

VOLUME 10 • NO. 1
Fall 2006 - Spring 2007

OBJECTIVITY AND CONFLICT OF INTEREST

Sponsored by:

The Graduate School

Office of the Vice President for Research and
Graduate Studies

IN THIS ISSUE . . .

| | |
|--|-------|
| Introduction..... | P. 1 |
| MSU's Firm Foundation of Trust..... | P. 3 |
| Objectivity, Integrity, & Academic Freedom..... | P. 4 |
| Perspectives in Anthropology | P. 6 |
| Professor Strives for Objectivity in Her Work..... | P. 9 |
| Inside a Research Controversy..... | P. 10 |
| Should Objectivity Be a Goal for Journalism? | P. 13 |
| Introduction to Image Editing Ethics..... | P. 14 |
| Observations on Scientific Objectivity | P. 18 |
| Conflict of Interest Situations at MSU..... | P. 19 |
| Resources | P. 23 |

<http://grad.msu.edu/integrity.htm>

MICHIGAN STATE
UNIVERSITY

Research Integrity

INTRODUCTION

This edition of the Research Integrity Newsletter continues our tradition of focusing on a specific topic that is timely and important in supporting Michigan State University's ongoing efforts to promote disciplinary excellence through the responsible conduct of research. This issue addresses the meaning of "objectivity" and related issues, and the importance of striving to minimize bias.

It may seem ironic, but the reality is that attempts to characterize and explicate matters of objectivity are in themselves extremely subjective. Often, such matters are based on a community understanding within a discipline or a collective statement by scholars more broadly (such as in an institution) that are recognized by others as having standing, both through their professional records and their professional reputations. Here, we highlight such perspectives from both the viewpoint of individuals about their own experiences as well as about their disciplines in relation to particular situations or applications of their disciplines.

We solicited and include brief essays by or about individuals as examples of the nuances and differences between professionals and disciplinary cultures. In addition, we highlight two matters that are directly relevant to faculty, staff, and students broadly—the presentation and use of digital images and the importance of disclosing conflicts of interest.

We emphasize once again (first in the Research Integrity Newsletter on Plagiarism¹) that “In order to achieve the intellectual stature and respect that we desire for the community of scholars at MSU as whole, we must work cooperatively to build not only disciplinary excellence but also a reputation for integrity and respect for others. The articles here are presented with our thanks to the contributors and their assistance in striving toward the goal of unquestioned respect for and trust in MSU’s contributions to society.” We offer special thanks to Douglas W. Cromey of the Southwest Environmental Health Sciences Center Cellular Imaging Core

¹ Research Integrity Newsletter – Plagiarism, Fall 2005 –Spring 2006, http://grad.msu.edu/res_integrity/ri_s06.pdf

Facility, and the University of Arizona for granting permission to reprint “Digital Imaging: Ethics.”²

We intend this newsletter to be a resource to stimulate discussion and understanding of the importance of being open, honest, and responsible stewards of the trusts we hold as a community of scholars.

Karen L Klomparens

² Douglas W. Cromey, *Digital Imaging: Ethics*, The University of Arizona Southwest Environmental Health Sciences Center Cellular Imaging Core Facility, http://swehsc.pharmacy.arizona.edu/exppath/micro/digimage_ethics.html

THE IMPORTANCE OF PROTECTING MSU'S FIRM FOUNDATION OF TRUST

By J. Ian Gray

Vice President for Research and Graduate Studies

and by Karen Klomparens

Dean of the Graduate School and Associate Provost for Graduate Education

Michigan State University recently initiated a process of reflection and planning termed “Boldness by Design.” President Lou Anna K. Simon, in her 2007 State of the University Address,¹ explained that this process “...is a guide for defining MSU’s path and our accountability to one another, to the people of Michigan, and to partners and investors, current and potential, around the world.” She emphasized that, “Michigan State University accepts the mantle of leadership in renewing and redefining public trust in the role of land-grant universities to lead the nation and the world to a better tomorrow. We connect past and future, advancing the 21st-century application of core land-grant values—quality, inclusion, and connectivity—as the key to prosperity for a global society.”

In discussing day-to-day issues with students, faculty, and others, it is not uncommon for someone to offer, “What is the university going to do about this issue or that concern?” The implication is that “the university” is somehow an autonomous being that functions with a single-minded purpose, knows right from wrong, is self-governing, and that personal actions might not have a meaningful impact in a larger context. We know that the “university” is not an autonomous being and that individual actions often do have an impact beyond their own program context. The question remains as to what individuals should or can do to contribute to and collectively achieve the vision expressed by President Simon.

We suggest that the answer to this question depends, in part, on the importance of understanding

and committing to protecting and continuing the firm foundation of trust that has been established by our predecessors at MSU—students, faculty, staff, and administrators alike. The contributions and the legacies of those before us are apparent in many ways—through, for example, their writings, their discoveries, their art, their actions, and their words. While each individual undoubtedly came to MSU for different reasons and with different interests, it is fair to say that all shared a common goal of bettering their lives and the lives of others through education, research/scholarship, and service. We hope that the same goals are shared by faculty, students, staff and administrators who are part of the MSU community now and in the future.

Part of the foundation of trust that our national and international colleagues have in Michigan State University is based on our commitment to objectivity. The same may be said of the society that funds much of our educational, research/scholarship, and outreach programs. That said, the public trust in higher education should not be taken for granted. We must all assume responsibility for considering anew the meaning of public trust and what we can do to strengthen this legacy as the foundation to assist those that come to MSU tomorrow.

¹ “Boldness in a Time of Challenge,” February 8, 2007
- <http://president.msu.edu/speech.php>

OBJECTIVITY, INTEGRITY, AND ACADEMIC FREEDOM

By Leonard M. Fleck

Professor of Philosophy and Medical Ethics

Are the three values captured in the title of this essay compatible with one another? I certainly wish to defend an affirmative answer to this question (as I suppose the vast majority of academics would as well). But my more controversial claim (possibly) is that academic freedom needs to be subordinated to the values of objectivity and integrity. I think of myself as a loyal friend of academic freedom. Academic freedom protects our right to take unpopular positions on socially and politically controversial issues. However, if we take such positions, then we are professionally morally obligated to justify our views by appeal to the most objective and inclusive evidence available. Academic freedom does not give us a right to skew the evidence or selectively use evidence in order to defend a view to which we are committed more for personal reasons than impersonal reasons.

The integrity of academic research depends upon the objectivity with which that research is carried out. If academic research were a practice wholly internal to academia in the way that theological disputes might be wholly internal to a particular religious sect, then we might not have to be especially concerned about objectivity. But the fact of the matter (certainly since the middle of the 20th century) is that academic research today is very intimately connected to social problem solving, very often under the auspices of government seeking public policy solutions for a broad range of social problems. Think about embryonic stem cell research, global warming, alternative energy sources, human cloning, genetically modified foods, and more effective educational strategies for K-8. In the remainder of this essay I want to focus on that connection to government.

The distinctive feature of government as a social institution is that it alone has the legitimate right to employ coercion to enforce its will, ideally the

will of a responsible and reflective democratic majority seeking to protect public interests rather than self-serving special interests. The political philosopher, John Rawls, has introduced into the literature the concept of “public reason.” Public reason is a point of view that all citizens in a liberal pluralistic democratic society must be capable of achieving if we would hope to live peacefully with one another when we need political resolutions to divisive social issues. It is a point of view that is neutral or agnostic with respect to all religious views or comprehensive philosophic views or ideological political views. It relies upon the best methods of science for determining what the politically relevant “facts of the matter” are, and it depends upon the best methods of analytic moral reasoning to identify moral values and considered moral judgments that all reasonable citizens ought to be able to endorse *as citizens* wishing to live peacefully in a pluralistic society.

