

TO: Staff at CIAS West and East

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FROM: William Olkowski

SUBJ: Long-term Growth and Survival Strategies for CIAS  
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The purpose of this memo is to attempt to present a framework which we can use to organize ourselves to effect constructive social change and in so doing, grow and survive. In the past, CIAS has focused on identifying solutions to social problems concerned with toxic substances--primarily pesticides and primarily pesticides in urban areas, since that is where most people currently live, where the health hazard is least appreciated, and where the solutions need the most work. This does not preclude work in agricultural ecosystems--pesticides in these systems also affect urban people by showing up on their food. The urban focus can be considered a tactical approach to the overall problem since the communication systems in these areas are good, and in comparison urban areas accept new ideas faster. Urban areas are also where social problems are most severe--and will continue to worsen as we add more people to the planet. Urban pest problems also had few research competitors.

My experience has indicated that one person or a group can significantly impact any social problem if enough attention is focused to solve it. If a particular problem is impacted in a significant way, all humanity can be affected. Pesticides in the longest view, which includes many pollutants and toxic substances as well, are analogous to "germs" in the sense that pesticides are being gradually appreciated as disease causing or enhancing agents. We at CIAS have had and will continue to have a role in teaching people about this threat. However, I have also found that one's personal integrity and by extension the group's integrity is greatly compromised if once a problem is identified their attention is not re-directed towards solutions. Psychologically it is healthier to work on solutions and their elaboration than the elaboration of solely problems. Discovery of solutions is what ultimately will evolve the society--problem descriptions help in this process, but alone are only a fragment of a larger process.

These musings and sketches are presented to you to attempt a description of our philosophy to account partially for a variety of decisions made in shaping CIAS and to provide background for what follows.

#### Future Directions

Ultimately our future growth--more intellectually rather than physically--for we are almost at optimal size, is based on our learning. Here I mean learning in terms of the skills and sensitivities we possess collectively and the experiences we have accumulated. This in turn is a function of both our ability to learn, the settings we push ourselves into, our work at documentation (for without records there is no memory and without memory there is no stored learning to draw from) and our resilience in learning from mistakes (but not repeating them).

Institutionally I like to think of CIAS as an amoeba, with pseudo-pods to sense, feed and move into new areas. The nucleus is administration. The body of the amoeba is the physical institution (equipment, library, etc.), while the society is what the amoeba grazes upon. Money is its food and information is what it leaves behind, along with a reordered social system with a new, more viable and less polluted ecosystem.

The amoeba analogy is good because it helps explain how we have operated: We extend an idea outward--e.g., an IPM program for the shade trees of Berkeley--it funds a good source of money, feeds and does good work. The amoeba works with three basic tactics: research, service and education. The service tactic is best developed and where we found our earliest and most stable money sources. Education is one of our most important products, but research, although poorest and least developed, is our most important activity.

#### Research at CIAS

Research at CIAS occurs as 2 basic steps: (I) Problem Identification and (II) Solution Development. Public identification occurs when we discover that lindane is causing harmful side effects, when chlordane or pentachlorophenol shows up in the general population's fatty tissue, or when male sterility and birth defects are linked to pesticides found widespread in human sperm. Solution development research occurs on two levels:

(1) techniques or procedures, and (2) IPM programs within specific socio-political systems. A head lice combing procedure, ground squirrel smoke bombing, inundative use of lacewings on a shade tree aphid, use of vegetation to discourage ground squirrels, use of Sevimol<sup>R</sup> as a toxic barrier for the elm leaf beetle, use of boric acid against roaches, importation and establishment of a particular parasitoid on a aphid, effective use of BTI for mosquitoes, and use of vacuuming against yellow-jackets are examples of Level One research projects with which CIAS has experience and is currently evaluating.

Level Two examples being developed by CIAS include Shade Tree - city; Roach - apartment house; Park - recreation (NPS); Levee (DWR-State); School IPM Programs (Palo Alto, D.C. schools); and Tree Service Companies (private sector) programs. It seems that each social system requires a different IPM program.

