The International Society for Ecological Psychology

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MEETING ABSTRACTS

October 20, 1990
Trinity College, Hartford, CT

The following pieces by Rochat, Shearer, Flynn and Stoffregen, and Bootsma, are abstracts of their talks given at the ISEP Annual Meeting last fall.

Control of Posture and Reaching in Infancy

Philippe Rochat
University of Massachusetts
and now of Emory University

The focus is on a highly robust and predictable phenomenon characterizing action early in life: the propensity of young infants to bring hands in contact with objects, to grasp them and bring them to the mouth. The studies presented use this propensity as a paradigm to understand what controls action early in infancy. The goal of these studies is ultimately to contribute to the understanding of the emergence of functional actions. In general, they show that the perception of objects' affordances, the degree of postural control, and oral capture are important determinants of early reaching behavior.

Results of a first study demonstrate that when infants start to systematically and successfully reach for objects, their action is controlled by the perception of what objects afford for action. Six-month-olds tend to reach with one hand for a small object, and with two hands for a larger object. Furthermore, the precocious preparatory aspect of infant reaching is shown to persist when infants are subsequently presented with the same sounding objects in the dark.

Other studies further demonstrate that the morphology of early reaching behavior is also determined by the degree of postural control achieved by the infant. Four to 8 - month - olds, either able or yet unable to sit on their own, were observed as they reached for objects in various postural conditions. When provided with good postural support (except in an upright sitting posture), non - sitter infants usually tend to reach with one hand forward, regardless of the postural condition they are placed in.

Finally, research is presented showing that even when unable to sit on their own, but provided with good hip support, 6 - month - olds demonstrate a remarkable coordination between reaching of the hand(s) and leaning of the trunk. Compared to sitter infants, non - sitters that are provided with hip support show a similar coordination between reaching and leaning. Leaning of the trunk is also observed in the oral capture of the object by infants with hands constrained at their sides.

In general, these results indicate that early reaching is more than the movement of one hand toward an object target. From the onset, it is a whole body engagement determined by a) the perception of an object's affordances, b) the degree of postural control, and c) the goal of an oral capture.

The Dynamics of Plant Growth: New Explorations in Contemporary Sculpture

Rhonda Roland Shearer
Sculptor, New York City

When one thinks of the history of sculpture, the dominating image one conjures is that of the human figure. From Michelangelo, Rodin, through Henry Moore, human beings have been the primary subject matter for sculptors.

Unlike paintings where one consistently finds depictions of plants, in sculptures plant forms are virtually non-existent. The exceptions are wreaths on heads, leaves strategically placed for modesty or tree stumps for the occasional support of human feet. Otherwise, until very recent times, plants in three dimensions were relegated to the "decorative arts" e.g. architectural elements like the tops of capitals and cornices or bibelots for shelves and tabletops. Vasari in his "Book of Techniques" refers to tiny flowers and blades of grass being cast by virtuoso foundries during the Renaissance. These were created by "nameless craftsman" or artisans.

For the purpose of this discussion we will follow art history which places "artisans" in a completely different category than "sculptors." Dare I say it, sculptors are artists and famous ones are "names" that we can recite. Artisans are not. There are no Michelangelo, Rodin or Henry Moore plant sculptures. (Fighting the status quo of western art history is another discussion.)

In the plethora of human, animal and abstract sculpture, why are plants conspicuously absent?

Answering this question became central to my

own interest in creating plant sculptures. At first I was convinced that anthropocentrism was the primary factor. There has always been a favorable bias toward depicting humans in western art history. In general, human beings were considered a superior, more spiritual and intellectual subject matter than nature. Our patriarchal society, as well as Christianity, promoted this concept of man's superiority over nature.

But does this explain a near complete absence of plants in sculpture? After all painters at certain points in history overcame this bias, creating beautiful plants — why not sculptors?

