

THE SCIENCE OF ETHICS: I. THE SINGLE CASE*

William Stephenson
University of Missouri

ABSTRACT: *Conscience and self are at issue in ethics and moral judgments, and Q methodology provides their scientific basis in the single case. A study demonstrates the inherent form of the subjectivity at issue, as determined by feelings (professionalism, concern, blame), each corroborated by laws established by a body of knowledge, and each with truth-value as indicated by impersonality and acknowledgement of self as independent of itself (complimentarity).*

The aim of ethics is to render scientific--i.e., true, and as far as possible systematic--the apparent cognitions that most men have of the rightness or reasonableness of conduct,

Author's address: 2111 Rock Quarry Road, Columbia, MO 65201.

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whether the conduct be considered as right in itself, or as the means to some end conceived as ultimately reasonable. (Henry Sidgwick, *The Methods of Ethics*, 1874/1962)

Introduction

Ethics, for the *Oxford Concise Dictionary*, means a (or the) science of morals. Morals, the same dictionary tells us, pertain to the distinction between "right and wrong, or good and evil, in relation to actions, volitions, or character."

We learn from history that the morals of men are governed more by their actions than by their thoughts. As Darwin put it, if men lived bee-hive existences, our unmarried females would, like the worker-bees, think it a sacred duty to kill their brothers, and mothers would strive to kill their fertile daughters--and no one would think the worse of it. The end of absolutism in morals is so foretold: the modern thought is that morals have no independent legitimacy, but are the result of social forces. Morality in one culture may be immorality in another.

This we may grant. Yet it is still possible to have a science of ethics. This is because there is a science for all *subjectivity* (Stephenson, 1980a), and insofar as ethics and moralities are subjective, they must have roots in that science. The moralities of a culture may be quite in error, looked at as science.

Background

It would be my advice, for anyone interested in ethics, to use Stephen Toulmin's *An Examination of the Place of Reason in Ethics* (1950/1970) as source. First published in 1950, this brief work went through several editions up to 1970, the copy I used. With Q as background, one would see how sharply Q short-circuits much of Toulmin's reasoning and philosophy, while being in fundamental agreement with some of his conclusions.

Toulmin distinguishes, for his purposes, between "objective," "subjective," and "imperative" ap-

proaches to ethics. What is missing is self-reference, and any cogent reference to conscience.

Consider the "objective" approach he outlines: it assumes that moral or ethical qualities are *properties*--as redness is a fact of nature, so goodness is a property of life; admittedly, however, a "non-natural" property. Toulmin quotes G.E. Moore's *Principia Ethica*:

...goodness is not just like other directly perceived properties.

Of course it isn't, but it is a directly-perceived property nonetheless, a special kind of property, a *non-natural* one. (Toulmin, 1970: 22)

After many arguments and much reasoning by Toulmin, the "objective" philosopher is made to say that "any argument which shows the truth of fully-fledged ethical judgments is independent of the speaker (they are *objective* in other words) tends to confirm my theory," that is, his theory of the generality of ethical judgments. The same reasoning for *truth-value* is used in Q methodology.

Consider, also, Toulmin's account of the "subjective" approach: according to this, anything we say is "good" is a report of *feelings* we have (or that members of our social group also have). The "good," final analysis indicates, is what "all reasonable and fully-informed men will approve"--and since "approval" is subjective, this is testimony to the subjective nature of ethical concepts, as expressions of our feelings. Again, in Q, subjectivity is rooted in feeling, but with self reference, which, we must suppose, is hidden behind "reasonable and fully-informed."

