NEWS, NOTES & COMMENT

Recent and Forthcoming Scholarship

William Ascher (Inst. of Policy Sciences, Duke U, Durhan NC 27706), "The Moralism of Attitudes Supporting Intergroup Violence," *Political Psychology*, forthcoming. To understand intergroup violence, it is necessary to understand the relationship between violence and the moral principles of those who advocate it. Conceptual reliance is placed on Lasswell's triple-appeal principle (emotional, pragmatic, moralistic) and his social process model: "*Man*, interacting through *culture and personality*, seeks *values* through *institutions*, using *resources*." Respondents in three Q studies include members of a chapter of Northern Irish Aid, the Armenian Students Association, and the Lebanese Students Association. Three separate Q samples, each tailored for the group under study, included statements concerning (1) general principles of justice and violence, (2) specific principles regarding the group's confrontation, and (3) expectations of the motives, strategies and outcomes of the confrontation. Among the conclusions is that support for intergroup violence serves moral as well as psychological needs, that the complexity of the data is due in part to each individual's efforts to maintain a sense of rectitude in a difficult situation, and that group resources must be seen to include beliefs and affects as well as materials.

David M. Goldstein, "Q Methodology, Control System Theory and Psychotherapy," Second Annual Control Theory Conference, Haimowoods WI, August 20-24, 1986. In line with the control system theory assumption that perceptions and interactions are controlled, a single psychotherapy case is presented demonstrating the two dimensions (factors X and Y) in "Angie's" personality which emerge from Q sorts administered under a variety of conditions of instruction: Self, ideal self, mother, father, brother, Dr. G, and co-worker. The factors then provide the basis for discussion with the patient. (David Gold-

stein can be reached at 214 W. Main St., York House East, Suite 102, Moorestown NJ 08057.)

Thomas R. Hensley (Political Science, Kent State U, Kent, OH 44242), Joyce A. Baugh, and Steven R. Brown, "Testing Supreme Court Legitimacy Theory: The 1986 Abortion Case," paper read at a panel of the American Political Science Association, Washington, DC, August 27-81, 1986. *Abstract*: The legitimacy conferring function of the Supreme Court is tested experimentally in a Q-methodological study of public reactions to the 1986 *Thornburgh v. American College of Obstetricians and Gynecologists* case. Viewpoints on Supreme Court legitimacy are obtained from subjects using a Q sort composed of statements drawn from the research literature, and viewpoints concerning abortion are obtained using a Q sort composed of statements drawn primarily from briefs filed in the *Thornburgh* case. The two Q sorts were administered both before and after the June 11 decision, and the extent of change in individual cases is measured in terms of changes in loadings from the factors which emerged. Virtually no significant changes are detected, thereby calling into question the Court's presumed legitimating role.

William E. Hudson (Political Science, Providence College, Providence RI 02918-0001), "Parish Reaction to the Roman Catholic Bishops' Economic Pastoral Letter: A Q-Sort of Rhode Island Priests," American Political Science Association, Washington, DC, August 28-30, 1986. The National Conference of Catholic Bishops is currently working on the third draft of its economic pastoral, *Economic Justice for All: Catholic Social Teaching and the U.S. Economy*, which is critical of excessive unemployment, poverty, inequality, and militarism. Earlier drafts created controversy and prompted a spirited defense of the U.S. economy by the Lay Commission on Catholic Social Teaching, and it is primarily from these two sources that a 36-item Q sample was drawn for administration to 17 priests. Of the five resulting factors, the first (labeled "The Bishops' Constituents") sides with the pastoral's message of social justice and concern for the poor; the viewpoint derives more from a moral stance, however, and is relatively devoid of economic analysis or support for specific economic reforms. The "conservative critics" comprising the second

factor are older and not only disagree with certain aspects of the pastoral, but are also concerned that the Church is improperly playing a political role; this factor also expresses a conservative view of property and of self reliance, rather than government funding, as ways to address the problems of poverty. The third factor accepts an optimistic view of the U.S. economy as a reflection, perhaps, of the affluent parishes to which these priests minister, yet also supports the Bishops' initiatives. The fourth factor stresses the evils of capitalism and sides with the Bishops less for their religious authority than because of the economic implications of their message. The fifth factor is likewise economic, but is based on a commitment to economic rights rather than a criticism of capitalism. Factors I, IV, and V are variants of liberalism, and II and III of conservatism, yet they converge (among other ways) in their belief that capitalism "must bow to the higher principles of stewardship."