On Jan. 21, 2007, *The New York Times Magazine* carried a long article by Emily Bazelon examining the post-abortion syndrome. Anti-abortion activists have appealed to this phenomenon as a public health reason for putting in place state laws that would ban abortion entirely or impose stringent access limitations to the procedure. Bazelon reports that there are about 1.3 million abortions each year in the U.S., and there may be tens of thousands of women who have suffered what is referred to as “post-abortion syndrome.” This syndrome is described as including intense (sometimes disabling) feelings of guilt and depression. At least one state legislature (South Dakota) took this information as sufficient justification for passing a law that banned abortion in the state (except for threats to the life of the mother). Other research, however, has shown that this very same range of harmful psychological feelings is experienced by the same percentage

of women who had unwanted pregnancies who carried them to term as those who chose abortion. Likewise, 20% of women who have an abortion have feelings of depression afterwards, which is the rate of depression for all women 15-35 years old. Other research shows the same percentage of women experience significant psychological distress after birth as after an abortion.

My goal in introducing this example is not to make any judgment at all about post-abortion syndrome. I cannot do that competently because I am a philosopher, not a social science researcher. At least 99.9% of our citizenry are not social science researchers either. But they depend upon the objectivity and integrity of the researchers who do this work in order to make more thoughtful and reasonable judgments about the sort of policies that should or should not be adopted in relation to this phenomenon. This is what public reason requires if we are to make reasonable policy choices in matters as controversial and divisive as abortion-related issues.

Bazelon wrote her essay to show how shoddy and disingenuous was the research that anti-abortion activists relied upon to support their appeal to the post-abortion syndrome. However, academic researchers are human and may have feelings just as strong about the rights of women that could just as easily corrupt the objectivity and integrity of their research in this regard. If academic researchers permit such strong feelings to skew or distort their research in order to provide scientific support for a favored cause or policy (no matter how right or noble), then they are as guilty of corrupting public reason as those criticized by writers such as Bazelon. Most certainly the value of academic freedom ought not be used as a shield to protect from discovery such violations of scientific standards of objectivity.

I need to put my point more strongly. Academic researchers who compromise scientific standards of objectivity are not *as guilty* as non-academic citizens of corrupting public reason; they are *more* guilty. They are more open to justified moral

criticism because, as I have argued elsewhere (*Journal of Public Service and Outreach*, Fall, 1999), universities today are the laboratories and repositories of public reason. Academic researchers are supposed to be its responsible guardians. As I wrote in that essay, "One of the most important roles universities play in society is that of modeling, motivating, and sustaining respectful, rational, democratic deliberation regarding controversial, complex, deeply divisive moral and political issues. In a culturally diverse, ethically pluralistic society we need a medium for rationally shaping public policy in value-laden matters that can be seen as legitimate from a very broad range of cultural and value perspectives."

Again, think of the tens of thousands of controversial policy choices we (democratic citizens) must thoughtfully and fairly address regarding medical research, genetic research, environmental research, energy research, and so on; and think of all the relevant complex scientific matters that have a bearing on making wise and reasonable policy choices in these matters. The quality of our political life as a reasonable and peaceful life will be severely threatened if the primary practitioners of public reason (academic researchers) permit the objectivity and intellectual integrity of their research to be compromised by either righteous indignation or seductive self-interest. Finally, in neither case are appeals to academic freedom wise or warranted. On the contrary, such appeals would be irresponsible and ultimately subversive of the value they would hope to defend.

Note: Dr. Fleck contributes each year to the Graduate School's Responsible Conduct of Research series. His topic is: The Ethical Challenges of Contemporary Academic Research: Whose Rights? Whose Responsibilities? Whose Common Good?
<http://grad.msu.edu/all/respconduct.htm>

PERSPECTIVES AND SOCIAL RESPONSIBILITY IN ANTHROPOLOGY

By Mindy Morgan

Assistant Professor of Anthropology

Anthropology has long been involved in the struggle to define objectivity in disciplinary terms and to place it within larger discussions regarding responsible research. Currently, anthropologists are engaged in substantive conversations about how to conduct research that is not only methodologically rigorous and theoretically grounded, but also ethically responsible and relevant to the communities in which they work. As a discipline, anthropology has based itself on knowledge that has been generated by systematically observing, participating in, and representing other people's lives. Many communities have generously opened their homes to anthropologists and included them in the most intimate of social interactions. Anthropologists, however, have often not repaid this debt in kind—exposing secrets and information that might benefit western definitions of science, but not the host communities.

During the early years of the discipline in the mid-19th century, there was a concern that the field be considered equivalent to the natural sciences in terms of methodological and theoretical accuracy. In earlier ethnographic works, this often resulted in the sublimation of community wishes to the needs of so called “scientific rigor.” These works also emphasized the role of the distanced observer; the outsider anthropologist who conceivably did not carry preconceived or biased notions that would influence analysis. This approach ignored the fact that even distanced observations were value-laden, and were even more pernicious since these judgments were often taken as “facts” while crucial issues such as the relationship between researcher and subject were ignored. This was especially true in the case of linguistic anthropology where researchers often assumed that since the emphasis was on language description and documentation, that the work was more “objective” than other subjects

of anthropological inquiry. However, linguists were able to dictate who they talked to, set the standards for linguistic competency, and establish writing systems that benefited scholarly study but not necessarily the language communities.

These attitudes continued through much of the 20th century, until the discipline went through a deep reflexive pause in the 1980s when people began to question established disciplinary practice (Clifford and Marcus 1986, Rosaldo 1989). These discussions included the realization that power differentials existed between researchers and communities that made “objective” work impossible. Two scholars, Susan Gal and Judy Irvine, have thought about this in depth, especially as it relates to the field of linguistic anthropology. In their recent writings, they have illustrated how unacknowledged biases in linguistic description and the emphasis on classification have in fact influenced language use in communities in Africa as well as Europe. Language maps and relationships were drawn that showed European biases and assumptions and actually ignored facts on the ground that contradicted the analyst's theories. They conclude, “[T]here is no view from nowhere, no gaze that is unpositioned” (Irvine and Gal 2000:36). This acknowledgement has resulted in more attention to applied work that both involves and directly benefits the host communities. It also meant recognizing that communities have their own agendas and that there needs to be more access to and sharing of research.

This discussion was of particular importance in regard to anthropological research with Native American communities, the area in which I primarily work. In 1969, the influential Native American scholar, Vine Deloria Jr. published his essay, “Anthropologists and Other Friends,” which took aim at the insular field of Cultural Anthropology and critiqued researchers' lack of responsiveness

to and dialogues with contemporary American Indian communities (Deloria 1969). As Deloria rightly observed, anthropologists had been visiting Native communities and publishing materials about them without considering the impact of the initial research as well as ultimate scholarship on community practices and relationships. Implicit in this critique was also the failure of anthropologists to recognize that their works were being read and assimilated by the local communities. Some have argued that this interrogation of anthropological practice that began within Americanist circles in the 1960s and 70s set the stage for the larger self-reflexive critique in discipline in the 1980s (Strong 2004:345). Recognizing the non-reciprocal nature of much of anthropological research, tribes also began to more tightly regulate and control research conducted among Native communities particularly by outsiders (Scheper-Hughes 1987). Since that time, researchers, both Native and non-Native, have tried to work collaboratively with Native communities to identify research questions and to create respectful research protocols.

In the current environment, the idea of “transparency” has replaced the idea of objectivity. Practically speaking, this means an acknowledgement in publications and other forms of research dissemination the following: 1) the role of the researcher vis-a-vis the community; 2) the process through which the research question was developed; 3) and disclosure of any information as to why certain voices/perspectives could not be included. This also means being explicit about methods and linking method directly to the question that is being asked. Further, attention must be paid to how the final outcomes of the research impact the community. Importantly, this needs to be assessed in terms of both positive and negative effects and intended and unintended consequences.

In the current environment, the idea of “transparency” has replaced the idea of objectivity.

On a more personal note, what are the implications of this within my own work? My research concerns how Native American communities are addressing issues of indigenous language maintenance and has two primary components; investigating how local language ideologies impact language revitalization efforts, and aiding communities in developing culturally appropriate language curricula. Most of my research has been with tribal communities in Michigan and Montana, and therefore when I write, I anticipate my audiences as being both the anthropological community and the Native communities with whom I work. My work is highly qualitative in regards to methodology. I interview

people, work with speakers and teachers of indigenous languages, and conduct archival work concerning historical views toward language and language use.