And, again, for the "imperative" approach: in calling something "good," we are merely displaying our feelings towards it--we ejaculate, "good!", "Ah!", "I am pleased!", "Hurray!". Ethical judgments, the philosopher says, are merely ethical utterances which evince our feelings, though admittedly these have been shaped by our dealings with our fellow man. That is, they have *rhetorical* force, but this is not the same as the *value* aspect of ethical judgment such as the "subjective" approach

depends upon. In Q, the concern is with "psychological events," concretely with "behavioral segments": faced with the question, Why oughtn't I to have two wives? (the Muslim can have four), the concern would not be merely with "Gee! You don't say!" or "Don't talk nonsense!" or "Of course you can if you want to be a bigamist!". It would be with, say, three different persons in our culture--one bewildered, another angry, another practical--and for each there would be a related concourse, in terms of which a determination could be made of any truth-value in the factor structures culled from Q sorts each could perform. In short, as Toulmin had to admit, his is a superficial look at psychological complexities: Q can probe where he can merely state the problem.

We shall return to these three "theories" in a moment. Meanwhile, about science, Toulmin maintains that no amount of thinking on our part will alter what is "outside" as a scientific observation; that is not the case, he reminds us, about moral judgments, since these are open to change in feelings and conduct. This is not arguable in Q: but it is conditional upon self-reference, one science independent of it, the other crucial with respect to it. And that is not to conclude that the one is science, the other not: both, we have seen repeatedly, fall into the common domain of communicability. Scientists, and moralists, are communicating something in both.

With regard to development, it can be agreed that ethics begins with "doing the done thing." In primitive cultures there are rigid duties, taboos, customs, commandments, obligations. In our culture we expect our neighbors, and ourselves, to be "responsible beings": and this is with respect to a developing moral code--from the conventional acceptance of duties and civil rules (drive on the right side of the road in the U.S.A.), to keeping promises, and more compelling, to "prevent avoidable suffering anywhere."

But what is compelling? Any President of the U.S. would undoubtedly try to save a child from harm in the Presidential kitchen: but the prevention of avoidable suffering in the political and geopolitical domain is surely illusory. Distance, in ethics, doesn't make the heart grow fonder.

Which raises the question of the *rightness* of any social practice. Toulmin's conclusion was that the three approaches to ethical judgment, the "objective," "subjective," and "imperative," serve different purposes, hidden behind the cogitations of the philosophers defending these. They are "disguised comparisons," helpful in thinking about the parts played by ethics in our cultures and in our lives. None reaches the "real truth"; but they serve to relax a demand for it, for the "literal truth." It is better to understand that each approach, in its own way and time, serves the main purpose of ethics, namely, in Toulmin's words, to provide the "harmonious satisfaction of desires and interests" in a culture. This, he added, usually agrees with accepted maxims of conduct; and what is sowed, essentially, is "happiness." But, Toulmin continues, we should allow for changing conditions in the direction of "what *could* be," not "what ought to be" (Toulmin, 1970: 223). Thus, in his final statement, his own permissive, non-authoritarian values are vouchsafed. But where is the literal truth?

The "objective" approach was appropriately promoted by Jeremy Bentham to attack a century-old dominance of archaic laws in Britain: this was probably right in its own right, and not dependent upon the ethics of the "greatest happiness" principle. But utilitarianism and "the greatest happiness for the greatest number of people" served an important socializing function. So, likewise, my own emphasis on subjectivity as such is undoubtedly related to my feeling that our culture is headed disastrously toward its possible destruction by nuclear warfare--one wants to support a possible subjective science for a significant purpose, to offset centuries of science without self reference.

So much can be admitted. Yet it remains that there is most certainly a solution to Toulmin's queries for the "literal truth."

Toulmin's is a resort to "limiting questions." We ought to do what is right. But why? He can only say that, as a limiting question, there is no possibility of an answer--it helps us to accept the world, just as answers to scientific questions help us to understand it. The need for reassurance remains, and

merely to ask "why?" is a way of giving reassurance. So Toulmin concludes.

Q finds this unacceptable. There is literal truth in objectivity, and literal truth-value in subjectivity, both alike in their logic.

