

INTERNATIONAL SOCIETY FOR ECOLOGICAL PSYCHOLOGY

July 1983

Newsletter

Volume 1, Number 1

Welcome to the Society. Many of you have waited patiently for quite a long time with little acknowledgement of your membership except a cancelled check. We are very grateful for your support and hope that you will actively participate in the development of ecological psychology and the Society.

This newsletter should be especially important for people who cannot attend meetings. It is meant to be a forum for relatively informal discussion among members about issues of common interest. Hopefully these exchanges will help us learn something about nature as well as one another. We have members whose primary disciplines are art, architecture, computer science, history, philosophy, and physical education. These represent a good beginning for the interdisciplinary mix we have always intended. Within psychology we have specialists in perception, action, speech, language, social, developmental, and animal work. Ten countries and the West Coast of the U.S.A. are represented. The greatest concentration is in the U.S. Northeast, followed very specifically by Columbus, Ohio and Uppsala, Sweden.

CONFERENCES AND MEETINGS

The primary activity of the Society has been scholarly meetings. The May, 1982 meeting is described in The Journal of Experimental Psychology: Human Perception and Performance, 1983, 9 (No. 1), 151-157. If you cannot get it, write to me for a copy.

October Annual Meetings

We have meetings whenever enough people succeed in arranging them. However, our By-Laws currently require us to have a business meeting every October. Unless that is changed then, you can always count on an October meeting. The default time and place is a Saturday at Trinity College in Hartford. We have not decided on which October Saturday for this year, yet, but must do so soon.

Who has a preference? Johns Hopkins University is having a special G. Stanley Hall Symposium October 11-13. If their event does not go through Saturday, the 15th, there is no conflict. Would any of you be going there? Are there other conflicts? Write to me soon if you know of any.

Call For Program Ideas

We have been very fortunate in having well received programs so far. Please send in whatever ideas you might have for the next program this October.

Event Conferences

Vanderbilt. Many Society members attended our Second International Conference on Event Perception, The Design and Analysis of Information for Perceiving and Acting, held at Vanderbilt University June 9-13. A copy of the Program is reproduced. It is not possible to provide an adequate summary of the whole conference here, but it is not exaggerating to say that it was smashing. We are grateful to Joe Lappin, Jeff Franks, John Bransford, their graduate students, and Vanderbilt University for shouldering all the burdens that fall to conference organizers. Indeed, John and Jeff had to miss some events because they took "burden" literally. Whenever there was hauling to be done--be it tape deck, beer keg, bottles, cans, food, or trash--they were doing it.

There were two quasi-experiments at this conference. One was to have poster sessions, the other was to devote a day to explicitly applied psychology that touched on the themes of the Meeting. Both worked very well. The poster sessions came at the end of long days, but were set up adjacent to beer, wine, and food in the patio so that socializing could be mixed with discussing the posters and demonstrations. The talks in the Applied Workshop on June 10 presented an array of concrete human factors problems that psychologists in industry are working on. A persistent theme, echoed by our members who are working with the Air Force, was the difference between practical research directed toward finding an acceptable result in a given amount of time (usually short) in a particular technological environment and university research designed

according to graduate school standards. These are two quite different circumstances and the speakers seemed to be suggesting that as psychologists look to industry for positions, more room should be made in graduate schools for research training that recognizes these constraints.

There were substantive highlights every day. One unintended theme that emerged among perception people was an interest in the rigid--nonrigid motion distinction. Gunnar Johansson showed point-light films of bending, including cases that might have been seen either as rigid or nonrigid but were usually seen as nonrigid. Mike Braumstein showed a film of moving points that generated a rotating sphere but with the points moving around relative to the sphere like ants crawling over the surface. This display did not seem to satisfy the commonly cited conditions for preceiving rigid rotation. Saturday morning Eleanor Gibson and Gary Riccio gave an impromptu talk complete with videotapes of babies' perception and exploration of surfaces of support. Their major contrast to an ordinary solid surface was an undulating, decidedly nonrigid waterbed. Finally, the whole symposium on face perception centered on studies of the nonrigid changes involved in growth.