Steven R. Brown (Political Science, Kent State U, Kent OH 44242-0001), "The Subjective Side of Enterprise," Association for Public Policy Analysis and Management, Austin, October 30-November 1, 1986. This paper will be given as part of a panel on "Intensive Methods for the Policy Sciences," and will focus on various aspects of organization and decision-making.

Kerlinger's 3rd Edition

Fred N. Kerlinger's *Foundations of Behavioral Research* (Holt, Rinehart and Winston, 1964; 2nd ed., 1973) was the first textbook to devote an entire chapter to Q methodology, and so applause is due the appearance of the third edition (1986), along with a sigh of relief that the Q chapter has survived. (The separate chapter on the semantic differential was deleted from this edition; a chapter on analyzing covariance structures was added.) By the same token, there is nothing really new in this version of the Q chapter to distinguish it from the edition first issued more than 20 years ago: Only two new paragraphs have been added from the second to the third edition, and these appear to be of no special importance; similarly, two paragraphs found in the second edition have been dropped from the third.

There is of course a good deal to admire in Kerlinger's chapter, but there are also a number of arguable assertions, reference to dated literature, and almost no recognition of theoretical and methodological developments which have occurred during the past quarter century. For the sake of reliability, for example, Kerlinger continues to assert that the number of Q statements should probably not be less than 60; he also informs us that Q items are selected because they measure variables such as neuroticism and adjustment, that individuals provide Q sorts in order to test theories built into the statements, that principle interest in Q is ordinarily in the main effects built into the Q sample structure, and so forth. Abduction, theoretical rotation, dependency factor analysis, the centrality of self and subjectivity, Newton's Fifth Rule, quantum-theoretical considerations--all such are missing in this chapter.

Kerlinger's *Foundations* is well known and influential, and has served to widen Q's popularity, and we can appreciate that the author argued with the publisher to keep the Q chapter in originally. Nor would it be fair to insist that he agree with all that Stehenson has claimed for the methodology. However, one can insist that the main ideas at least be understood and clearly stated before being disagreed with, and that myths and erroneous conceptions not be passed on uncritically. As it stands, the chapter, like Nunnally's in *Psychometric Theory*, provides a suitable technical introduction (aside from too great reliance on variance analysis) but is lacking in broader and more subtle methodological understandings.

One Cheer, Two at Most

One would think that a volume with the ostentatious title of *A Century of Psychology as Science* would have something to say about subjectivity, and there are a few scattered references to this term in the index of a volume with this title, edited by Sigmund Koch and David E. Leary (New York: McGraw-Hill, 1985), but most often as a synonym for consciousness or some such. Karl H. Pribram appears to have the proper spirit, in his chapter entitled "Mind and Brain, Psychology and Neuroscience, the Eternal Verities." Noting that Skinner warned against

the use of "subjective terminology," Pribram asserts that what a behavioristic psychology thereby leaves out is "subjective experience, that fascinating topic which brings most students into this field of inquiry" (p. 701). But lacking method--there is not a single reference in this 990 page volume to any of William Stephenson's work--Pribram can only despair, concluding with hope that psychologists in the next century will do better, apparently oblivious of the fact that some in this century already have.