So in matters of faith, of the sacredness of white elephants in Cambodia and of miracles in the Christian religion, for Toulmin the beginning is with such notions (his term). We do not ask whether white elephants are sacred, or whether God exists--these are given by faith, and it is for us to find evidence of the sacredness and existence. The notions are theoretical, spiritual. In Q they are subjective, and for all such there are concourses, and for all such there is the theory of communicability and its methodology. Which serves exactly what Toulmin specified, that is, a method is provided by means of which the sacredness and existence can be investigated, to determine truth-value. Note, however, that in Q the focus is upon "the single case": any truth-value is an individual's. How far it may be of general significance is a matter for discovery.

Choice of a Problem

Clearly, we can continue in the direction begun by Toulmin's *An Examination of the Place of Reason in Ethics*. That reason enters is of course acceptable; but conscience and much else is overlooked in Toulmin's search for good reasoning. He puts moral reasoning in place of "feelings," "attitudes," "psychological states," or "dispositions" of a person as central in moral judgment; which is to put logic where conscience is.

The example Toulmin used is whether a book, loaned by Jones, ought to be returned to him. The borrower says, "I feel I ought to." Asked why, he says, "Because I promised to do so." Pressed further, he contends that "I ought to do whatever I promised to do." Again pressed as to why the "ought," and the reply is "Because it was a promise." Toulmin concludes that one can go no further for a general reason.

But if the borrower had to attend to his grandmother, and couldn't return the book without possible harm to her, conflict arises; and Toulmin

proposes that the borrower can only judge what to do in terms of "estimated consequences." If grandmother might die, of course you don't return the book. But if she is notoriously pettyfogging, you return the book and take the consequences afterwards from an irate grandmother.

In all such cases, what is centrally at issue, one has to contend, is a matter of conscience. The book-borrower had perhaps promised fervently to return the book within a week, and already that was a month ago: it would have presented no real problem without conscience being at issue.

We are to take the position that conscience is at issue in moral judgment. By conscience we shall mean that people who share it about an incident meriting moral judgment, are holding something *secret* amongst them, that they may talk about amongst themselves, but not, without being ashamed, guilty, or afraid, to others not in the secret. And it may be only *one* person, who knows he has done something wrong, who talks to himself, within himself, under those same conditions.

Thus, a surgeon may be involved in an accident in which, with a nurse in attendance, a patient falls from an operating table: did he in some unethical manner contribute to the accident? If this situation could be represented in terms of what is being "shared"--in this case within himself--it should be possible to formulate the science at issue, even from a minor incident of a surgeon's possible dalliance with a nurse, so contributing to an accident.

Basis for a Science of Ethics

To say that a patient, attended by a surgeon and nurse, falls off an operating table is a matter of *information*, a statement of fact (or not). Modern science is conducted with statements of such information, free from the "whims and wishes" of scientists, in Karl Popper's (1959) language.

It is possible to treat the incident in purely informational terms, as in modern behavioral psychology--"it shows the world," as William James (1891:674) would say, "in a clear frosty light, from which all fulgenous mists of affection, all swamp-lights of sentimentality, are absent." Our basic

concern in Q methodology (Stephenson, 1953/1975, 1977, 1979; Brown & Brenner, 1972), however, is precisely with these "vapors and mists"--with the everyday conversations people have about such incidents, with whatever prejudice, sentiment, innuendo, or opinion the individuals can conjure with: for this is the substance from which moralities and ethics form.

Thus, our science begins with the empirical fact that about any event, such as the surgeon-nurse incident, infinite numbers of opinionated statements are possible. Thus, by merely listening to people who became aware of the above incident, statements such as the following are immediately communicable in our culture:

- It probably didn't do much harm.
- It brings the medical profession into disrepute.
- The patient should sue for damages.
- Nothing under the sun is ever purely accidental.
- The patient perhaps enjoyed it--a change of routine.
- You can't blame the surgeon, who can only undertake to be competent, reasonable, and fair.
- The nurse was devoted to her work.
- ...and so on, *ad infinitum*.

