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- ▲ to maximize the impact and effectiveness of available funds for professional development;
- ▲ to open new lines of communication between and among faculty members with similar disciplines and interests;
- ▲ to sponsor discipline and cross-discipline conferences;
- ▲ to publish a directory of faculty members in the Maryland Community Colleges; and
- ▲ to promote the exchange of faculty among Maryland Community colleges.

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Cyber field trips
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Net based practice tests (QuizPlease)

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UNDERSTANDING THE ROOTS OF BEHAVIOR, A NEW SYNTHESIS: NOTES ON THE CAUSALITY OF SOCIAL SYSTEMS[1]

Don A. Campbell

Abstract

Understanding human behavior in the social sciences involves a synthesis of nature (biosociological) and nurture (sociobiological)[2] thinking. Human behavior is the universal causality in social systems. That causality is chaotic, emergent, and nonlinear. I examine five primary areas of innate behavioral causality which tie human societies together. We are a thinking species. When we do not think due to injury, disease, or genetic defect, we are classified as abnormal. We are asocial species, and innately socialize into and identify with group behaviors. If we do not socialize into accepted social roles, we are treated as abnormal. Order in social groups is maintained by status hierarchies which are innate to social systems. In them individuals strive for a level of status they find psychologically comfortable. Socialization and status are value driven. The values can act as super-normal sign stimuli for some status questers. The open-innate[3] interaction of thinking, socialization, and status questing drives all primary forms of social causality.

Understanding our Understanding of Humans in Society

Historians and social scientists deal with the who, what, where, how, and whys of human societies. Inherent in the why is the matter of human behavior. Science must ultimately address the question of why and that is a question of causality. For human society that causality is the causality of human behavior. Human behavior and only human behavior causes social systems to form, evolve, and adapt. The record of that process is called history. This presentation is a multivariate hypothesis about that process.

If we seek to understand humans in a global perspective, we must understand the universal elements of their behavior. This implies defining the causality of human behavior. This is the most difficult of all scientific problems. The basis question is, What is the nature of human nature? Are we genetically programmed or free, or is it a case of being a bit of both? It is basic in the social sciences that each human, each culture, and each society is unique. It is a staple in the classical physical sciences that it is the role of science to study non-unique universal causalities and describe them as laws. One school of classical science, assumed that since both societies and humans are unique they could not be studied and described as obeying universal natural laws. Thus, the social sciences could not be true sciences. The other school tried to find universal elements of human behavior in genomic control of human behavior. This became the nature side of the nature/nurture controversy. The posit is, genetically encoded instincts force all animal behavior into

specific responses to stimuli. But analysis of specific individual responses to specific stimuli reveals such a range of responses to any specific stimuli that no specific underlying law could be formulated. Both classical approaches to science revealed a misunderstanding of what science is and what unique means as well as a misunderstanding of the nature of natural laws. Parts of the classical philosophy of science still bedevil our understanding of science is. Let us debunk some of these antiquated perceptions.

Chaos, Complexity and Emergent Systems

Chaos theory[4] recognizes that all systems, both physical and social, are unique within the boundaries of their definitions as systems. However, once a system is defined as a unique stable set of dynamic relationships, the fact of that definition places the system into a taxonomic class of phenomena which have common attributes. Those common attributes are not unique. Thus they can constitute a description of the universal principles behind that taxonomic class of system's general behavior.

Science's understanding of systems is complicated by several factors. First is the phenomenon of chaos itself. It is known that complex systems can emerge from chaos without the event of an outside causality. This is in part because the phenomenon known as chaos, i.e., the turbulent behavior of dynamic, complex systems is a nonlinear phenomenon. This means that without an absolutely full set of data on the system at any given point, it is not possible to say with precision what the next behavior of the system will be. The next response is chaotic. It falls within a set of behavioral dynamics which identifies the system. Since the behavior is nonlinear, however, one can only observe what the behavior will be, but never predict it exactly.

Further, chaos theory posits that in time all systems will become chaotic under the pressure of outside causalities. This is called sensitive dependence on initial conditions. Sensitive dependence means that a small change at the start of a system can have massive consequences on the ultimate behavior of a system. Without a full knowledge of all the influences on a system's initial conditions, no precise calculation of the system's behavior is possible. This is complicated by the fact that all systems also have a sensitive dependence on changing conditions.

So without a full knowledge of all the possible events and causalities that a system will encounter, it is again impossible to calculate the behavior of a system for any but short periods of time or limited sets of conditions. Thus, there are limits to knowledge about a system. The best science can hope for is to make a generalized statement about the statistical propensities of a system's likely behavior under given conditions. This specifically contradicts the philosophy of classical science which maintains the possibility of absolute calculation. This chaotic behavior of complex systems, then, specifically denies biosociological behavioral science the possibility of making deterministic statements about any part of human behavior.