In their review of G.W. Hynd and J.E. Obrzut's edited volume, *Neuropsychological Assessment and the School-Aged Child: Issues and Procedures* (New York: Grune & Stratton, 1981), R.S. Dean and Gurmal Rattan refer to a chapter in which Q factor analysis is used to subtype children's learning disorders, and note that "although Q-factor techniques have been used previously..., it remains controversial. Moreover, the reader may want to examine the nature of this classification approach in light of the various arguments and alternatives..." (p. 209). That Q is still considered controversial is invariably associated with the assumption that it is merely a factor-analytic method which, when viewed from a purely statistical standpoint, produces results which are problematic in comparison with other typing methods (e.g., numerical taxonomy, cluster analysis). That it might be something else is rarely countenanced despite mounting and incontrovertible evidence. Dean and Rattan's review appears in *Professional School Psychology*, 1986, *1*, 209-211.

Detectives, Medical Men, and Discovery

In their chapter, "'You Know My Method': A Juxtaposition of Charles S. Peirce and Sherlock Holmes," Thomas S. Sebeok and Jan Umiker-Sebeok relate a true experience of Peirce's in which a watch was stolen from him. In a series of "guesses," for which he was absolutely lacking in evidence, Peirce identified the culprit and recovered his watch, to the consternation of the Pinkerton agent assigned to the case. Peirce's detection, he later informed William James, was intended as an illustration "of why it is that people so often guess right." Man's capacity to guess has survived evolution because it has enabled him to cope with his environment in the struggle for

existence. The mind is therefore, in some sense, attuned to nature in such a way that one's instincts are more apt to be right than wrong.

Such is the foundation of *abduction*, or *retroduction*, that mode of thinking (in contrast to deduction and induction) that alone is capable of introducing a new idea. In the abductory state of mind, the observer stands passive and receptive, as in reverie, devoid of any desire to explain or theorize, and it is in this receptive state of mind that impressions and observations are allowed entry without being prematurely twisted to fit a preconception. It is this free-floating attentiveness to all details, none prejudged, that is common to both Peirce and Holmes (and Freud), and it is this attitude which is critical as a Q methodologist examines a factor array for its secrets or rotates a factor this way or that for no necessarily expressible reason, i.e., for no reason that can be given at the time.

The Sebeoks' delightful exercise in comparative literature is located in Umberto Eco and Thomas A. Sebeok (Eds.), *The Sign of Three: Dupin, Holmes, Peirce*, Bloomington, Indiana University Press, 1983, and it provides a useful counterpoint to Bruce G. Buchanan's "Steps Toward Mechanizing Discovery." Buchanan wishes to extend discovery to include the activity of finding explanations by systematically excluding hypotheses, the only preconditions being that (1) the space of relevant hypotheses is definable, (2) there exist criteria of rejection and acceptability, and (3) there exist criteria for guiding a systematic search. In other words, Buchanan demands that all plausible explanations, including the correct one, already be in the hopper, the only task remaining being that of systematically tossing out those reasonable candidates less able to account for the phenomenon than that explanation remaining. Buchanan approaches the topic of discovery from the standpoint of medicine and within what he calls "the comfort of an established scientific theory, paradigm, or conceptual scheme [within which] hypothesis formation...does not involve the introduction of new concepts": Given a disease, the researcher rejects one plausible but erroneous hypothesis after another until the correct answer is found. An activity such as this is of course important, and probably compu-

terizable, as Buchanan suggests, but how different is Buchanan's situation from that of, say, Einstein, whose original population of plausible explanations did not include the right one, which therefore had to be invented and dragged in over the objections of common sense. It is on this account, in part, that Carl G. Hempel criticizes Buchanan's conception, noting that "when the search is aimed at comprehensive theories which require the introduction of a new vocabulary and the formulation of theoretical principles in terms of it, then it is not clear how a suitable computer program might be designed."

Buchanan's paper appears in K.F. Schaffner (Ed.), *Logic of Discovery and Diagnosis in Medicine*, Berkeley and Los Angeles, University of California Press, 1985. Hempel's chapter, "Thoughts on the Limitations of Discovery by Computer," appears in the same volume.