On this basis, of concurrence, it is possible to probe into the surgeon's conscience (or lack of it). A Q sample is constructed and Q methodology is applied.

Prototypical Example

Table 1 gives data for a surgeon, in the situation above-noted, who has performed nine Q sorts (1-9), for the different conditions of instruction 1 to 9. The Q sorts are factor analyzed, using a computer program, resulting in three operant factors (A, B, C) with the structure in the table.

So that one will not be charged with unethical conduct, I have to say that the experiment is a simulation: I performed the Q sorts myself, by putting

Table 1
OPERANT FACTOR STRUCTURE
FOR A SURGEON'S Q SORTS

Q Sort Condition of Instruction	Factors		
	A	B	C
1. The incident as felt	X		
2. As felt by the nurse	X		
3. As felt by the patient			X
4. As felt by the public			X
5. If one had looked at an attractive nurse		X	
6. As one's own professional peers ought <i>not</i> to feel	-X		
7. The ideal feeling, if nothing had happened	X		
8. What a highly moral person would feel	X		
9. Myself (surgeon) as such	X		

X=significant factor loading, all other values insignificant

myself in the shoes, so to speak, of a surgeon in this predicament. The example, therefore, is expository only: a real life example will be provided in the sequel. It is important to note, however, that once the Q sorts are performed, the computer takes over, and the factor structures and factors are as tangible and as concrete as any provided in real situations.

The supposition is that in the above incident the nurse had mistaken the patient's seizure for obstreperousness, a mistake which the surgeon felt was not reprehensible, so that in his view, nothing unethical was at issue.

Readers unfamiliar with Q methodology and factor theory can be forgiven for bewilderment at this point: it is sufficient, however, to recognize that a method exists which uses one person's self reflections, each represented as a Q sort, which factor analysis reduces to operant factor structure. (Thus,

though this is a simulation, the factors are real; they are natural phenomena, issuing as inherent *form*, outside the experimenter's or Q sorter's control.) They are the fundamental form of subjectivity, like an X-ray plate. It happens that factor theory has the same mathematical foundations as quantum theory in nuclear physics, serving parallel purposes, the one to reach into the basic form of subjectivity, the other the basic form of atoms, as we shall indicate in the sequel. The inference must be that fundamental matters are at issue, in our case, with the *form* taken by a Q sorter's feelings.

Thus, from Table 1 we know that three distinctly different (uncorrelated) feelings are involved--A, B, and C, respectively.

The nurse, the patient, and anyone else privy to the incident could provide their own self reflections, and for each case the outcome would be factor structure (usually three or four factors).

Feelings at Issue

The theory is that feelings determine the *form* of Q sorts and of factors. Each factor is a theoretical Q sort, consisting of the same 50 statements (in this example).

Each factor is calculated from Q sorts defining it. Thus, factor C is calculated from Q sorts 3 and 4; factor B from Q sort 5; and factor A from Q sorts 1, 2, 6 (-ve), 7, 8, and 9. In effect, the original nine Q sorts have been reduced to three uncorrelated Q sorts, and we can therefore assume that three distinctly different feelings are at issue.

When the theoretical Q sorts are laid out before one, they are usually acknowledged by the Q sorters as self referent, such as he/she might have provided. The experimenter (often with the Q sorter's help) has the task of inferring from these Q sorts what feelings are at issue, running through a factor from one end of it to the other, i.e., from statements gaining +5 to those gaining -5.