In my most recent work, I investigated cultural understandings of literacy within a language program that promoted indigenous language writing. I had been involved in the language program as a curriculum facilitator, and therefore my “results” would necessarily be biased in support of the program with which I was working. Even if I attempted to survey the community for a range of opinions, most people knew that I was affiliated with the program and therefore out of consideration would hold back negative judgments. My work was also seen as part of larger social networks within the reservation. During the language project, I worked with specific individuals and families. While this brought me into a very rich and rewarding network of relationships, it also meant that I did not work with others. Additionally, my own access to community members was limited by my position as an outsider, my gender, and my age. Simply, there were certain people who I could not work with because of established community values regarding appropriateness. Any research that

I attempted regarding the subject therefore would be admittedly partial.

As a result, I worked in collaboration with community members to find a question that would be beneficial to the community but also address critical issues within the field of anthropology. I made the decision to write an ethnohistorical study that used archival and other documents to understand community views toward both indigenous and English literacy. This allowed me to recover documents that were not generally accessible to the community—which was seen as a benefit, while allowing me to explore questions about how historical language ideologies affect current usage that could withstand the criteria of peer review.

In my capacity as a curriculum developer for the community language program, I was confronted with another issue related to responsible research conduct. Part of my job was to work with elder speakers on eliciting language materials to be used in Assiniboine lessons for the local tribal college. In this work, I quickly realized that there were certain prohibitions on what types of language knowledge was thought to be appropriate for a general audience. The materials used in the classroom needed to be culturally appropriate, but respect certain boundaries regarding types of knowledge and information. Certain subjects were not included in the lessons, and paradoxically these were often topics about which students would like to know. For example, some young people expressed interest in learning vocabulary used in particular ceremonies; however, this knowledge is considered esoteric and sacred and therefore was not included. Only certain people possess the right and responsibility to conduct certain ceremonies. This type of knowledge is also considered dangerous to individuals who have limited experience in these ceremonies. In my capacity, I needed to demonstrate to the elders that their wishes would be respected over scholarly concern with completeness and even competing interests from the wider community.

Through this process of working with the community, I found that this method of conducting

research is not only respectful but also can be respected for the results that are produced. As scholars engaged with both local and academic communities, we have the opportunity to change and modify the expectations of the discipline itself. Working with community members in research design does not exempt the researcher from being rigorous with methods, and explicit about how they are applied. Rather, it means that “objective” standards in anthropological research must be derived with and through community participation.

WORKS CITED

- Deloria, Vine Jr.; 1969 *Custer Died for Your Sins: An Indian Manifesto*. New York: Macmillan Company
- Clifford, James and George Marcus; 1986 *Writing Culture: The Politics and Poetics of Ethnography*. Berkeley: University of California Press.
- Irvine, Judith and Susan Gal; 2000 “Language Ideology and Linguistic Differentiation” in *Regimes of Language: Ideologies, Politics, and Identities*, Paul Kroskrity, ed. Santa Fe, NM: School of American Research Press, pp.35-83.
- Rosaldo, Renato; 1989 *Culture and Truth: The Remaking of Social Analysis*. Boston: Beacon Press
- Scheper-Hughes, Nancy; 1987 “The Best of Two Worlds, the Worst of Two Worlds: Reflections on Culture and Fieldwork among the Rural Irish and Pueblo Indians” in *Comparative Studies in Society and History* 29(1):56-75.
- Strong, Pauline; 2004 “Representational Practices” in *A Companion to the Anthropology of American Indians*, Thomas Biolsi, ed. Pp. 341-59. Oxford: Blackwell Publishing.

A PERSONAL PROFILE: STEPHANIE W. WATTS

“THE DATA ARE WHAT THE DATA ARE”: HOW ONE MSU PROFESSOR STRIVES FOR OBJECTIVITY IN HER WORK

By John Kinch

Visiting Assistant Professor of Writing, Rhetoric & American Culture

Professor Stephanie W. Watts' lab in the Department of Pharmacology and Toxicology on the fourth floor of the Life Sciences Building is busy this day as it is most days. She's been here since 5 a.m., which is not unusual. She and her lab colleagues—graduate students and post-docs—study hypertension; in particular, “the mechanisms by which arteries and veins contribute to this disease, in the hopes of developing novel treatments.” Hypertension affects approximately 20-30% of the world's population and places individuals at a higher risk for heart disease, stroke and kidney failure.

It's serious work and Watts is dedicated to her profession: her lab research, students, teaching, publishing, reviewing papers for a journal—and she's serious about a zeitgeist of science, objectivity.

Watts has been a professor for a dozen years. Still she says that, “the longer I'm in this job, the more I learn and the better job I hope I'll ultimately be able to do in avoiding those kinds of things that I think makes it hard to be objective.”

In fact, Watts' lab has a phrase that serves as its core value: “The data are what the data are.” In other words, if the data do not support your hypothesis then you go back to the drawing board. You don't shape the data to fit your hypothesis, which happens in science, sometimes intentionally, sometimes unintentionally. Watts believes that objectivity is a perspective, an approach, that as a scientist you can hone with practice and time.

“Being aware of objectivity is important and I'm always thinking, ‘Am I doing this research experiment the same way?’” Watts says. “For example, we had a piece of data that is absolutely contradictory to a hypothesis I've had in my lab for several years. It blew my mind because I completely

wasn't expecting it. And I can understand how people would say I'll never publish these data because they do not agree with my hypothesis. But you cannot do that. You have to take the data for what they are and integrate them into your research. It's natural for a hypothesis or idea to change over time. It's being open to that and not feeling that as a scientist you've failed if it comes out differently than expected. It's just that somewhere along the line you didn't think about it exactly right. And you now have a chance to change.”

Watts understands well the issues around publishing research. She's an associate editor for the *Journal of Pharmacology and Experimental Therapeutics (JPET)* and in this role has reviewed hundreds of papers for publication. She goes to great lengths to create an objective system for her reviews.

Watts sends papers for consideration to a number of reviewers and then weighs each response of whether to publish or not. In doing this, she also needs to play detective of sorts because the “objective reviewers” she selects for each paper may in fact have biases.

“The scientific community, although it seems big, is actually small and there are all kinds of inner connections between people, some of which are obvious and some of which aren't. So I try to choose reviewers that don't have personal connections to the group seeking to publish, that haven't published with them in the past, and that hopefully haven't just immediately been trained by that group,” she says.

Watts doesn't “review” the papers herself as an editor—not because she's ducking the work but because it is “a dangerous thing for an editor to get in the habit of being reviewer and decision-maker.

That's the reason you have reviewers: to get as many independent assessments as you can. It's an imperfect system because we're imperfect too, but overall it works pretty well" according to Watts.

But it also works for *JPET*, which is one of the most respected journals in its field. Without diligence, without striving for objectivity in one's own work and in that of one's colleagues, Watts feels the reputations of journals, such as this one, and scientific research as practiced in her lab and others, begin to erode. That's a slippery slope for empirical science.

Watts feels perhaps the most important lesson she imparts to the grads and post-docs in her lab on pharmacology and toxicology, on the scientific

method, and on beginning an academic career is also the most straightforward. "Data are facts," she says, emphatically. And she always strives to be open and honest with younger and lesser established professionals in communicating her professional insights as well as in reviewing their work fairly and objectively just like her own.

"One of the best ways to be vigilant for objectivity is to use the wonderful brains you have around you. If you have a concern, lay it out for a colleague and ask for their opinion. Ultimately, you will come to an informed decision that feels right to you. By trusting in a colleague, you show value in the scientific community and commitment to objectivity; this can only make us better," says Watts.