A Question for the Times

Charles Stephenson, although not identified as such, is the author of a question recently put to the science editor of *The New York Times*, as follows:

> Q. *Ptolemy erroneously thought that Earth was the center of the universe. Copernicus also erred in believing the Sun was the center. If now, because all other galaxies appear to be flying away from us in a uniform manner, must we conclude that the center lies within our galaxy, which seems statistically unlikely?*
>
> A. Present cosmology does not regard our galaxy as central. It is widely assumed that the universe has no "edge" and is expanding uniformly in all directions, like a gas that expands because of heating. An observer on any particle within such a gas would see all other particles receding in the same manner as is observed for distant galaxies. A particle twice as distant as a nearby one would recede twice as fast. No particle would be central.

The exchange is in the Science Section of the *Times* (April 29, 1986), and the idea was originally contained in Stephenson's paper, "Self-Reliance and

Development," presented at the first Q conference at the University of Missouri, July 19, 1985.

Seeing, Imagining, and Instrumentation

Stars used for decorative purposes, of the kind placed on Christmas trees, are typically constructed with five points which represent an effort to capture the twinkle (irradiation) which, to the naked eye, appears to be part of real stars which shine at night. And it was this empirical fact of shimmering starlight, there for all to see, which led critics to doubt the veracity of Galileo's telescope, the view through which did not include the same irradiating fringe. Which of these versions of reality was true and which illusory? The problem posed to Galileo was to explain why the telescope should be accepted as more trustworthy than the eye, and the Copernican thesis was at stake.

In his "Galileo on the Telescope and the Eye" (*Journal of the History of Ideas*, 1985, *46*, 487-501), Harold I. Brown traces Galileo's efforts to show that the source of this irradiating fringe, those "adventitious and alien rays" that make a star appear larger, is not millions of miles away, but is the result of light refracted in the moisture on the surface of the eyeball. It was the naked eye that was creating illusions, as is evident when squinting or tearing up produce longer or shorter rays. The telescope only magnifies those images which pass through it, not the distorting effects at the eye's end of the device, hence it not only magnifies, but helps correct misleading impressions perpetrated by the imperfections of unaided perception--which was not to deny that the telescope might produce erroneous impressions of its own.

Instrumentation can also at times assist imagination as well as perception. James Gleick, in "Mathematicians Finally Log On" (*New York Times*, August 24, 1986, p. E7), notes that the new computer technology is facilitating the discovery of forms not previously conceived of. It used to be thought, for example, that "inifinite minimal surfaces" came in only three shapes: flat plane, spiral (helicoid), and hourglass (catenoid). But the equations producing the surfaces can be experimentally manipulated by computers, the result being the discovery of "whole

families of new minimal surfaces--weird shapes with holes and handles that had eluded the unaided mathematical imagination."

Whatever defects instrumentation may bring with it, therefore, we cannot fully trust pure observation (Galileo's unaided eye) or pure rationalism (mathematical imagination).

And the same is true in the human sciences. Can the psychologist--whether psychoanalyst, behaviorist, or humanist--really divine the other person's point of view? The psychoanalyst sees complexes, the behaviorist sees reinforced responses, and the humanist sees evidence of an actualizing self, but are these any more than refractions in the theoretical membranes of an observer's mind, or the preconceived spirals and hourglasses of an unemancipated imagination? Whatever defects Q technique may have, its singular virtue, as with Galileo's telescope, is that it provides a rendition of a person's subjectivity which is relatively free of distortions produced by the observer. (The "facts" produced by technique can be distorted through interpretation, but that is a matter for the scientific community to deal with through debate and additional experimentation.) The observer can of course guess what the client thinks, but to accept the external view of the observer as more real, simply because it is external, is analogous to accepting twinkling stars as evidentially superior to what one sees through a telescope.