Thus, the theoretical Q sort for factor C is an array of the 50 statements of the Q sample, laid out as a Q sort. It is sufficient for our present purpose to list only a few statements, from the extremes of the Q sorts, as in the following example for factor

C (for comparative purposes, the scores on factors A and B have also been listed):

Statements	Scores		
	C	A	B
The patient should sue for damages.	5	-5	-3
It was unfortunate for everyone at the hospital.	5	-2	4
It happens every day and nobody is held responsible.	4	-5	-4
The patient is helpless and scarcely expected this to happen.	4	2	3
Medical care is the main purpose of the hospital and this wouldn't do the hospital much good.	4	-2	2
...and so on, down to statements at the other end of the factor, scoring -5:			
The patient probably enjoyed it--a change of routine.	-5	0	-1
The nurse was being too conscientious.	-5	-1	-4

It is fairly apparent that the feeling is one of *blame*: it runs through all 50 statements, down to the statements gaining -5. The patient should sue; it was unfortunate; it happens every day and no one is held responsible; it wouldn't do the hospital much good...and so on, and at the negative end of the factor, of course the patient *wouldn't* have enjoyed it; *nor* was the nurse being too conscientious. It is worth noting that the blame seems to be thrown at the hospital, not at the surgeon and nurse.

Factor B takes quite a different form, as follows:

Statements	B	A	C
The surgeon was to blame, no matter what, since he's in charge.	5	0	2
Nothing under the sun is ever fully accidental.	5	2	1
It is just part of the daily routine-- Something is always happening that doesn't really matter very much.	4	2	-2
A good surgeon can only undertake to be competent, reasonable, and fair.	4	5	0
It was unfortunate for everyone at the hospital.	4	-2	5

...and so on, down to statements at the other end of the array:

The patient was struggling and over-powered the doctor and nurse.	-5	-2	-4
It was faulty equipment.	-5	1	-1

This is what the surgeon would have felt, he is saying, if he had indeed dallied with the nurse: he would be to blame. But the emphasis remains on the incident as such--not in any way on the nurse. There were plenty of statements in the Q sample concerning the nurse, ready for the surgeon's use; but they were downplayed, as in the following data from the factor:

Statements	A	B	C
Physicians and nurses should know their places--intimacy is not in place.	0	3	0
The surgeon may have had an eagle's eye, and a lion's heart, but he	0	1	1

certainly had a lady's hand.

Nurses dress very smartly in uniform -2 2 2
and make the most of their good
looks: probably that's what is at
the root of the matter.

It's a marriage market, say what -1 1 3
you will.

In describing what he might have felt if he had indeed dallied with the nurse, so contributing to the accident, it would seem reasonable to expect those statements to be more salient on factor B. Note, indeed, that the four statements are all positive in saliency for B; the point to be made is that the surgeon gives much higher saliency to institutional matters in his array for factor B--that it wouldn't do the hospital much good, it would be unfortunate, etc.

Thus, the factor seems defended, as if the surgeon couldn't, and certainly didn't, address his Q sort to what dallying would have involved. The accident is down-played, and nothing specific is held to account for it; there is no strong feeling about what dallying could have meant.

We face the familiar psychoanalytic quandary: was this because the surgeon was defending himself; or was it because dallying doesn't enter strongly into his concerns?

The underlying feeling at issue, therefore, is one of *concern*, but with some doubt as to whether it is a responsible concern, or a defensive measure.

As for factor A, the array has the following form:

Statements	A	B	C
A good surgeon can only undertake to be competent, reasonable, and fair.	5	4	0
The nurse loved what she was doing.	5	3	-1
It wasn't a serious operation.	4	2	-3
It can happen to the best surgeon in	4	0	-1

the world.

Nurses are professional, and I doubt whether this one was negligent. 4 3 -2

...and then on to the other end:

It happens every day and nobody is held responsible. -5 -4 4

The patient should sue for damages. -5 -3 5

The theme is of professional conduct, of self satisfaction that comes from complacency, reasonableness and fair-dealing. It appears realistic--it could happen to the best surgeon in the world.