MSU PROFESSOR LAWRENCE BUSCH GOES INSIDE A RESEARCH CONTROVERSY

By John Kinch

Visiting Assistant Professor of Writing, Rhetoric & American Culture

Lawrence Busch, a MSU professor of sociology, was part of an outside review team that in 2004 evaluated an agreement between the University of California Berkeley (UCB) and Novartis, a biotechnology company, that was extremely controversial when it was signed. Novartis gave \$25 million to 23 faculty members in UCB's Department of Plant and Microbial Biology to support research that might lead to the development of genetically engineered seeds, which Novartis might then bring to the marketplace.

In the end, the research led to no new discoveries of consequence and Novartis did not license anything. In fact, by many accounts, Novartis was very much hands-off with the researchers, not pressuring them to develop commercially viable inventions.

This, it turned out, didn't matter. The relationship earned UCB a cover story in the *Atlantic Monthly*

as "The Kept University" and the incident has reverberated throughout research universities, prompting questions such as these from a *Sacramento Bee* story on UCB: "Is the primary purpose of a university to create knowledge? To stimulate economic growth? Train high-tech specialists needed in a modern economy? Educate the masses? Be of service to its customers?"

Lawrence Busch and colleagues have based a new book on their investigative report that is both an exploration of this particular incident, and a meditation on the essential questions around conflict of interest and objectivity that defines modern campuses.

The book, *Universities in the Age of Corporate Science: The UC Berkeley-Novartis Controversy*, discusses the institutional mechanisms for achieving objectivity in departments and research laboratories.

As a way of introducing the passage reprinted below, Busch speaks of objectivity more in terms of cultural or psychological mechanisms.

“One of the great confusions in scholarly research is the notion that objectivity is in here,” says Busch, pointing to his head, seated in his office on the fourth floor of Berkey Hall. “It isn’t. It’s out here. Objectivity is determined by a community. It’s not determined by any individual.”

In a department or a lab, Busch continues, among researchers there emerges a kind of communal checks and balances with each other’s research that can be considered objective in the aggregate. But what if—as in the case of UCB—the entire department is working on the same research issue, funded by the same source? What happens to the community’s ability to be objective? Does it begin to function more as an individual might, which Busch argues is susceptible to subjective passions—in part, simply, because he or she cares so much of the work?

“You don’t do research unless you’re committed to it,” says Busch. “But you have to be passionate about research, otherwise this is the most tedious stuff in the world—any kind of research, whatever field we’re talking about, right? For any kind of scholarship, you have to be committed to it. And that’s precisely the opposite of commonsense notions about objectivity, which is supposedly dispassionate and is the cold, hard eye of observation. Well, that’s again where the community comes in. The community determines whether or not that stuff is objective—is an objective description of reality or whether it’s just rubbish. People are always passionate about what they’re doing. This notion of the armchair researcher who sort of sits around and weighs the hypothesis carefully, I think it’s just total nonsense. I’ve never met such a person and I’ve been studying scientists now for 30 some odd years, they just don’t exist.”

From “Chapter 11: Rethinking Land Grant Universities” in *Universities in the Age of Corporate Science: The UC Berkeley-Novartis Controversy*.

“The idea that objectivity may be compromised by self-interest is hardly new. It is typically addressed through attention to professional ethics (or codes of conduct) and COI policies. The public and well-tempered policies of UC provide a useful illustration for research universities in general. Individual conduct is spelled out in considerable detail in UC’s code of conduct. The university’s COI policies conform to state law aimed at protecting the public interest. They define a conflict of interest as “a situation in which an employee has the opportunity to influence a University decision that could lead to financial or other personal advantage, or that involves other conflicting official obligations” (University of California, Office of the President 1989). While the formation of COI policy in the 1980s and 1990s focused on entrepreneurial faculty and their external financial interests, UCB-N raised issues of a different sort. In this case, it is the *institution’s* potential for COI relative to funds it receives that is at issue.

UC’s existing COI policy and procedures concentrate on the financial implications of licensing agreements and the governance of on-campus research. Yet the financial return from agricultural biotechnology is not determined solely by the terms of IPR agreements. The financial interests of individual researchers, academic units, UCB, and UC as a whole are also linked to governmental regulatory decisions, the documented results of field trials, findings on environmental consequences, findings on alternative approaches to agriculture, findings regarding agricultural economics, and the state of the public dialogue on biotechnology. The degree to which individuals affiliated with UC inform or influence any of these activities, either directly or through other organizations, could constitute a potential conflict of interest. For example, a faculty member who uses his or her influence to help persuade the Environmental Protection Agency that a new plant variety will have no harmful effect on the environment could yield financial benefit at public expense under current IPR agreements. In the same fashion, if the institution reduces its support of environmental research while holding a financial stake in the success of agricultural biotechnology, the same adverse trade-off could occur. These scenarios illustrate conflict deriving from a duality of purpose or a conflict of mission. Perceived COI endangers the credibility of fair and transparent agricultural, regulatory, and environmental research...”

Lawrence Busch was one of several authors of the Novartis volume. The complete citation follows:

Rudy, A.P.; D. Coppin, J. Konefal, B.T. Shaw, T. Ten Eyck, C. Harris, and L. Busch. 2007. *Universities in the Age of Corporate Science*:

The UC Berkeley-Novartis Controversy.
Philadelphia: Temple University Press.

Among the authors, T. Ten Eyck, C. Harris are also MSU faculty. A.P. Rudy is former MSU faculty. J. Konefal and D. Coppin are a Ph.D. student and post-doc, respectively.

Excerpt appears with the permission of Temple University Press (<http://www.temple.edu/tempress/>).

OTHER WORKS CITED:

Lau, Edie, "Five-year deal with Novartis hurt UC Berkeley," *Sacramento Bee*, August 1, 2004.

Press, Eyal and Jennifer Washburn, "The Kept University," *Atlantic Monthly*, March 2000.

SHOULD OBJECTIVITY BE A GOAL FOR JOURNALISM?

By Stephen Lacy

Professor of Communication and Journalism

Survey research indicates that many U.S. citizens believe journalism should be “objective.” However, the research does not really delve into just what that terms means to them. Many people seem to think that journalism is objective if it is consistent with their beliefs and not objective if it contradicts what they believe. Perhaps a better way of evaluating journalistic objectivity is to examine the issues that have been raised by reporters and scholars. Dictionaries define objectivity (as opposed to opinion writing) as journalism not influenced by personal feelings and biases. However, this does not distinguish between purposeful bias and bias that is caused by the psychological processes of selectivity (exposure, attention, perception and retention). The fact that people cannot escape selectivity makes it unlikely that reporting can be completely devoid of all biases. Yet it is important to recognize that the unconscious influence of previous experience is not an either/or phenomenon. Because journalists can make an effort to counteract non-purposeful bias, bias in news content is a matter of degree.

Any discussion of just how this happens should start with the acknowledgment that the history of journalism is not marked by the continuous effort of journalists to be objective. The post Revolutionary War press fell into two types. The *political press* was extremely partisan, and tended to support either the Federalist or Anti-Federalist parties. The *mercantile press* tended to contain announcements about events and business activities and did not deal with controversial subjects to a great degree. Even the first mass newspapers, known as the Penny Press, were not concerned with objectivity. These papers were sensationalist in nature, often concentrating on crime and scandal. They were even known to publish hoaxes.

The current concept of objectivity developed during the late 1800s for many reasons, including an

effort to avoid offending readers as the newspaper tried to develop the largest readership possible to sell to advertisers. Today, the discussion over objectivity continues, but the term has become somewhat of a burden because increasingly people realize that reporters cannot be totally “objective.” The goal of fact-based journalism, versus advocacy journalism, is to try to control the bias that shapes news content. This is done in a variety of ways. One way is to aspire to report content that is fair and balanced. Fairness means all important sides of a controversy are presented. Balance means that journalists aim to avoid giving a particular side of an issue more attention than other sides, unless that imbalance is appropriate to the story. (As Dan Rather said, “Look, not every story has two sides. Some stories only have one side. Some stories have 14 sides.”¹¹) Being fair and balanced can sometimes be even more difficult when sources presenting some sides will not speak with journalists, but it remains a goal.