It is reported that Clavius, in 1610, stated that Galileo couldn't have seen Jupiter's moons in his telescope unless he had put them there. Clavius was wrong about Galileo, but would be correct if addressing certain aspects of R methodology. Items in a scale measuring conservatism, for example, are assigned meaning a priori; in a sense, therefore, conservatism is *seen* through the use of the scale because conservatism was put there. This is the value of operantcy: As with Jupiter's moons, operant categories are really there rather than having been put there by the constructor of the apparatus.

COMSERVE

Timothy Stephen and Teresa M. Harrison of Rensselaer Polytechnic Institute have launched an electronic information resource, endorsed by the

Speech Communication Association, which serves as a bulletin board or file server for the communication discipline. The COMSERVE system is a computer program that runs on one of Rensselaer's mainframes and is accessible by students, faculty, and others who use one of the 1200 computers connected to BITNET. The main purpose of COMSERVE is to provide a self-service clearinghouse for research and educational materials of interest to those involved in communication studies. Individuals can access the archive free of charge through the BITNET address COMSPRT1 at RPICICGE. A requested file is normally delivered within a few minutes. Materials sent to COMSERVE should be in the public domain, i.e., not copyrighted or intended for restricted distribution. Teaching materials (syllabi, bibliographies, reading lists), research materials (scales, instruments, computer programs), and announcements are welcome. (For example, announcements advertising the Q conference and *Operant Subjectivity* are currently on deposit with COMSERVE.) Submissions should include the author's name, address, and phone number. If submitted electronically, line size should be restricted to 80 or fewer characters.

Stephen and Harrison can be reached c/o the Department of Language, Literature, and Communication, Rensselaer Polytechnic Institute, Troy NY 12180. Through BITNET, their respective addresses are STEPHEN AT RPICICGE and HARRISON AT RPICICGE.

Short Course on Q at SCA

Richard G. Nitcavic (Speech Communication, Ball State U, Muncie IN 47306) and Joan Aitken (Speech Communication, U Southwestern Louisiana, Lafayette LA 70504-3650) are scheduled to direct a workshop on Q methodology at the 72nd annual meeting of the Speech Communication Association. The three-hour workshop, to be held November 13 in Chicago, is entitled "Q Methodology in Communication Research" and is designed to introduce participants to basics. According to an SCA advertising blurb:

> For persons who seek a basic understanding of Q methodology and its applications. Aimed at identifying the purpose and nature of the

methodology, constructing Q sorts and analyzing Q-sort data. Applications of Q methodology in communication research will be presented. Lecture-discussion module: Participation in sorting and in interpretation of Q factor arrays.

Nitcavic and Aitken are also applying to chair a panel on Q in mass communication at the joint meeting of the Central States and Southern States Speech Associations, April 9-12, 1987, in St. Louis. If approved, panelists would include William Stephenson and Keith Sanders of the School of Journalism, University of Missouri.

Q and "Inner Thoughts"

In a short item entitled "How One Researcher Gets at the Innermost Thoughts" (*Marketing News*, September 12, 1986, p. 45), attention is devoted to Doran Levy's adaptation of Q to assess business problems. According to Levy, President of Market Structure Research, Minneapolis, traditional surveys and focus groups fall short in revealing hidden feelings; to determine consumer attitudes, therefore, research techniques must be used which probe more deeply. Several of Levy's successful studies are briefly summarized. Marriott's Roy Rogers fast-food restaurants, for example, installed salad bars based on the results of Levy's study, and a major financial institution restructured its marketing department according to the market segments identified by Q factors.

Q Programs in BASIC

Readers are reminded that Q-related programs written in BASIC for personal computers are still available from Brian D'Agostino, 360 Riverside Drive, Apt. 4D, New York NY 10025, phone 212/663-2751. Programs are available for the calculation of factor loadings, for plotting subjects graphically, for calculating new loadings from judgmental rotation, and for calculating factor scores. A complete set of programs is available for $50, and on a trial basis at no charge.