A new age in studies of perceiving during flight is upon us. Dean Owen showed that the Ohio State group, with impressive graphics facilities, has been making excellent progress on the study of optical flow field information available to and sometimes used by pilots. Rik Warren and Grant McMillan reported on coordinate research programs at Wright-Patterson Air Force Base. According to one count, twelve Ohio State graduate students were able to attend the conference. Since we have Society members at Kent State, Denison, and Miami of Ohio in addition to Ohio State and Wright-Patterson, the population center of the group is shifting westward. Expect to hear a lot more from Ohio.

The Transatlantic impact comes primarily from Sweden and Scotland, of course. There were no fewer than six Swedes on the program, three at Uppsala now (Johansson, Jansson, Runeson), one on leave from Uppsala (von Hofsten), one not all that long from having been at Uppsala (Bergström), and one now working in the U.S. (Becklen). Little wonder that we have been informally invited to have our next Event Conference in Uppsala--but more about that below. David Lee and Stuart Aitkin represented Edinburgh.

One of the focal issues of the future, for both perception and action researchers, is the problem of incorporating the role of mass and mass related quantities such as force. Some of the relevant results are described in the JEP:HPP article mentioned above. Runeson, Shaw, Kelso, Saltzman, and Bertenthal all touched on this problem in one way or another.

Sunday afternoon was devoted to biology and philosophy. Joe Levine, a biologist from Boston College, gave an especially flashy summary of comparative and ecological research on color vision in fish. Interested people can read about his work in the February 1982 Scientific American, pp. 140-149.

Peter Machamer and Gary Hatfield, the philosophers, stirred up the most audience participation of the entire week. By the end of that session it was clear that Machamer thought Brunswik should be taken more seriously, that Hatfield had more differentiated construals of direct and constructivist theories of perception than one usually hears about, and that more heat than light was generated. A third philosopher, David Kline, was able to present his variations on Fred Dretske's account of information (from Knowledge and the Flow of Information) amidst comparative calm on Monday morning. This Newsletter, the Journal, and our book series are all appropriate places to carefully extend the discussions begun in that session.

Many of the participants, especially those who gave posters, have short papers or abstracts to distribute. This Newsletter would be a good place to let readers know if you have something written available. Tell me and a notice to that effect will appear in a subsequent issue. Meanwhile, if you want papers from people, go ahead and write to them directly. If you do not have an adequate address, write to Joe Lappin, Psychology Dept., Vanderbilt University, Nashville, Tennessee, 37240.

My overview has been a very rough first pass. Other people who attended the conference should submit commentaries that would have the effect of highlighting other details.

The consistently high quality of all the presentations makes summarizing a hopeless task. Suffice it to say that we hope versions of many of them will find their way into the first issues of our journal or an edited volume that might materialize. Unlike the Connecticut Conference, no commitment was made to collect everything into one publication.

The NEXT Event Conference. We have been honored by an informal invitation to hold the next Event conference, in the summer of 1985, in UPPSALA, SWEDEN. Since arranging for funds to travel to Europe could take a long time, I mention this now even while the plans are quite unofficial. The Society itself will play a definite role in organizing that meeting.

Art Conference. Nathan Knobler informs us that the College Art Association is meeting in Toronto at the end of January. He thinks there may be people and discussion topics of interest to some of our members there. For more information write to Nathan at the Philadelphia College of Art, Broad & Spruce, Philadelphia, PA 19102.

Psychonomics. The Psychonomic Society meets November 17-19 in San Diego this year. Is anyone interested in a West Coast Society meeting during Psychonomics or the day before?

#### JOURNAL

From the beginning we have intended to work toward having a journal with The Vanderbilt Conference as a watershed. We are now on the way. An editorial board and papers are being recruited. If many of you send letters, notes, or short columns to the Newsletter, it should be able to serve as a medium of quick communications that also reveals what issues are occupying people's minds. That in turn should help guide the selection of topics covered in the journal.