In order to achieve fairness and balance, journalists depend on two techniques. First, they concentrate on the process of newsgathering and reporting, and second, they aim for agreement among the reporters and editors involved in the process. Journalists have a process with certain rules. For example, during the Watergate era, the *Washington Post* expected two independent sources to verify a statement before the paper would publish it. Rules can vary from news organization to news organization, but most have formal and informal rules that are followed most of the time. Even with such rules, decisions about what and what not to publish are not always clear. In those situations, the journalists depend on the fact that newsgathering and reporting

¹ “A Newsman’s Credo, Part II,” *The Open Mind*, December 9, 1994. http://www.theopenmind.tv/tom/searcharchive_episode_transcript.asp?id=1119

is a team process. Reporters, editors, photographers and designers all participate in the development and presentation of news. The interaction among these journalists helps to counteract non-purposeful bias of individual journalists. A journalist convincing herself or himself of the truth of an interpretation is not enough. The other members of the team must be convinced as well.

Phil Graham, former publisher of the Washington Post, called journalism the “first rough draft of history.” The emphasis is on “rough.” The need to publish on at least a daily cycle can create bias in articles because the time needed to question and control bias is limited. As news organizations increasingly emphasize news on the Web, the

potential for increased non-purposeful bias will grow. Of course, after news is published, it is subject to debate similar to that found within scientific communities, and other journalists will follow up with further stories if the event or issue is important. Errors can be corrected and the journalistic equivalent of replication can be pursued.

Over time, historians try to filter the bias that can occur and generate a more accurate picture of what really happened. However, on a day-to-day basis, readers, listeners and viewers need to realize that even when most journalists strive to produce fair coverage, bias can creep into reporting. They need to seek multiple sources of news that will help them control for this bias.

The Office of Research Integrity, Office of the Secretary of Health and Human Services, reported in their June 2005 Newsletter (http://ori.dhhs.gov/documents/newsletters/vol13_no3.pdf) that the incidence of questioned images and computer manipulations of images as a percentage of total scientific misconduct cases increased from under 5% in 1993-94 to over 40% in 2003-04, thereby warranting special efforts to combat their incidence.

INTRODUCTION TO IMAGE EDITING ETHICS

By Douglas W. Cromey

Assistant Scientific Investigator, Cell Biology & Anatomy
University of Arizona, College of Medicine
Southwest Environmental Health Sciences Center

Reprinted with the permission of the author from http://swehsc.pharmacy.arizona.edu/exppath/micro/digimage_ethics.html

INTRODUCTION TO IMAGE EDITING ETHICS:

This topic is increasingly on people’s minds given that image manipulation “tricks” which took considerable darkroom skills now can be done quite easily by anyone using one of the powerful image editing programs that are available. A user does not even have to be intentionally malicious to alter an image in an unethical manner. Unfortunately, many are unaware of the issues or the effects of their actions.

Journalists have grappled with the credibility problems created by altered images since the early days of photography. In western society a photograph is typically assumed to be an accurate representation of reality, unless it is patently obvious that it has been altered (e.g., *SPY* magazine’s cover photo of a “pregnant” Bruce Willis in September 1991). Most readers seem to understand and expect that widely respected sources of information will adhere to a higher standard of photojournalistic ethics than sources such as “tabloid newspapers.”

Scientists are usually considered to be respected sources of information and there is the understanding within the scientific community that data must not be inappropriately manipulated. Unfortunately there seem to be very few well defined “ground rules” for what is an appropriate level of digital image manipulation and what is not. In an effort to start a dialog about this topic, the author would like to offer some observations and suggestions.

DIGITAL IMAGING GUIDELINES

1. Scientific digital images are data.

The data are arranged spatially in an xy matrix (or grid) and each individual element (pixel) has a numerical value that represents a grayscale or RGB intensity value. These data are a numerical sampling of the sample as presented by the data acquisition system (e.g., microscope) to the sensor (e.g., CCD camera). The data acquisition system and sensor are subject to all the limitations and aberrations that physics and instrument design may impose on the two devices. To the observer’s eye the image data may appear to accurately represent what can be seen, however, it is the user’s responsibility to understand the limitations of the particular instrument.

2. Digital images that will be compared to one another should be acquired under identical conditions.

Any processing of images that are to be compared should be identical, especially if they will be published as a group of images in a single figure. If there is a compelling reason that the images in a figure were processed differently, this must be explained in the publication or figure legend. Honesty is the best policy.

If background subtraction or white-level balancing (to compensate for uneven illumination, etc.) was performed, this should be acknowledged in the methods section.

3. Intensity measurements of digital images

should be performed on raw data and the data should be calibrated to a known standard.

Be aware that some instruments (e.g., fluorescence microscopes of many types) are subject to a number of known fluctuations over time as well as having other physics/electronics limitations. If you are unaware of, or can’t account for, the limitations of the acquisition instrument, you should not be performing intensity measurements.

4. Manipulation of digital images should always be done on a copy of the raw image data.

The original raw data file is the standard to which the final image can be compared. Maintaining a copy of the unaltered original image is the user’s only protection against accusations of misconduct. This is also the only way that users can recover from a mistake in image processing.

5. Simple adjustments to the entire image are usually acceptable.

This would include techniques that are similar to standard darkroom techniques (e.g., different contrast grades of paper, changes in development time). With digital images this would include performing “reasonable” adjustments of the levels and gamma settings. Small adjustments to the brightness and contrast are usually acceptable, however, large adjustments are not recommended.

6. Cropping an image is usually acceptable.

7. Manipulations that are specific to one area of an image and are not performed on other areas are questionable.

This would include techniques analogous to “dodging” and “burning” in a photographic darkroom. This is a disputed issue. Purists would state that selective enhancement should never be performed, however, there are rare occasions when it is legitimate to enhance a specific area in an image. Honesty is the best policy, if portions of an image for publication were selectively enhanced, the author should state it clearly in the figure legend.

8. Use of software “filters” to improve image quality is usually not recommended for biological images.

Commercial software designed for desktop publishing cannot be counted on to appropriately and scientifically manipulate the data in a digital image. Digital image filters are typically mathematical functions (convolution kernels) that numerically change the data in the image. If not carefully used, they can create artifacts in an image that can lead to misinterpretation of the data. If filters must be used, they should be noted in the figure legend of published images (include software version, specific filters and any special settings that were used).

9. Cloning objects into an image, or from other parts of an image, is very questionable.

Users often consider using the technique of cloning sections of an image to “clean up” a dirty preparation. If the image requires this much processing, the best solution is to go back and take another image from the sample or a new sample prepared under the same conditions. Use of cloning techniques to create objects in an image that did not exist there originally (e.g., “creating” a new gel band) is completely unethical.

10. Avoid the use of lossy compression.

There are very few good reasons to use the JPEG file format on scientific digital images (other than displaying an image on a web page). JPEG compression uses the discrete cosine function to reduce the file size, however, it also changes the xy resolution of the image and the intensity value of any given pixel. If you must use JPEG, perform the compression as the last thing that is done to an image. With most image manipulation programs, opening & closing a JPEG image multiple times runs the compression algorithm on the image multiple times, further degrading the image each time.

The Joint Photographic Expert Group (JPEG) states “In addition, many aspects of scientific and industrial usage involve subsequent processing of a digital image, for example to enhance features or count items. Using any

form of lossy compression for images in this context may create problems – after all the information thrown away during lossy compression is generally that information that is imperceptible to a human eye - not necessarily showing the same characteristics as computer image processing software.” See: <http://www.jpeg.org/apps/scientific.html>

Dr. John Russ, author of The Image Processing Handbook, states “The reason for recording images in scientific studies is not to deep remembrances of familiar objects and scenes, but to record the unfamiliar. If it is not possible to know beforehand what details may turn out to be important, it is not wise to discard them. And if measurement of features is contemplated (to measure size, shape, position or color information), then lossy compression, which alters all of those values, must be avoided.” pg 48 of Seeing the Scientific Image, published on-line at <http://drjohnruss.com/downloads/seeing.pdf>.