When approaching my own work, it quickly became evident why "flower" sculptures for all practical purposes did not exist. It was the limitation of materials and techniques. Traditional materials; clay, bronze, marble, terracotta, except in small scale, did not lend themselves to thinness and delicacy — essential plant characteristics. What sculptor would want to create a leaf 5/8" thick? Visually, a leaf becomes clumsy at this thickness, losing the essence of what makes a leaf, well, a leaf. It therefore becomes sculpturally uninteresting — thus back to humans, animals and abstract shapes for sculpture subjects.

It was not only the factor of thickness which was daunting but the comlexity of plant morphology; leaf phyllotaxis and the seemingly endless variety of plant shapes which have undercuts (closely aligned but not touching planes or surfaces) presented many technical problems.

To explain further without revealing any proprietary details (I spent two years and endless hours figuring out the best ways to create "plant" bronzes after being told by major foundries that my concept for plant sculptures was "stupid and impossible.")

At the onset I concluded bronze seemed the only feasible material for creating plant sculptures. It had a permanence (was strong and can be used as an interior, exterior material) and had innate aesthetic qualities. Besides, it was traditional and the challenge wass to do what Michelangelo and others did not. I wanted to create my own history of plant sculptures since it did not exist. I had almost no idea at that time what plants would look like as sculpture. Would plants be successful as only pure form, not color? My cultural conditioning toward flowers was their innate appeal via their color and fragrance. Leaves were used as foils – to fill in around flowers. Leaves were not considered of themselves, interesting aesthetically. I would have to develop my own approach to their sculptural usage with no guidance from centuries of various treatments of the subject evolving from the realistic to the abhstract. It was a visual beginning and the visual freedom it offered was scary yet exciting.

I was working with creating table and life size horses in bronze at the time. My approach to these was a traditional one. I started with steel pipe and aluminum wire to create an armature. Petroleum based clay was placed over this "skeletal" structure. The surfaces were then shaped to achieve the final horse-like form. This clay model, upon completion, was molded, cast in wax, remolded, wax burned-out, then cast in bronze. In the case of my life-size horse there were 11 separate molds, therefore, 11 waxes. Once in bronze, these pieces were welded together, seams chased, and patina applied for completion.

For the sake of brevity, I have oversimplified the bronze casting process. But the essence of the problem in casting plants is revealed. By the time you make an armature strong enough to support the clay — you are already thicker than a leaf.

The other problem is realted to fluid dynamics. How do you get the hot wax and/or bronze to completely flow into the very thin and complicated cavity of the mold (remember the undercuts)? No centrifugal process possible here — these are large molds and practicality dictates the use of only gravity.

Once the leaves were in bronze two other concerns were, how can you, because of their thinness, A) weld the leaves to attach or repair casting flaws, or B) use the traditional torch applied sulfates and nitrates for patination?

Due to their thinness and delicacy welding is difficult because the act of welding starts to melt down the entire leaf.

Patination by torch has a similar result — the heat begins to bend and distort plant shapes.

To address the first two problems the solution involved engineering. The welding melt-down was eliminated only by the highest degree of skill of accomplished welders. Patination was resolved by an experimental technique. "Cold" paste and liquid application of chemicals wer used to achieve the finished patination.

With much experimentation I was able to overcome these four central problems. My exploration of using plant forms as subject matter for sculpture continues now, more in a conceptual realm. The physicality of the problems is, thenkfully, behind me and I am able to concentrate on the intuitive and creative aspects of making sculptures.