#### DISCUSSION

Since we want people to send in short commentaries on substantive issues that are likely to appeal to many ISEP members, it seemed appropriate to start off with a "purple peril" (since originals were in purple "ditto" ink) from James Gibson. This one asserts the difference between a psychophysical experiment and an information-based experiment, a point Gibson often stressed, but one rarely mentioned by other writers. This distinction includes Gibson's conception of an intentional animal that could "choose" what information to attend to in a display, in contrast to an animal whose experiences are automatic consequences of "stimuli." Gibson's contrasts between stimulus and information, stimulus and display are here as well.

#### The Psychophysical Experiment and the Perception Experiment

James J. Gibson, Cornell University April 1975

The difference between a traditional psychophysical experiment in which a variable of physical stimulation is applied to an observer and then the corresponding variable of his phenomenal (or "sensory") experience is established, and the kind of experiment that is required by an information-based theory of perception can be illustrated as follows.

In traditional psychophysics one would present a systematically varied parameter of optical (or "retinal") motion to an observer and try to establish from his reports what the variable of phenomenal motion is. The assumption is one of psychophysical correspondence. The Uppsala program of research on motion perception, or event perception, seems to be of this sort. On this tradition one would never think of trying to establish what gives rise to the perception of ego motion or locomotion of oneself through the environment (e.g., R. Warren). But in information-psychophysics (if it can be called that) one tries to display information rather than to arouse sensations. That is, one tries to simulate natural perception. The assumption is not one of correspondence between physical and phenomenal variables but of the specifying capacity of invariant variables in an array. Hence an experimenter tries to isolate and systematically vary some parameter of an ambient array, not of a stimulus, leaving it to the observer to pick it up if he can. He would try to display an optical flow-pattern to an observer which would specify for him both ego-locomotion in a layout of surfaces and the layout of surfaces. He constructs apparatus for the experimental study of perception-and-proprioception, (memo of May, 1967). Is this control of the optic array that he makes available to an observer a "psychophysical" experiment? Not in the traditional sense, surely, and not in the sense of epistemological dualism, but it is an experiment. How do we characterize this new kind of experimentation?

Psychologists have not faced up to the difficulty of systematically controlling stimulus information. They have used only the ready-made information in verbal items (written or spoken language) and have left experimentation to the unsystematic artists and musicians. They dodge the issue by calling such items "stimuli" and then confuse everybody by calling the inputs sensory "signals" which allows them to beg the question of what constitutes information for perception. But this will not do.

THE DESIGN AND ANALYSIS  
OF INFORMATION FOR  
PERCEIVING AND ACTING  
(SECOND INTERNATIONAL CONFERENCE ON EVENT PERCEPTION)  
VANDERBILT UNIVERSITY  
JUNE 9 - JUNE 13, 1983

## PROGRAM

## WEDNESDAY, JUNE 8:

Branscomb Quadrangle Dormitories  
1:00 - 10:00 p.m. Registration, Check In  
8:00 p.m. Social (location to be announced)