However, why has top saliency (+5) been given to a defense of the nurse (that she loved her work)? And why stress that it wasn't a serious operation? Why give such high saliency to the excuse that it could have happened to the best surgeon in the world? There are many statements in the Q sample which could have indicated a more realistic account of what happened--for example, the following:

Statements	A	B	C
It beggars description how such a thing could happen: but it is an emotional situation, and breakdowns occur.	2	-1	1
It was laughable--a comedy of sorts.	0	2	-2
It was just one of those things--we were concentrating on equipment when the patient panicked.	3	-1	-3
There are too many medicines, machines and treatments nowadays: probably the trouble lay in the complexity of things to be done during what was preparation for a minor operation.	1	-3	0

Note that these statements gain positive saliency on the factor (A).

Again there is the psychoanalytic two-edged sword: either we are to infer that the surgeon was indeed highly professional and ethical, or we are to doubt this and to infer that he was being defensive about the incident.

One hopes that the reader marvels a little at the penetration of the method into the situation, albeit a simulation. A possible "cover-up" is indicated, for each factor. In factor A we can doubt the surgeon's expression of ethical conduct; in B the hospital rather than the surgeon takes the brunt of blame; and the same holds for C, where the hospital, not the surgeon and nurse, are blamed for the accident. In all three there is a possibility of guilt, and of conscience at work.

How, then, can the truth be reached?

Truth-Value

The truth is approached in terms of a "body of knowledge" now available, the result of three decades of various studies in Q methodology. It involves the concepts of *truth-value* and of *self reference* in all matters of conscience.

First, as to truth value: objective science is basically *informational*, and is concerned fundamentally with conditions of change in the real world "outside"--with facts about how water boils, metals melt, and Big Bangs form the universe. About this, Karl Popper (1959) draws sharp distinctions between "truth" and "truth-value" on the one hand and corroboration on the other. Modern objective science is essentially tied to corroboration, by tests repeatable in principle by all scientists. A "body of knowledge" is achieved this way, which, in Popper's words, is...

a system of guesses or anticipations which in principle cannot be justified, but with which we work as long as they stand up to tests, and of which we are never justified in saying that we know they are "true" or more or less "certain" or even "probable." (p. 317)

In short there is no "truth" or "truth-value" in objective science in the sense of the logic of truth and falsehood, e.g., that $2+2=4$, not $=5$. All in science is a matter of corroboration.

We can say the same about Table 1. Anyone, in principle, can repeat such an experiment, for a different incident, and *corroborate the lawfulness at issue*. The conditions of instruction for Q sorts are not fortuitous: they are based on a "body of knowledge" now formulated as *laws* (Stephenson, 1980a). There is, for example, *Taylor's law* (that Q sorts tend to be reliable expressions of self reference); *James' law* (that some factors are "me," others only "mine"); the *law of covert self reference* (that operant factors are covert forms of self reference); *Peirce's law* (that operant factors are schematical with respect to feeling); *Parloff's law* (that action is more likely for "me" factors than "mine"); *Freud's law* (that some factors are defended); *Sullivan's law* (of me-you dynamism); and, not least, *Rogers' law* (of congruency between self-me and ideal-self in adjustment to a situation). This "body of knowledge" has gradually developed during the past several decades, in hundreds of experiments using Q methodology.

The Q sorts of Table 1 were my guesses, as experimenter, that such laws are involved in the situation. Q sort 7 is directed at *Rogers' law*. The Q sorts, however, are not testable hypotheses: instead, they are hypothesis-inductive. Conditions of so-called mind are so complex that only *after* analysis, after the effect, can we determine which laws, if any, were at issue. The methodology, in short, is the opposite of the hypothetico-deductive which is widely current in present-day experimental science. It is comparable, instead, to that of nuclear physics, which is inductive, with probabilities at issue and not singular facts to be corroborated or falsified. The methodology is that of quantum theory: and, as was noted earlier, factor theory (Q) has the same foundations in mathematical-statistical theory as quantum theory in nuclear physics, for parallel reasons of the great complexity of the processes at issue (Burt, 1940; Stephenson, 1982).