Kinematic specification of support surface dynamics

Steve Flynn & Tom Stoffregen
University of Cincinnati

Stoffregen & Riccio's ecological theory of the perception and control of orientation argues that dynamic properties of the surface of support have consequences for the manner in which orientation is controlled. An implication of this is that different surfaces will produce characteristic patterns of movement of body segments of animals on that surface. The kinematics of the body should specify the dynamics of the surface. Such kinematics could be used for perception of surface dyamics by that animal itself or by observers who viewed the animal's interaction with the surface. We sought to evaluate the latter possibility by making point-light displays (videotapes) of an actor on three different kinds of surfaces; floor, mattress, and balance beam. The surfaces were entirely invisible in our displays. In experiment 1 subjects discriminated floor from mattress with 95 % accuracy in a forced choice situation. Only one behavior was used: walking. In experiment 2 the behavioral generality of this finding was tested by presenting tapes in which the actor engaged in eight different behaviors on the floor and mattress: walking, running, hopping, push-ups, standing sway, toe-touching, sit-ups, and crawling. Forced choice judgements yielded accurate surface discrimination for all of these but sit-ups. Experiment 3 evaluted the generality of the original finding with respect to different surfaces. The actor executed toe-touching and standing sway on the floor, the mattress, and while standing sideways on a balance beam. Three-way forced choice judgements were made. performance was not above chance for standing sway, while jugements of surface were accurate for toe-touching. For both behaviors analysis of errors revealed that mattress was confused with beam, and beam with mattress, but neither was confused with floor. Both beam and mattress elicit one kind of postural control (hip movements) while floor is characterized by another kind (ankle movements). This raises the possibil- ity that the dynamics of mattress and beam might be differentiated in displays involving different behaviors, ones for which the affordances of the two surfaces were different. Future work will address this possibility.

Temporal information as a holonomic constraint on the coordination of components in natural prehension.

Reinoud J. Bootsma
Dept. of Kinesiology, University of Waterloo
Dept. of Psychology, Free University, Amsterdam

Behavioral, kinesiological, and neuro - anatomical evidence suggests that a distinction should be made between the transport and grasping components in prehension. The wrist - hand system is brought to the appropriate location in the vicinity of the object (transport component), while, concurrently, formation of a grip by the fingers of the hand takes place in anticipation of contact (grasp component). It has been suggested that these two components are controlled via different visuo-motor channels, with the transport component being sensitive to distance and direction information, and the grasp component being sensitive to information about the size and the shape of the object. Given this separation of components, supra - ordinate control programs or common central temporal templates have been suggested to account for the coordination normally obeserved. Such control devices constitute non - holonomic constraints and are therefore not the most parsimonious solutions.

In a series of experiments we have demonstrated that time - to - contact information is not only available and used in situations of relative approach between an object and the eye of an observer, but also in situations of imminent collision between two objects within the field of view of an observer. This time - to - contact information is contained in the sum of the relative rate of constrction of the optical gap separating the two objects and the relative rate of dilation of the optical contour of the moving object. Thus, there is information available about the time remaining until contact between the moving hand and a stationary object in a prehension task. We suggest that, if the actor were to use this information to modulate both the transport and grasping components of the prehensile act, this time - to - contact information would constitue a holonomic constraint on coordination. A large number of experimental findings reported in the literature can be accounted for by the information-based model of natural prehension proposed.

MEETINGS AND ORGANIZATIONAL NEWS

1991 Annual ISEP Meeting
October 19, Trinity College

This will mark the 10th anniversary of the ISEP.

If the idea of moving the business meeting to the biennial ICEPA's is carried out, this could be the last annual business meeting. Henceforth they would be every two years.

Most of the activity will be on Saturday, October 19. It might be desirable to have program time on either Friday evening or Saturday morning. For those who might attend the meeting, please let me know which of these would be best. Last year we

discovered several decent, moderately priced motels, in convenient locations. Some people were lured (by me, unfortunately) to somewhat more distant sites, but we've learned the lessons of last year. No one need be as far out as Tom Stoffregen.

So far the list of speakers includes, Gene Goldfield, Bruce Kay, Bill Warren, Robert Hoffman, Dan Bullock (and perhaps others from the Adaptive systems group at Boston University), and Philippe Rochat. Contact Bill Mace immediately if you think of something else that needs to be on this year's program or if you need information earlier than official announcements are sent out.

POSTERS PLEASE. As usual, there will be a poster session to allow people to present and discover the most recent developments in a number of ecological research programs. People who are not able to make it to Amsterdam are especially encouraged to bring their findings to this meeting.