## THURSDAY, JUNE 9:

Sarratt Cinema  
8:30 a.m. Welcome  
8:45 a.m. E. J. Gibson (Cornell U.): Shedding the light of the ecological approach on differentiation and enrichment  
9:30 a.m. J. J. Jenkins (U. of South Florida): A functional approach to comprehending  
10:15 a.m. Coffee  
10:45 a.m. C. von Hofsten (U. of Uppsala, U. of Minnesota): Perception and action  
11:15 a.m. R. Shaw (U. of Connecticut) and W. Warren (Brown U.): Perceiving information for ecological action  
11:45 a.m. G. Jansson (U. of Uppsala): Visual and nonvisual guidance of walking  
12:15 - 1:00 p.m. Lunch, Branscomb Cafeteria  
1:30 p.m. ~~D. Bertenthal~~ Bertenthal (U. of Virginia): ~~Perception of~~ point-light walker displays  
1:50 p.m. S. Aitkin (U. of California, Berkeley): Perceptual development in an artificial world  
2:10 p.m. D. Klopfer (U. of Pittsburgh): Acquisition of perceptual skill  
2:30 p.m. W. Schiff (New York U.): Conservation of length redux: A perceptual linguistic phenomenon  
2:50 p.m. C. Granrud and A. Yonas (U. of Minnesota): Infants' sensitivity to kinetic information for spatial layout  
3:10 p.m. J. Kennedy (U. of Toronto): Static pictures, events and catachrisis: The meaning-based theory of depiction  
3:30 p.m. L. R. Caporael (Rensselaer Polytechnic Inst.): Evolutionary context for behavior  
4:30 - 6:00 p.m. Sarratt Room 118

Poster Session (wine, beer, and refreshments available)  
S. Kramer & B. Bertenthal (U. of Virginia): SPRITE-oriented graphics  
J. Conway, E. Cochran, H. Skene, and R. Hoffman (Adelphi U.): Perceptual learning and the interpretation of thermograms  
C. Dent (U. of North Carolina): The effect of object and event information on descriptive metaphors: A developmental study  
K. Hoffitt (Systems Research Labs.): The role of optical texture and visual accommodation in target detection  
S. Bergstrom (Umeå Univ.): Modulation of illumination giving a flat surface apparent three-dimensional shape and motion in depth  
E. Mingolla (Boston U.): Surface orientation and image instabilities  
S. Braddon and G. Brickel (Sacred Heart U.): Role-taking and role-switching in visual event perception  
T. Bachmann (Tartu State U.; presented by J. Lappin): Ecovallidity arguments in favor of the functional fovea  
J. Doner (Circa Inst.): A conceptual operating system for cognition  
Social (location to be announced)  
Movie (Xerox): "Star: As the user sees it"

8:00 - 12:00

9:00 p.m.

## FRIDAY, JUNE 10:

Sarratt Cinema  
Workshop: The Design of Information Tools  
9:00 a.m. Introduction  
9:10 a.m. J. Gould (IBM): The user interface for the audio distribution system  
9:55 a.m. M. C. Day (American Bell): Designing a trouble-shooting interface for customers  
10:25 a.m. Discussion  
10:30 a.m. Coffee  
10:45 a.m. G. Stikeleather (Apple Computers): Designing a people-literate interface for a personal office system  
11:30 a.m. C. Springer and J. Sorce (Bell Labs): Accessing large database: The relationship between data entry and output evaluation  
12:15 - 1:00 p.m. Lunch, Branscomb Cafeteria and Private Dining Room  
1:30 p.m. C. Molgaard (Mayo Clinic and U. of California, Berkeley): Designing a database for epidemiological research  
2:15 p.m. M. Singer (American Bell): Assessing small business office information needs  
2:45 p.m. Discussion  
2:50 p.m. Coffee  
3:10 p.m. R. Mack (IBM): Development of operator training systems  
3:55 p.m. J. Bair (Bell Northern Res.): Interface to human-computer productivity  
4:30 p.m. Discussion  
4:35 p.m. Wine, cheese, continued discussion