The new "body of knowledge," however, is not in the framework of Popper's logic: his concern is

with *information* without self reference; ours is with *communicability*, i.e., with meanings in which self reference is inherent. The term "schemata" in Peirce's law, and "me" and "mine," are psychological matters. Yet the operant factors are themselves objective, i.e., natural phenomena. We need a term for subjective science, therefore, which corresponds to corroboration in objective science, and for this we propose "truth-value," notwithstanding Popper.

Moreover, precisely as in objective science, where the self is rendered nugatory, so in subjective science, truth-value is reached under the same rule, *that self has to acknowledge itself as independent of itself*, i.e., *as outside purely personal considerations*.

How, then, is this achieved?

Self Reference

In objective science the scientist's wishes, opinions, whims, etc. do not enter into his equations and experiments. True, he has to be conscientious, trustworthy and the like, but such dispositions won't make water boil at other than its natural point, or metals melt, or alter in any way the Big Bangs and the other marvels of the world "outside." In subjective science, truth-value is reached under the same rule, that self has to be rendered nugatory; but as self reference is everywhere at issue in subjectivity, *this means that self has to find some way to be independent of itself*.

About such a possibility we are reminded by Polanyi that objective science involves self reference, in spite of the nugatory rule: science operates with an "intuitive grasp of objective unity," comparable to our grasp of common things around us, which we perceive without logic or reason to support the perceptions. The knowledge is "personal" and this, according to Polanyi, has self reference, as (in his words)...

...submission to requirements acknowledged by the self as independent of itself, from what is merely or improperly subjective. (Polanyi, 1966: 104, 107)

The child is not apt to confuse the common things around him, in our culture, with *himself*.

This self reference, however, in child and scientist alike, is "tacit"--only poets are likely to make it vocal! What evidence, indeed, is there for this submission to non-self?

Polanyi thought that the matter would never be formalized, the questions unanswerable. But we now know better, as is made evident in "Polanyi, Science and Belief" (Stephenson, 1980b). The factors in Table 1 are all self referential, produced, unbeknown to anyone, yet recognized subsequently by the Q sorter as self referent. It seems a contradiction in nature, as in physical complementariness, that self reference can be independent of itself. But it is an issue in every Q-methodological experiment, and is formalized as *James' law*, that some factors are "me," others merely "mine." Polanyi's "tacit dimension" can therefore take two distinct forms, one the "me" which is centrally important to the person, and others "mine" only--like a person's clothes. William James (1891), at the conclusion of his "The Consciousness of Self" (Chapter 10), ends on this note of the significance of *me* as distinct from its attachments--the "clothes, material possessions, and even friends, honors and the esteem one may receive from others" (p. 400). The components are very fluid, he added, and "honors may change manners" is a reminder of it--the honor may inflate the *me*, more than is merited by the deed.

Let us see, then, how "truth-value" applies to Table 1, and what its bearings are upon problems of ethics and morality.

Truth-Value in Ethical Elements

To test for truth-value involves these two criteria, that the concern is with matters outside purely personal considerations, and an acknowledgement of self as independent of itself.

We begin by noting that factor A is "me," the others "mine" (*James' law*)--because the self of Q sort 9 is aligned with factor A, and is absent in factors B and C.

We note that factor A has enclosed Q sorts 7 and 8, concerning an ideal feeling and high morality,

suggesting congruency as between self (Q sort 9) and such ideals, and therefore, according to Rogers' law, a state of adjustment in the situation. Note also that there is an admitted congruency about what he (the surgeon) feels about the accident and what he feels the nurse's reaction to it must have been--a pointer in the direction of a *me-you* dynamism (Sullivan's law, except that we need the nurse's account of matters to substantiate it). The factor is also given sanction as professional--Q sort 6 is "on" it, negatively, as it should be because of the way the condition of instruction was couched.

These are strong recognitions of a professional self: but there is no evidence of it as independent of itself--it could still be "improperly subjective," i.e., without truth-value, corresponding to the inference drawn from the factor array, that something might be amiss, and that the surgeon was being defensive about the situation. Defensiveness is likely, according to Freud's law.