ISEP in The Netherlands

Since the beginning of this year, the Dutch group now functions as an official group within the Dutch organization of psychological research (PSYCHON). The officers are Kees Overbeeke (secretary), Reinoud Bootsma, and Ad Smitsman (Chair).

ICEPA6
Amsterdam, August 25 - 30

The preparations have been made and the organizers are waiting anxiously for the participants to arrive. What more can be said? Many of you may see this issue of the newsletter in Amsterdam.

British ISEP Fall Meeting
23-24 September 1991
Workshop on Situated Action
Ashburn Hall/Department of Psychology
Manchester University

Human activity is the focus of research for workers in a wide variety of fields. These include Ecological Psychology, Developmental Psychology in Vygotsky's tradition, discourse - oriented Social Psychology, Sociology, Philosophy and Social Anthropology. The study of activity is also important in Artificial Intelligence and Information Technology where the environments are designed to support cooperation. The aim of the September workshop of the International Society for Ecological Psychology is to bring together people working in these fields in a discussion of topics which may include, for example, the individual / environment dualism, coordination in joint activities and their intentionality, and the relationship between agency and subjectivity in social activities.

We are bringing together workers from various disciplines concerned with study of human activities. So far, participants will include Mirilia Bonnes & Marino Bonaiuto (Rome, Psychology), Alan Costall (Southampton, Psychology), Pat Devine (Manchester, Economics), David Frohlich (York, Computing), Tim Ingold (Manchester, Social Anthropology), Ivan Leudar (Manchester, Cognitive Science / Pragmatics), Bob Shaw (Connecticut, Psychology), John Pickering (Warwick, Psychology), Benny Shanon (Jerusalem, Psychology), Wes Sharrock (Man - chester, Sociology), Arthur Still (Durham, Psychology), Dave Wastell (Manchester, IT / Computer Science). Further contributions are welcome. Indeed we would hope that all participants will contribute to the workshop, and so presentations will be limited to 20 minutes. These will serve as a basis for extended discussions. All the contributors should provide the organizers with a page abstract in advance. This should be preferably an e-mail message or a laser - printed A4 sheet. The final workshop program will be provided before the workshop.

Further Details from and Proposed Contributions to:

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European ISEP meeting

The second meeting of the European ISEP will be in Glasgow during the summer of 1992. For more information, contact the organizer, Jimmie Thomson, at the University of Strathclyde:

James A. Thomson, Dept. of Psychology, Turnbull Building, University of Strathclyde, 155 George St., Glasgow, Scotland G1 1RD

Intentional Dynamics

Dragana Barac-Cikoja and Bob Shaw are organizing a meeting around the topic, "Intentional Dynamics," to be held in Dubrovnik in the summer of 1992. Bob Shaw can be reached at CESPA, Department of Psychology U-20, University of Connecticut, 406 Babbidge Road, Storrs, CT 06269 - 1020.

International Congress of Psychology
Brussels, July 1992

The ISEP does not have an official role in this International Congress, but it would be good if members would report on, for our readers, any relevant activities that might be going on at the Congress.

ICEPA7
Vancouver, British Columbia
August 9 - 13, 1993

John Pittenger is hard at work on this one. Please send any email correspondence about this meeting to John at ICEPA7@UALR.EDU. The next 3 paragraphs repeat what was said in the last newsletter.

ICEPA-7 will be held at the Conference Centre of the University of British Columbia in Vancouver, Canada from Monday, August 9 through Friday, August 13. Registration will start Sunday the 8th and we hope to have the now traditional group social event on Saturday the 14th. Facilities are said (by a colleague at UBC) to be excellent and the surroundings, restaurants,cultural amenities etc. are known to be spectacular.

For the first time ISEP is formally sponsoring the conference. The Psychology Department at UBC has graciously agreed to serve as a sponsor as well, thereby greatly reducing charges for the meeting rooms.