An editorial in *The Journal of Cell Biology (JCB)* 164:11, 2004) states “It is tempting to acquire your image files in JPEG format to save disk space, but doing so compromises your data. Always use TIF format.”

An excellent tutorial demonstrating the problems with using JPEG for scientific images is available at Florida State University’s Molecular Expressions website: <http://micro.magnet.fsu.edu/primer/java/digitalimaging/processing/jpegcompression/>

11. Resolution and magnification issues.

Digital images of real world objects sample an object in a way such that each pixel in the image has a scale. This scale may be in meters per pixel for satellite images or in tenths of microns per pixel for microscope images. Ideally the scale is the same in both the X and Y dimensions; however, this is not always the case. This leads to several important points:

The ability of microscope to resolve (separate two small, adjacent objects) is limited by the wavelength of light used and the numerical aperture of the objective lens (Rayleigh criterion). “In most cases, to ensure adequate sampling for high-resolution imaging, an interval of 2.5 to 3 samples for the smallest resolvable feature is desirable.”¹ Note that this statement means 2.5-3 samples/pixels in both the x and y dimensions. **Undersampling (using too few pixels to describe a feature in a sample) can lead to artifacts masquerading as real structures.** Oversampling is not as problematic, however, it should

¹ <http://micro.magnet.fsu.edu/primer/java/digitalimaging/processing/samplefrequency/index.html>

be noted that oversampling does not yield any additional resolution information from the specimen.

This is an important technical point, for more information see:

<http://www.olympusconfocal.com/theory/resolutionintro.html>

<http://micro.magnet.fsu.edu/primer/java/digitalimaging/processing/spatialresolution/>

The magnification of the image is determined by the difference between the original scale of the pixel and the scale of the pixel in its final form (e.g., paper printout, projected on the wall of a large lecture hall). Since it is often impossible to know in advance what the final magnification will be, a scale bar of known size is the best way to express the magnification. Journals may resize your image, so providing a numerical magnification number in a figure legend may result in errors.

12. Be careful when changing the size (in pixels) of a digital image.

Changing the size of an image (the number of pixels in X and Y) can introduce resampling artifacts. Decreasing the image size (downsampling) can cause the XY resolution in an image to be greatly reduced. If the size reduction is not by a power of two, the software program has to be “creative” in determining the intensity values of each pixel (guessing). Increasing the image size (upsampling) causes the software to interpolate (guessing) to “create” pixels in between the existing pixels. Upsampling an image does not increase the resolution, in fact it may make it more difficult to resolve features because of aliasing artifacts. In either case, users should insert a magnification scale bar prior to resampling (magnification may be nearly impossible to calculate afterwards).

ADOBE PHOTOSHOP TIP: if you are only changing the dpi of the image for different output devices (e.g., printers), uncheck the resample image box that’s found at the bottom of the window that appears when invoking the **IMAGE|IMAGE SIZE** menu item. By doing this you change the scale of the image (72 dpi, 300 dpi, etc) without changing the number of pixels in the width or height boxes.

Note, this web document is a work of the author and endorsement by the Microscopy Society of

MICROSCOPY SOCIETY OF AMERICA’S POSITION ON ETHICAL DIGITAL IMAGING

“Ethical digital imaging requires that the original uncompressed image file be stored on archival media (e.g., CD-R) without any image manipulation or processing operation. All parameters of the production and acquisition of this file, as well as any subsequent processing steps, must be documented and reported to ensure reproducibility.”

“Generally, acceptable (non-reportable) imaging operations include gamma correction, histogram stretching, and brightness and contrast adjustments. All other operations (such as Unsharp-masking, Gaussian blur, etc.) must be directly identified by the author as part of the experimental methodology. However, for diffraction data or any other image data that is used for subsequent quantification, all imaging operations must be reported.”

Resolution adopted at the 2003 summer council meeting - *Microscopy Today* Nov/Dec 2003, p61.

JOURNAL OF CELL BIOLOGY - INSTRUCTIONS TO AUTHORS (2004)

“No specific feature within an image may be enhanced, obscured, moved, removed, or introduced. The grouping of images from different parts of the same gel, or from different gels, fields, or exposures must be made explicit by the arrangement of the figure (e.g., using dividing lines) and in the text of the figure legend. Adjustments of brightness, contrast, or color balance are acceptable if they are applied to the whole image and as long as they do not obscure or eliminate any information present in the original. Nonlinear adjustments (e.g., changes to gamma settings) must be disclosed in the figure legend.”

From *J. Cell Biology* 166 (1):11-15

America or the *Journal of Cell Biology* should not be implied.

OBSERVATIONS ON SCIENTIFIC OBJECTIVITY

By Linda Triemer

Director of Compliance and Standards, Office of Regulatory Affairs

The conduct of research is a common activity. It may be done while shopping for a car, a college, or an airplane ticket. However, scientific research is expected to follow disciplinary methods that ensure objectivity and reproducible unbiased results. I offer the following observations from my experience as a researcher and scientist in academia and in the private sector, and as a research compliance officer. Often my observations lead to more questions.

Researchers believe their work is objective. They lose objectivity when their opinions replace their work. Several years ago I attended a seminar given by an internationally noted physicist who concluded that research on genetic cloning should not be conducted. I ask myself, when a physicist makes conclusions about genetic research are these objective statements or opinions?

All researchers need funding. Objectivity is lost when money dictates the work. Research funds from any source can affect the objectivity of the work by limiting the scope, publication and ownership of the research. Is there really a difference between industry and government money if future funding, or extra consulting work, is dependent on positive research results?

Good methods guarantee good data. But some data are not worth the effort. Sometimes the scientific “questions” are only important to the sponsor to improve the marketing of a product, or important to the researcher to publish yet another article or important to the researcher to publish yet another article on a well-studied subject that does not appreciably advance the field, only the length of a personal CV.

Good scientists communicate. Roadblocks to communication strain objectivity. Some typical roadblocks: the sponsor limits the audience, the researcher is fearful of ideas being plagiarized before

publication or funding decisions are made, or the publisher only publishes “positive” results.

Peer review is always good—despite having reviewers who may be competitors. Certainly, a researcher knows their specific work more than any peer reviewer, and it is not unusual to hear researchers complain that reviewers do not have the right expertise. However, advancing scientific understanding requires convincing even the most adamant detractors and is the basis for paradigm shifts.

Research on researchers. A report of a 1993 survey of scientists who received funding from the National Institutes of Health showed that: “... withholding (of research results) is more common among the most productive and entrepreneurial faculty. These results also suggest that data withholding has affected a significant number of life-science faculty and further study on data-withholding practices is suggested.” Blumenthal et al (1997) *JAMA* 277 (15): 1224-1228.

A study of clinical trial researchers funded by the Canadian Institutes of Health between 1990 and 1998 resulted in the finding that “Selective reporting of outcomes frequently occurs in publications of high-quality government-funded trials.” In 40% of the trials, there was a difference between the primary outcomes and what was published; the better the outcome, the more likely that it was published. Chan et al (2004) *CMAJ* 171 (7).

Evaluation Criteria for Research Reports

Here are some questions that I pose when I evaluate research proposals and scientific publications:

- 1. Publication** – are there restrictions on publishing the results or on authorship?
- 2. Peer Review** – was it conducted by scientific peers?

3. **Financial rewards** – is the researcher (or family) gaining financially from the research results?
4. **Scientific merit** – who benefits from the research, does it merit researching at all?
5. **Scientific methods** – do they follow standard procedures, e.g., Good Laboratory Practices?
6. **Study design** – is the sample size adequate, appropriate to the question?
7. **Audit** – were there quality control, quality assurance procedures in place?
8. **Controls** – was there a comparison group appropriate to the study?

9. **Interpretations** – are the reported conclusions supported by the reported results, methods, design and uncertainties?
10. **References** – are they available, high quality peer-reviewed publications?