We look next at factor B: it is what the surgeon supposes his feelings would have been if indeed he had dallied with the nurse, so contributing to the accident. The self is not attached to it (Q sort 9 is not on factor B), as if to acknowledge this part of himself as independent of "me," the core self. But what are the "purely personal" considerations? It is not beyond reason to expect the experimenter to make discrete inquiries as to the surgeon's reputation for dalliance with nurses, thus to qualify whether, indeed, "purely personal" considerations have governed the factor. If nothing reprehensible is held against the surgeon, who, on the contrary is recognized as highly ethical, then this factor B is crucial for all else--its truth-value is then vouchsafed.

As for factor C: it is the surgeon's projection upon the patient and public of a well-known bias, that many are prejudiced about the medical profession--the patient, and public, are held to believe that the hospital would be to blame for the accident. It is not integral to the surgeon's "me," i.e., an acknowledgement as independent of *him* ("me," factor A). It is his belief, founded perhaps on much experience--outside any purely personal considerations. Thus the factor has truth-value.

The underlying feelings suggest *professionalism* (and ethical conduct), as factor A; *concern* (if dallying occurs), as factor B; and *blame* (from public and patient), factor C. The content suggests truth-value to B and C. Doubts were raised about factor A, as possibly defended--suggesting conscience at issue, as though the surgeon was holding something secret within himself. The key to resolution of our doubts rests on two matters: first, Perlin's law is to the effect that a person's actions are in relation to "me" factors--we would therefore expect the surgeon to act professionally in the future, as he has in the past; and second, discrete inquiry can clinch matters, by asking about his reputation vis-a-vis the opposite sex.

Quod erat demonstrandum: which was to be demonstrated. We have put into a vacuum a set of formal principles, as laws, based on an established "body of knowledge"--which, though far from sufficient, is nevertheless necessary for any scientific approach to ethical problems. We find the surgeon not guilty of unethical conduct.

The concern is not with a new kind of lie detector: it is with ethical science and its penetration into moral conduct and ethical judgment. The key to all else is recognition that the concern is not with ethical principles *in general*, but with ethical or unethical conduct in particular. There is the problem, for example, that professional conduct becomes ethical by common acceptance of its habitual practice: what everyone is expected to do becomes ethical, and departures from it unethical. So heterosexuality in our culture is the norm, and is ethical, whereas homosexuality is not, and is unethical--to a very considerable degree (i.e., as defined in the culture). The problem has been: How can we prove that the one is *in esse* ethical, the other not? The answer lies in our science; but the question is not about homosexuality or heterosexuality *in general*: it is about an *individual's subjectivity*. And for this we can provide answers in terms of our "single case" methodology.

The Problem of Credibility

The difficulty in the case of subjective science is the practical one, of how to make it compelling. Though

Q methodology has gained some credibility, it is as little understood as Einstein's relativity was in its early days: the current mode in scientific method is objective, and refusal to look seriously at subjectivity is an ultimate "shame of science" (Stephenson, 1978b).

One can only proceed by example. The literature on Q is now voluminous, but it is scarcely feasible for scholars, unfamiliar with factor theory, and perhaps suspicious of statistical methods anyhow, to come to grips with our theories. Yet by exemplification, at least the possibilities can be made evident. The underlying principle in Q is that everything reduces to "the single case." Euthanasia is called ethical if it has a patient's consent; an experimental treatment on a patient in a serious condition, with hope in it for the patient, is ethical if it has the patient's consent. The "right to die," by stopping treatment in terminal illness, is increasingly part of the medical *mores* of our culture. And indeed, only when a patient chooses to die is there an action of moral significance. Can man play God in this way? Is it permissible only when the suffering is inescapable? And how far are our refusals to help the dying *our* consciences, not the patient's cry?

All such are soluble questions, in principle, by way of "single case" probes into the situations. Almost any "single case" study will seem like moving from the sublime to the ridiculous: but this we have to accept.

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