## SATURDAY, JUNE 11:

Sarratt Cinema  
11:00 a.m. G. McMillan, R. Warren, and E. Martin (Wright-Patterson AFB): The design of dynamic tactical information for perceiving and acting  
11:25 a.m. D. Owen (Ohio State U.): Global optical information for the perception and control of one's own motion  
12:00 - 12:30 p.m. Lunch, Branscomb Cafeteria  
1:30 p.m. M. Braunstein and G. Anderson (U. of California, Irvine): How flexible is the rigidity principle?  
2:00 p.m. Symposium on Perception of Faces  
C. Carello, D. Czubak, and A. Groszofsky - Dimensional analysis of facial structure  
C. Carello, R. Shaw, L. Mark, and A. Groszofsky - Facial attractiveness of optimal growth: An archetypal analysis  
J. Pittenger and L. Mark - Perceived facial attractiveness as a function of degree of orthogonality of facial curves  
R. Shaw, H. Jenkins, and L. Mark - A covariance description of perceptual information for facial archetypes  
4:30 - 6:00 p.m. Poster Session, 118 Sarratt  
H. Jenkins: A curvilinear model for describing facial aesthetics in applications to orthodontic treatment  
W. Hallford (Ohio State U.): The specification of an object's size taken with reference to an observer's hand  
S. Handel and J. Draper (U. of Tennessee): Coming to grips with force-reflecting servo-manipulators  
R. Hoffman and S. Berg (Adelphi U.): Perceptual learning and the acquisition of a complex skill: Hand whistling  
S. Tobias and D. Owen (Ohio State U.): Useful optical variables for detecting decelerating self-motion  
L. Wolpert, D. Owen, and R. Warren (Ohio State U.): Eyeheight scaled versus ground texture unit scaled metrics for the detection of loss of altitude  
L. Hettinger, D. Owen, and R. Warren (Ohio State U.): The functional utility of optical flow acceleration  
Social

8:00 p.m.

**SUNDAY, JUNE 12:**

- Sarratt Cinema**
- 8:30 a.m. G. Johansson (U. of Uppsala): About visual perception of biological motion II: The movements of trees, bushes, and herbs
- 9:15 a.m. S. Runeson (U. of Uppsala): The experimental approach to dynamic event perception
- 9:45 a.m. Coffee
- 10:05 a.m. D. Lee (U. of Edinburgh): Activating the perceptuo-motor cycle
- 10:45 a.m. S. Kelso & E. Seltzman (Haskins Labs.): A dynamical approach to coordinated action. Part I: Concepts and data. Part II: Task dynamics
- 12:15 - 1:00 p.m. **Lunch, Branscomb Cafeteria**
- 2:00 p.m. V. Casagrande (Vanderbilt U.): Comparative aspects of primate visual system organization
- 2:30 p.m. J. Levine (Boston Coll.): Color vision in aquatic environments: Do you see what I see?
- 3:00 p.m. Coffee
- 3:30 P. Machamer (U. of Pittsburgh): Ecological concerns, experimental design, and perceptual theory
- 4:00 p.m. G. Hatfield (Johns Hopkins U.): Direct versus constructivist approaches to perception
- 4:30 p.m. Commentary and Discussion -- J. Compton (Vanderbilt Univ.)
- 5:00 - 7:00 p.m. Wine, beer, continued discussion

**MONDAY, JUNE 13:**

- Sarratt Cinema**
- 8:30 a.m. R. Warren (Wright-Patterson AFB): Active psychophysics and the perception of egomotion
- 8:50 a.m. R. Becklen (Swarthmore College): Using pantomime as a strategy for studying action perception
- 9:30 a.m. P. Kellman (Swarthmore College): Kinetic Subjective Contours
- 9:50 a.m. A. Kline (Iowa State U.): Information and the objects of perception
- 10:10 a.m. Coffee
- 10:40 a.m. J. Pollack (U. of Michigan): Temporal microstructural rules for repeated random auditory patterns
- 11:00 a.m. S. Bergstrom, K. Gustafsson, and J. Putaansuu (Umeå Univ.): Information about three-dimensional shape and direction of illumination from a square wave grating
- 11:20 a.m. D. Waters (Systems Science, SUNY-Binghamton): The universal enzyme model of perception and action
- 11:40 a.m. Y. McCabe (U. of Connecticut): Ecological semantics: Information and meaning as dynamic form

**Late Program Addendum****Saturday, June 11**

- 10:45 a.m. S. Falkenberg (Eastern Kentucky U.): The concept of affordances as applied to motivation and conditioning

## REASONS FOR REALISM

*Selected Essays of James J. Gibson*

Edited by  
Edward Reed and Rebecca Jones  
University of Minnesota

**LEA** LAWRENCE ERLBAUM ASSOCIATES, PUBLISHERS  
1982 Hillsdale, New Jersey London

### SPECIAL OFFER

Reasons for Realism is available through the Society at a 30% discount. If you would like to order a copy, send a check for \$29.05 (includes mailing) to Bill Mace (address at end of Newsletter). Make out the check to Lawrence Erlbaum Associates.