Costs are not yet firm but appear to be very reasonable. The registration fee, including a banquet and the program book, is likely to be around US $150.The 1991 room prices range from US $ 26 per night for a single dorm room to US $ 71 for a family apartment with 2 twin beds, living room, wash room, and kitchen.

QUERY

Request for lab ideas
Communicated by Alan Costall:

John Kirkland, of the Faculty of Education at Massey University, New Zealand contacted me for advice.

He's keen to run suitable lab or field - type studies for students to help their appreciation of the ecological approach. He and his team have been involved for some years in coming to grips with invariants, affordances, pick - up, and so on. A particular interest is in the sorts of things made available by parents in social contexts, especially those which could be labelled as "affective". Their preliminary work indicates only a few invariant classes of these affordances, which was surprising. As a developmentalist, one interest of his is in describing these and then of seeing which are detected as infants grow older. Correspondence would be appreciated.

REVIEWS

The following chapter commentary was submitted by new ISEP member, Naoki Ueno.
"Constituting Shared Workspaces", by Lucy Suchman. A chapter in *Cognition and Communication* edited by Y. Engstrom and D.Middleton, Sage, in preparation.

A recent paper by Lucy Suchman concerning situated and social distributed actions in an airport as a workplace seems to put a new light on ecological niches as social niches.

She pointed out that the word *position* has two meanings in English. It means the role or status of a social organization and, at the same time, the word *position* means the spatial location in a place like an airport as a workplace.(Her field is an operations room at the San Francisco Airport.) Where you are in the workplace implies what your role is in the social organization.

The example of a baseball game seems to be appropriate in order to show Suchman's point. The positions in baseball indicate the roles in a social organization called a team. Position in a baseball game also means the spatial location on the ground. In this case, the meaning of position is not only a location in a space but also possible moves or actions of a position in a space. Possible moves or actions of the position mean not only moves in the space but also the social missions of the position in the social organization called a baseball team. Maybe, the word *position* has not only static meaning such as location in the space and the social organization but also the meaning of dynamic, potential actions.

In short, a social organization is mapped into a space. Social distribution or an activity is mapped into a space. There is no activity and action without a space. On the contrary, a spatial configuration of a social organization also constrains activity and action.

A desk configuration of a school implies a type of activity or a type of social organization in the school. The structure of a building such as jail also implies a type of a social organization or power relations in a jail. The complex structure of courts reflects a complex social organization in courts according to a researcher of architecture planning.

The structure of buildings and the "positions" of artifacts or tools in a space also imply a type of the activity or social distribution. Further, the "positions" of artifacts and objects in a space may indicate

their social roles of the artifacts in the activity of the social organization.

The meaning of "the positions of aritifacts and objects" seems to put a new light on affordances of objects. In other words, the "positions" of artifacts and objects as social roles in a social organization or activity can be considered as a kind of social affordance.

Thus the "positions" of artifacts and persons play roles of not only physical resources but also social resources.

One can say that the above point of view is a social distributed version of the Gibsonian concept of Ecological Niche. It seems to me that the concept "Position" will be a good bridge between a Gibsonian perspective and the Situated Cognition view.

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BOOK REVIEW

John Dewey and American Democracy
Ithaca: Cornell University Press, 1991
Robert B. Westbrook

Reviewed by Edward S. Reed

John Dewey was many things in his more than six decades of public activity and writing. He was an important philosopher, educator, political scientist, and public intellectual. Because of the diversity of his interests and talents (and, unfortunately, because of his notoriously awkward writing style) Dewey has been the subject of many partial assessments, but few systematic assessments. The present book more than fills the gap, for it is an extremely impressive achievement, which should do much to shape how Dewey's work and influence are understood throughout the social sciences, and within American intellectual life more generally.

