‘the true and legitimate goal of the sciences is to endow human life with new discoveries and resources...but in most cases men are so far from setting themselves to augment the sum of sciences and skills that they neither take nor seek more from the sum available than what they can turn to professional use, profit, reputation or similar advantage’ (Bacon, *Novum Organum*)

Limiting the Activity of the Subject

Limiting the Activity of the Subject

- Rules, regulations, method

Limiting the Activity of the Subject

- Rules, regulations, method
- Quantification, measurement

Limiting the Activity of the Subject

- Rules, regulations, method
- Quantification, measurement
- Emphasis on collaboration

Limiting the Activity of the Subject

- Rules, regulations, method
- Quantification, measurement
- Emphasis on collaboration
- Technology – scientific instruments

Limiting the Activity of the Subject

- Rules, regulations, method
- Quantification, measurement
- Emphasis on collaboration
- Technology – scientific instruments
- Literary technology

Self Abnegation

Self Abnegation

- ‘perspicuity ought to be esteem’d at least one of the best qualifications of a style, and to affect needless rhetorical ornaments in setting down an experiment, or explicating something abstruse in nature were little less improper than it were...to paint the eyeglasses of a telescope, whose clearness is their commendation, and in which even the most delightful colours cannot so much please the eye as they would hinder the sight’ (Robert Boyle)

Self Abnegation

- ‘perspicuity ought to be esteem’d at least one of the best qualifications of a style, and to affect needless rhetorical ornaments in setting down an experiment, or explicating something abstruse in nature were little less improper than it were...to paint the eyeglasses of a telescope, whose clearness is their commendation, and in which even the most delightful colours cannot so much please the eye as they would hinder the sight’ (Robert Boyle)
- ‘Is it not selflessness when the historical man lets himself be emptied until he is no more than an objective sheet of plate glass? Is it not magnanimity when, by worshipping in every force the force itself, one renounces all force of one’s own in heaven and upon earth?’ (Nietzsche, *On the Uses and Disadvantages of History for Life*)

Openness

Openness

- ‘even if the stability of the heavens and the motion of the earth be more than certain in the minds of the wise, it would still be necessary to assert the contrary for the preservation of belief among the all too numerous vulgar’ (Galileo)

Openness

- ‘even if the stability of the heavens and the motion of the earth be more than certain in the minds of the wise, it would still be necessary to assert the contrary for the preservation of belief among the all too numerous vulgar’ (Galileo)
- Esotericism associated with greed, cheating

Value Inversion

Scientist

Conceals self in work

Method

Passive

Openness

Craftsman

Promotes self in work

Metis

Active

Secrecy