Note: Dr. Triemer was formerly Director of Research for a nonprofit medical quality improvement organization and has worked as a Senior Science Analyst for a private law firm specializing in science litigation; as a Senior Staff Scientist for a multinational petrochemical company; and as a Faculty and Researcher for a public medical school and university.

DISCLOSURE, REVIEW AND MANAGEMENT OF CONFLICT OF INTEREST SITUATIONS AT MSU

By Terry A. May

Interim Faculty Conflict of Interest Information Officer

The need to protect public interests from undue private influence was recognized even before the Michigan Legislature authorized the formation of the Agricultural College of the State of Michigan, now Michigan State University, in 1855. Two years earlier, Congress passed the first federal bribery statute of general application, an “Act to Prevent Frauds upon the Treasury,” that sought to prevent the misuse of federal funds by any person charged with a public trust¹. Specific initiatives to protect important trusts held by institutions of higher education generally, and MSU specifically, occurred much later. Here, I highlight in chronological order of their establishment, the laws, regulations, policies, and guidelines that currently govern conflict of interest situations at MSU, culminating with the recent (April 13, 2006) approval of a comprehensive Faculty Conflict of Interest Policy.

Each is important in its own right, and there is both a collective responsibility as well as individual responsibilities for understanding these requirements and to comply fully. The goal is to not just achieve strict compliance, although that is important, but also to inform, educate, and stimulate discussion about when conflicts of interest become so troublesome as to be considered improper and to be avoided. Such local discussions within the context of specific disciplines and academic cultures are intended to lead to consensus that will be helpful to others in understanding the trusts that may be jeopardized by a conflict of interest situation and in avoiding the most serious conflict of interest situations entirely.

- “**Outside Work for Pay**” - Academic Human Resource Policy (*August 9, 1951; last revised May 5, 2006*)²

¹ Footnote 8 to U.S. Supreme Court decision, DIXSON v. UNITED STATES, 465 U.S. 482 (1984).

² <http://www.hr.msu.edu/HRsite/Documents/Faculty/Handbooks/Faculty/AcademicPersonnelPolicies/iv-outsidework.htm>

“This Policy is intended to protect the integrity of the faculty—University professional relationship, to ensure that approved outside work for pay is consistent with the University’s mission, and to provide that faculty members remain accessible to students, colleagues, and the public.”

“This Policy does not apply to unremunerated outside activities, whether of a charitable or professional nature. However, faculty members are expected to arrange their outside activities so as to avoid conflicts of commitment. A “conflict of commitment” occurs when the time and attention a faculty member devotes to outside activities interferes with the performance of his/her responsibilities to the University.”

- “**Outside Employment**” – Board of Trustees Bylaws – *Article 7 (December 16, 1965; last revised January 10, 2003)*³

“A full-time member of the faculty or staff may not be employed for remuneration by agencies other than the University except under the established rules of the Board and with the approval of the appropriate University authorities. In all cases there shall be no conflict of interest between the activity of the faculty or staff member and the University function. Any proceeds realized from such activity may be proportioned between the University and the faculty member where institutional time and/or facilities are involved.”

- “**Contracts of Public Servants with Public Entities**” – Michigan Law - MCL 15.321 et seq. (effective *September 1, 1968*)⁴

Any contract between the University and any of the following requires Board of Trustees approval – 1) an employee of the University; 2) any partnership or unincorporated association of which the employee is a partner, member, or employee; 3) any private corporation of which the employee is a director, officer, or employee; or a stockholder owning more than one percent (1%) of the total outstanding stock

or with a total market value greater than \$25,000; or 4) any trust of which the employee is a beneficiary or trustee.

Board approval is required even when the employee with the conflicting interest is not initiating, advocating for, or negotiating the terms of the contract. Such contracts often relate to, but are not restricted to, the commercialization of intellectual property through companies where faculty hold financial interests. Contracts for procurement of goods and services are also governed by this law.

- **Conflict Situations** – Research & Creative Endeavor (March 20, 1970)⁵

The statement on conflict situations published in December, 1964, as a joint statement by the Council of the American Association of University Professors and the American Council on Education entitled, “On Preventing Conflicts of Interest in Government-Sponsored Research at Universities” was adopted by the Board of Trustees.

- **Interim Guidelines for Potential Conflicts of Interest in Academic Areas of the University** – Research & Creative Endeavor (October 22, 1982)⁶

“The potential for real and perceived conflicts of interest and conflicts of commitment that can arise when academic employees are simultaneously involved in more than one organization must be clearly identified by the individuals themselves and made known to their chairpersons, deans or other administrators so that any potentially detrimental influences can be avoided.”

“The growing frequency with which current or prospective faculty research provides a point of departure for commercial development of a technology is bringing new exposure of academic employees to potential conflicts of interest and conflicts of commitment. The University wishes to encourage the emergence of new high technology

³ <http://www.msu.edu/unit/trustees/bylaws/full.html#article7>

⁴ [http://www.legislature.mi.gov/\(S\(33nq2n3evxohn555zksxbf3o\)\)/documents/mcl/pdf/mcl-Act-317-of-1968.pdf](http://www.legislature.mi.gov/(S(33nq2n3evxohn555zksxbf3o))/documents/mcl/pdf/mcl-Act-317-of-1968.pdf)

⁵ <http://www.hr.msu.edu/HRsite/Documents/Faculty/Handbooks/Faculty/ResearchCreativeEndeavor/vi-conflictsituations.htm>

⁶ <http://www.hr.msu.edu/HRsite/Documents/Faculty/Handbooks/Faculty/ResearchCreativeEndeavor/vi-interimguidelines.htm>

industries while avoiding the problems that potential conflicts of interest can bring.”

- **Supervision of Academic Work by Relatives** – Instruction (March 22, 1994)⁷

“No faculty member may: 1) serve as a member of a relative’s graduate committee; 2) serve as a member of a relative’s honor’s thesis, master’s thesis degree, or doctoral dissertation committee; 3) directly assign a grade to a relative enrolled in her or his class. (Exceptions to this policy may be made with prior approval of the appropriate administrator.)”

“This policy does not prevent enrollment of a student in a class taught by a relative. It does require disclosure and assurance of fair grading, i.e., grading by a disinterested party.”

- **Guidelines for Potential Conflicts of Interest Pertaining to Applications for NSF and PHS Research Support** – Research & Creative Endeavor (October 2, 1995)

“... issued by the Office of the Provost and the Office of the Vice President for Research and Graduate Studies ...” in response to Federal regulations by the National Science Foundation⁸ and the Public Health Service⁹. No other Federal agencies have implemented formal financial disclosure requirements as a condition of receipt of funding, but the Food and Drug Administration has specific requirements¹⁰ governing all clinical studies whose results are included in marketing applications, regardless of the source of funding.

- **Conflict of Interest in Employment** - University Policy (December 8, 1995 as a replacement for the Employment of Relatives policy)¹¹

⁷ <http://www.hr.msu.edu/HRsite/Documents/Faculty/Handbooks/Faculty/Instruction/v-supervisionofwork.htm>

⁸ NSF Grant Policy Manual, Chapter V, Section 510 – Conflict of Interest Policies

⁹ 42 Code of Federal Regulations Part 50.604 - Institutional responsibility regarding conflicting interests of investigators

¹⁰ 21 Code of Federal Regulations Part 54 – Financial disclosure by clinical investigators

¹¹ <http://www.hr.msu.edu/HRsite/Documents/Faculty/Handbooks/Faculty/UnivPolicies/Univ+Pol+-+CONFLICT+OF+INTEREST+IN+EMPLOYMENT.htm>

This policy clarifies the role of employees in hiring or supervising individuals with whom they have a “relationship” and establishes conditions for employment of “relatives” in the same unit or department or under the same supervisor.

- **Conflict of Interest in Educational Responsibilities Resulting from Consensual Amorous or Sexual Relationships** - University Policy (November 8, 1996)¹²

“...each faculty member, graduate teaching assistant and other University employee who has educational responsibilities for students shall not assume or maintain educational responsibility for a student with whom the faculty member, graduate teaching assistant or other employee has engaged in amorous or sexual relations, even if such relations were consensual.”