What will most interest ecological psychologists is Westbrook's thoughtful working out of Dewey's position on "realism" in the early years of the present century. Dewey was in the thick of a then active American philosophical discussion inaugurated by Peirce and James over the nature of experience and the kind of epistemology and ontology appropriate for pragmatism. Unfortunately, Dewey was so prolific and prolix, that it is hard for even a sympathetic reader to either know what Dewey's position was on a given position or whether he contradicted it elsewhere. Westbrook has taken advantage of the excellent Dewey Collected Works, and in his exemplary Chapter 5, "Reconstructing philosophy" offers a beautiful and nuanced analysis of Dewey's position. I was repeatedly struck by how much of importance I had either missed or misunderstood in Dewey, and strongly urge anyone with serious interest in Dewey's philosophy to study this chapter and the later "Philosophy nad Democracy" (which deals with Dewey's ontology).

What Westbrook demonstrates is that Dewey was self-consciously championing what he was willing to call "naive realism" (a term that is the worst obscenity in most philosophers' vocabulary). He supported this view by re-conceptualizing experience as an activity, not as passive spectation. Moreover, Dewey's Christian-Hegelian background made him sympathetic to idealism, and he therefore made an important distinction not to my knowledge, found elsewhere among American realists or pragmatists. (Although perhaps it will be found in Peirce when we get the Collected Works that are slowly appearing, for Peirce, too, was a Christian Hegelian...) This was a distinction between entities as distinctive objects of knowledge versus entities as distinctive objects of existence. Dewey allowed that the activities involved in experience were very much capable of affecting the former, but not the latter (Westbrook, p.129 et seq). Dewey used this distinction to good effect in coordinating his perennial twin emphases on the naturalness of experience and the fact that experience is always in nature.

Another excellent feature of the present book is Westbrook's brilliant weaving together Dewey's philosophical, educational, and political work and thought. I have elsewhere (Reed, 1988, p.47) spoken of James's "radical empiricism" as entailing a "radical democracy of experience" but I had no idea how self-consciously Dewey worked out this line of thought between 1898 and World War I. Westbrook makes a convincing case that the impulse for Dewey's educational reforms (his Chicago school was operating at this time) derived from this democratic view of experience. And, in chapter after chapter Westbrook details how Dewey's various and sometimes changing political views revolved around this central theme. (I note that Westbrook is careful to highlight some of Dewey's less felicitous political ideas and ac-

tivities, as well as his many admirable ones). This means that the Deweyan democratic socialism of the 1930s, which was profoundly influential on many psychologists (Tolman, G. H. Mead, The early SPSSI, Columbia education school people, etc) ha d its roots in Dewey's own unique contribution to American neorealism. The hi story of American psychology will have to be re-written, emphasizing that the social psychology of the 1930s had much closer intellectual ties to epistemology than it has ever had since, and much that later writers interpreted as "social behaviorism" might well be reinterpreted according to Dewey's democratic view of experience. It is certain that most of us have misread not only "Human nature and conduct" but "Democracy and education."

Finally, Dewey's "reconstruction" of philosophy – his demand that we end the useless and elitist "quest for certainty" – will have to be reassessed. Modern writers who appeal to Dewey – most obviously Richard Rorty – have missed the basic pragmatic thrust of Dewey's combined positions in philosophy, education, and politics. To abandon the ideals of pure epistemology is not to entertain open-ended discussions of cultural relativism, but to promote an integration of thought and action that goes beyond the individual. This integration can only emerge from democratic practice, not just from the spectatorial democracy we (still) have. For Dewey, the key to that practice was in the schools and in early education. His ideas and ideals are still exciting and novel, and quite unlike those that pass for "Deweyan" in the world at large. Dewey thought philosophy would be reconstructed when it was something in which groups of people could take part, in conjunction with their work or studies. It was to encourage this cooperative and shared striving for truth that he suggested we abandon Truth and Certainty, not to encourage private speculations about the relative value of different intellectual positions. Dewey wanted to unite thought and action, experience and conduct in ways of which many of his supposed philosophical followers have never even dreamed. Bravo to Robert Westbrook for showing us the depth and power of Dewey's proposed integration in what is almost certainly the best American intellectual biography in a generation.