The directions for future research on Level One I envision being management techniques or monitoring techniques for new pests: Japanese beetles, gypsy moth, Dutch elm disease. Or new ecosystems: water bodies, lawns, human body, annual plants, shrubs, weeds, grazing systems, etc. Or use of new tools: combs, computers, bacteria, fungi, nematodes, traps, pheromones. Directions for Level Two includes food service operations,

rights-of-way (utility or road); national political organizations like the National Arborists and the American Institute of Architects (AIA); public housing (administered by HUD); county health departments; small farms; zoos; museums and others.

Potential Research Projects Now Seeking Funding for:

	<u>Sources</u>
(1) An IPM Program for Head Lice	private foundation - \$25,000
(2) Lacewing Rearing Business	Rockefeller/Ford
(3) Joint Conference with AIA: Architectural Designs & Pest Control	EPA + HUD + GSA
(4) Shade Tree IPM	cities in D.C. region
(5) Fort Hustis, VA (army base)	Enviro Control Contractor to EPA
(6) Beneficial Insect Production: A Systems View	NSF Appropriate Technology Program
(7) CO <sub>2</sub> as a Fumigant	DOE Alcohol Fuels Program \$50,000

Possibilities for Further Development

<u>Project</u>	<u>Source</u>	<u>Needs</u>
Power Lines IPM	Electric Power Research Inst. San Francisco	Need more background information and ideas for alternatives: harvest vegetation for power or biomass production
Food Service	Giant Food Chain (D.C.)	Need info on scale of pesticide use
Meat and Poultry (slaughterhouses)	FSQS Carole Foreman	Need info on FSQS
Aquatic Weeds	DWR/EPA	Info on existing practices & alternatives. Need literature
Bubonic Plague - a simulation model	CDC of HHS	Short description to J. Schwartz
Health Hazards of Pesticide Use	Ruth Mott?	Description to Max - \$15,000

### Research Speculations

Long-term research possibilities could involve:

- (1) an insectary program funded by a portion of the monies produced by franchised insectaries;
- (2) a biological control importation program funded by gifts, grants, proceeds from publications or portions of contract work;
- (3) a non-toxic pest control technique development series;
- (4) a pesticide residue data base and simulation model.

### Services at CIAS

Our contract work in the past has been our most important service and source of funds. In this area we offer something distinctly different from the universities, our nearest competitors. Pest control companies could offer similar services but do not appear to be oriented in this way. Other non-profit organizations are fixed on the pesticide problem, if interested in the area at all. Our ability to provide useful services is a function of our experiences, our knowledge and our abilities to move into new areas and learn quickly. Our reputation, however, is built on the impressions we create and our past work. This in turn is one of the key aspects of our ability to get new work.

With the turnabout in the Federal government I believe the service function of CIAS will become more important. I would like a CIAS task force to focus on this area and meet regularly to develop objectives and projects to strengthen the overall service functions of CIAS. Two areas for future development that could significantly improve our overall institutional capabilities are consulting and direct pest control. We will need an equitable arrangement to adequately manage and encourage the former if we and JMI headquarters think the idea is good. The direct pest control activities will require some extra effort, most probably outside sources, to develop initially.

Although these ideas are speculations at this time, they may be important for CIAS's survival if and when Federal sources dry up. In any case, the development of these capabilities cannot detract from our survival unless they drain development labors from other more productive areas or are badly designed and implemented.

The idea of having another institutional relationship--possibly a profit-making company or at least another entity within CIAS/JMI to effect pest control--not only creates another income source but also strengthens the advising-consulting functions, because it could actually carry out what is advised. This component could also operate as a pilot IPM business for study of small business functions and difficulties. An adjunct possibility for this company is to sell pest control equipment and materials--beneficial insects and possibly pesticides.