- **Conflict of Interest** – MSU Extension Administrative Handbook (May 26, 1999)¹³

“Employees are prohibited from direct or indirect financial or other personal gain that is in conflict with his/her Extension duties, or responsibilities. Employees are to avoid participation in matters in which conflict of interest exists or in situations in which a conflict is likely to arise.”

- **Standards of Official Conduct for Deans, Separately Reporting Directors, and Executive Managers** – Faculty and Administrative Staff Policies and Procedures (June 18, 2004)¹⁴

“A “conflict of interest” exists when an Administrator’s financial interests or other opportunities for personal benefit may compromise, or reasonably appear to compromise, the independence of judgment with which the Administrator performs his/her responsibilities at the University.”

- **IRB Member and Investigator Conflict of Interest** – MSU Human Research Protection

¹² <http://www.hr.msu.edu/HRsite/Documents/Faculty/Handbooks/Faculty/UnivPolicies/Univ+Pol+-+CONFLICT+OF+INTEREST+IN+EDUCATIONAL+RESPONSIBILITIES.htm>

¹³ <http://web1.msue.msu.edu/msuehandbook/conflictofinterest.htm>

¹⁴ <http://www.hr.msu.edu/HRsite/Documents/Faculty/Policies/StdOffConductDDE.htm>

Program (April 21, 2005)¹⁵

“Institutional Review Board (IRB) Member and Investigator Conflicts of Interest that could affect the rights and welfare of participants must be eliminated or a management plan must be implemented so that the rights and welfare of participants are not affected by the interest.”

While non-binding, the Department of Health and Human Services, Office for Human Research Protections provides policy guidance by topics, including “Financial Relationships and Interests in Research Involving Human Subjects.”¹⁶

- **Conflicts of Interest, Faculty** - Academic Human Resource Policy (*April 13, 2006*)¹⁷

“This Policy addresses the disclosure, review, management, and resolution of conflicts of interest relating to the performance by faculty of their research, teaching, outreach, and service responsibilities at the University. For purposes of this Policy, a conflict of interest exists when a faculty member’s financial interests or other opportunities for tangible personal benefit may compromise, or reasonably appear to compromise, the independence of judgment with which the faculty member performs his/her responsibilities at the University.”

Implicit in this Policy and its implementation is MSU’s belief that its faculty are individuals with proven disciplinary expertise who will act responsibly and with integrity “through reasoned discourse, intellectual honesty, mutual respect and openness to constructive criticism and change.”¹⁸ One measure of academic integrity and an expectation of professional responsibility is a commitment to openness and honesty with the personal intent

of minimizing bias as it relates to professional decision-making.

In situations where a person holding a position of trust has competing professional or personal interests, “such competing interests can make it difficult to fulfill their duties impartially. Even if there is no evidence of improper actions, a conflict of interest can create an appearance of impropriety that can undermine confidence in the ability of that person to act properly in his/her position.”¹⁹

As recognized by Stanford University, “conflicts of interest are common and practically unavoidable in a modern research university.”²⁰ Paul J. Friedman in discussing the “troublesome semantics of conflict of interest”²¹ properly stressed that, “You don’t have to do anything improper to have a conflict of interest; it is strictly situational.” Personal belief about whether or not a competing interest would bias one’s actions should not be a factor in deciding whether or not to disclose the situation. The presence of a conflict of interest does not mean that there has been or will be a misdeed; however, failure to disclose a conflict of interest may be viewed as a misdeed.

¹⁵ http://humanresearch.msu.edu/regs/hrp_manual/10-1%20vM1%20v3%20IRB%20Member%20and%20Investigator%20Conflict%20of%20Interest%20%206-14-05.pdf

¹⁶ <http://www.hhs.gov/ohrp/humansubjects/finreltn/fguid.pdf>

¹⁷ <http://www.hr.msu.edu/HRsite/Documents/Faculty/Handbooks/Faculty/AcademicPersonnelPolicies/iv-FacultyConflictsInterest.htm>

¹⁸ MSU Policy on Faculty Rights and Responsibilities; <http://www.hr.msu.edu/HRsite/Documents/Faculty/Handbooks/Faculty/AcademicPersonnelPolicies/iv-facultyrights>

¹⁹ Retrieved on January 19, 2007 from http://en.wikipedia.org/wiki/Conflict_of_interest

²⁰ Research Policy Handbook, Chapter 4.1 - Faculty Policy on Conflict of Commitment and Interest, <http://www.stanford.edu/dept/DoR/rph/4-1.html>

²¹ Paul J. Friedman. 1992. *The Troublesome Semantics of Conflict of Interest*. *Ethics & Behavior* 2(4):245-251.

RESOURCES ON OBJECTIVITY AND CONFLICT OF INTEREST

FEDERAL GOVERNMENT

National Science Foundation

Investigator Financial Disclosure Policy

<http://www.nsf.gov/pubs/1997/iin117/iin117.txt>

Grant Policy Manual, Section 510, Conflict of Interest Policies

http://www.nsf.gov/pubs/manuals/gpm05_131/gpm5.jsp#510

Health and Human Services

Food and Drug Administration

<http://grants1.nih.gov/grants/guide/notice-files/not95-179.html>

Office of Human Research Protections, Final Guidance, Financial Relationships and Interests in Research Involving Human Subjects Guidance for Human Subject Protection

<http://www.dhhs.gov/ohrp/humansubjects/finreltn/fguid.pdf>

PHS, Objectivity in Research

<http://grants1.nih.gov/grants/guide/notice-files/not95-179.html>

NIH, Office of Extramural Research

Financial Conflict of Interest

http://grants.nih.gov/grants/policy/nihgps_2003/NIHGPS_Part4.htm#_Toc54600065

Frequently Asked Questions

<http://grants.nih.gov/grants/policy/coifaq.htm>

Office of Research Integrity, Educational Resources

Conflicts of Interests and Commitment

http://ori.dhhs.gov/education/products/rcr_conflict.shtml

MSU'S CONFLICT OF INTEREST POLICY

Faculty Conflict of Interest

<http://www.hr.msu.edu/HRsite/Documents/Faculty/Handbooks/Faculty/AcademicPersonnelPolicies/iv-FacultyConflictsInterest.htm>

EDUCATION AND TRAINING TOOLS

Cleveland State University

http://ori.hhs.gov/education/products/Cleveland%20WBT/040329_1430%20%28D%29/title.swf

Columbia University

http://ccnmtl.columbia.edu/projects/rcr/rcr_conflicts/

NIH Research Ethics

<http://researchethics.od.nih.gov/>

University of Minnesota

http://ori.hhs.gov/education/products/u_minn/html/managers/index.shtml

University of Texas Health Science Center at Houston

<https://apache.hsc.uth.tmc.edu/rcoi/>

ADDITIONAL RESOURCES

Association of American Medical Colleges, Financial Conflicts of Interest in Clinical Research

<http://www.aamc.org/research/coi/start.htm>

Association of American Universities, Report on Individual and Institutional Financial Conflict of Interest

<http://www.aau.edu/research/COI.01.pdf>

Government Accounting Office Report, HHS Direction Needed to Address Financial Conflicts of Interest

<http://www.aau.edu/research/gao.pdf>

MICHIGAN STATE UNIVERSITY

With the exception of “Introduction to Image Editing Ethics,” this newsletter may be reproduced without permission as long as proper acknowledgment is given.

Research Integrity

517.353.3220 (phone)

<http://grad.msu.edu/integrity.htm>

Issue Editor

John A. Kinch

Visiting Assistant Professor

Writing, Rhetoric, and American Cultures

Design and Layout

Mikala Rioux

The Graduate School

Editorial Advisors:

Karen Klomparens

The Graduate School

Terry May

The Graduate School

Les Manderscheid

The Graduate School

MSU is an affirmative action/ equal opportunity employer.

Research Integrity

110 Linton Hall

Michigan State University

East Lansing MI 48824-1044