Reference

Reed, Edward S. (1988). *James J. Gibson and the psychology of perception*, Yale University Press.

PUBLICATIONS

New Gibson Book

The new book, *An Odyssey in Learning and Perception*, by Eleanor J. Gibson, is supposed to come out in August from the MIT / Bradford press.

James Gibson Collection

The journal, *Leonardo*, now publishes what it calls "theme packs," collections of articles previously published in that journal. The seventeenth theme pack (TP # 17) is on James Gibson. The price is $ 15 for ISAST (International Society for the Arts Sciences and Technology) members and $ 26 for non-members. ISAST membership is $ 60 and it includes a subscription to *Leonardo*. Mail orders to: ISAST, 1442-A Walnut Street # 75, Berkeley, CA 94709 USA.

Resources For Ecological Psychology

This is a reminder that there is an ecological psychology book series with the above title. Editors are Robert E. Shaw, William M. Mace, and Michael T. Turvey. ISEP members receive a 30% discount on the publication price of series books. Graduate students, at least in North America, can join the LEA graduate student book club and receive 50% discounts on all LEA books that are not new. LEA has grown enough that not all personnel know about this discount. It is, nevertheless, legitimate. People outside the U.S. may have difficulty utilizing this discount and should write to Bill Mace. The discounted price on all series books can be obtained by all members — it is just easier to do within the U.S. .

Published books in the series include: *Reasons for Realism: Selected Essays of James J. Gibson* Ed Reed and Rebecca Jones (Eds.), *Persistence and change*, William Warren and Robert E. Shaw (Eds.), *Information, Natural Law, and the Self - Assembly of Rhythmic Movement* by Peter Kugler and Michael Turvey, *Event Cognition: An ecological perspective* Viki McCabe and Jerry Balzano (Eds.), *The reciprocity of perceiver and environment: The evolution of James J. Gibson's ecological psychology* by Tom Lombardo, *Social and applied aspects of perceiving faces* Tom Alley (Ed.), *Perception and Control of Self - Motion* Rik Warren and Alex Wertheim (Eds.), and *Michotte's experimental phenomenology of perception* Georges Thinès, Alan Costall, and George Butterworth (Eds.).

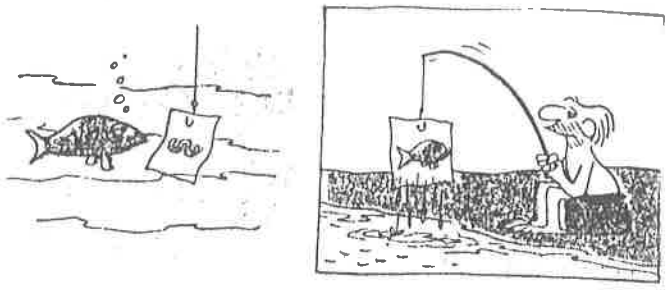
New books in progress (titles and editors not final) are: *Juggling Dynamics* by Peter Beek, *Ecological approaches to human - machine systems* John Flach (Ed.), and *Spontaneous Order, Evolution, and*

Nine Digit ZIPS

Would U.S. members please send me your 9 digit ZIP codes if at all possible. All of us (LEA and the Society) ultimately can get lower postal rates if these are used. Please keep in mind that all journal subscriptions that go with Society membership are reported to LEA from the ISEP office. Therefore, when changing or amending addresses, make sure you send them to me, Bill Mace, Dept. of Psychology, Trinity College, 300 Summit St., Hartford, CT 06106 - 3100 USA.

Captions wanted

Sverker Runeson submitted the B.C. cartoon by Johnny Hart that is in the adjacent column. What words would you put underneath as a caption? The first prize winner can have $ 5 off next year's dues.



SUMMARY OF QUESTIONS ASKED IN THIS ISSUE
Please respond

1. What day is best to add for Annual Meeting? p. 3
2. What is your 9 digit ZIP code?
3. What caption do you like for the cartoon?

The International society for Ecological Psychology
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