**Part I: Foundations of Ecological Optics. Selections from *Motion Picture Testing and Research*. Optical Motions and Transforma-**

tions as Stimuli for Visual Perception. The Information Contained in Light. Ecological Optics: A Note on Ecological Outputs. On Theories for Visual Space Perception. Letters Between G. Johansson and J. J. Gibson. A History of the Ideas Behind Ecological Optics: Introductory Remarks at the Workshop on Ecological Optics. On the Analysis of Change in the Optic Array. What is Involved in Surface Perception? Part II: **Movement and Motion: The Perception of Action and Events.** A Theoretical Field Analysis of Automobile Driving. Selections from *Motion Picture Testing and Research*. Visually Controlled Locomotion and Visual Orientation in Animals and Men. The Uses of Proprioception and the Detection of Propriospecific Information. The Problem of Temporal Order in Perception. What Gives Rise to the Perception of Motion? Memo on Motion. The Change from Visible to Invisible: The Problem of Event Perception. Ecological Physics, Magic and Reality. Part III: **The Perception of Pictures.** Selections from *Motion Picture Testing and Research*. A Theory of Pictorial Perception. Pictures, Perspective, and Perception. The Information Available in Pictures. The Concept of Formless Invariants in Visual Perception. A Note on Direct Perception... Various Kinds of Cognition. Part IV: **Implications of Ecological Realism.** What is Form? Toward a Nomenclature of Form, Pattern, and Shape. Perceptual Learning: Differentiation or Enrichment? What is Learned in Perceptual Learning? The Concept of Stimulus in Psychology. Note on the Distinction Between Stimuli and Stimulus Information. The Useful Dimensions of Sensitivity. Note on Current Theories of Perception. New Reasons for Realism. Are There Sensory Qualities to Objects? Volition and Proprioception. Notes for a Tentative Redefinition to Behavior. On the New Idea of Persistence and Change and the Old Ideas That It Drives Out. The Myth of Passive Perception. Notes on the Perception of Affordances. Bibliography of James Jerome Gibson.

0-89859-207-0

1982/480 pp./\$39.95

A modern classic is now available in paperback!

**THE SENSES CONSIDERED  
AS PERCEPTUAL SYSTEMS**

James J. Gibson  
*Late Professor of Psychology  
Cornell University*

\$14.95 • 336 pages

Waveland Press, Inc. P.O. Box 400 Prospect Heights, Illinois 60070 (312) 634-0081

R. MURRAY SCHAFER

*The  
Tuning  
of the  
World*



Alfred A. Knopf New York 1977

Schafer is a Canadian musician working on a large project that sounds very much like ecological acoustics.

#### FUTURE FEATURES

Besides what is evident here in the first stab, other items that might fit in a Newsletter--if you send them in--include:

- (1) Short descriptions of research programs to let members know who is doing what.
  - (2) Queries about equipment, technique, methods.
  - (3) Funding sources.
  - (4) Suggestions for research you'll never get around to.
  - (5) Requests for opinions about a proposed line of research or thinking.
- What goes out to people will reflect what comes in.

#### SUMMARY QUESTIONS

1. What is the best (worst) Saturday to schedule a meeting?
2. Is there any interest in a West Coast meeting in conjunction with Psychonomics?
3. Would you send in Newsletter contributions--please.

William M. Hace  
ISEP  
Department of Psychology  
Trinity College  
Hartford, Connecticut 06106

International Society for Ecological Psychology  
c/o Department of Psychology  
Trinity College  
300 Summit Street  
Hartford, CT 06106  
USA