It is now recognized that complex systems are self organizing. And although they are chaotic, they do behave in statistically predictable ways. Since about 1960, whole new branches of science have evolved to deal with chaos and the phenomenon of nonlinear complexity. These have been added to the branches of science already dedicated to the study of unique, non-reoccurring, and complex systems. They fall under the general descriptive name idiographic sciences.

The idiographic premise is that complex systems are more than the sum of their parts. The idea that a system is more than the sum of its parts is known as "emergence" or "complexity". The emergence concept does not fit the descriptive rubric of classical nomothetic experimental science, which maintained a belief in linearity of causality with the concurrent belief that all systems could be described as the exact sum of their parts. The linearity posit holds that the behavior of all systems is inherent in their antecedents. Therefore, even the most complex behavior of creative minds must have been set by the antecedent events leading backward to the beginning of time. Logically this means that every thing you are was supposedly inherent in the big bang at the start of time. Now pardon me but ...!

Societies are Complex Systems

History and the social sciences are the study of unique systems. Therefore, their philosophy falls within the parameters of the idiographic disciplines. It is understood that while social systems can be defined and described as systems, based on the similarities of their mean behavior, neither their exact behavior as systems nor the behavior of their components can be fully, predictively described. While unique systems maintain a sensitive dependence on initial and changing conditions, they maintain a core behavior that maintains their definitions as a specific type of system. As self-organizing and self-maintaining systems the subjects of history and the social sciences fall under the sway of chaos and complexity theories and the concurrent theory of general systems. The laws of behavior of general system are laws as statistical generalizations describing the statistical propensities of systems toward behaviors around a definable mean. All such systems are understood as a whole, never as unlinked parts. The study of any single unique system is the study of its deviation from the mean. All deviations from the mean are the result of some causality at work.

This leads to a critical posit. If systems are nonlinear, **then causality is nonlinear**. If causality is nonlinear then it must both nonlinear and hierarchical in its function. Ergo, causality itself is emergent and complex. As emergent and complex, complex causality creates new orders of causality greater that the sum of the primal parts from which they spring. Thus complex social systems can be both the product of a complex causality and the producer of more complex causalities. Thus the complexity of the behavior of social systems can be orders of magnitude greater than that of simple mechanical or physical systems.

The Social Sciences: Two Definitions

The social sciences are the scientific study of the full range of contemporary human personal and social behaviors and the uses to which individuals put innate, learned, and cognitive behaviors in the creation, development, and maintenance of societies.

History as a social science is the scientific study of all past human personal and social behaviors, and the uses to which individuals have put innate, learned, and cognitive behaviors in their creation, development and maintenance of societies. Thus history is the study of the record of the causality involved in the development of civilizations. As a subject, history embraces the totality of past human sociocultural and cognitive experience.

Defining Commonalties

To function as scientific disciplines, the social sciences must be able to define the behavioral commonalties of their subjects. That is, what are the common elements of societies? What are the common elements of human behavior? This leads us back to the fundamental causality of history and the social sciences, the causality of human behavior. That behavior is predicated on two major elements: natural biological instincts and socially learned behaviors predicated on the existence of those instincts.

The primary innate elements of human behavior rest upon but are emergent from the biological nature of man. First and foremost to the understanding of man is his existence as a thinking being with open instincts. We are a thinking species; by our own definition we are Homo Sapiens Sapiens. When we do not learn or think due to injury, disease, or genetic defect, we are classified as abnormal. However, what we learn is open to environmental and social influences. That we must learn is innate. What we learn is open and is constrained only by the innate ability of the brain to perceive and abstract an impression of the world. It is also innate that we are a social species. We organize ourselves into social groups. If we do not socialize into a group, if we do not accept the behavioral norms of that group, if we are socially dysfunctional, if we are sociopathic, our behavior is treated as abnormal. As a social species, it is innate that we must behave within a social context. That we must learn via socialization is innate. But as with learning and thinking, the socialization pattern we learn is open. We learn the values of the group and learn to aspire to them. Our socialization can follow any one of many patterns that have been created in response to environmental, social, or cognitive causalities. The mean behaviors of humans are learning, living as social beings within a group and thinking. But there are abnormalities, there are extremes to human behavior. A rule of science is that one cannot determine the true mean from the extremes.

There is another innate behavior shared by all humans which is not obvious. Because of our thinking and socialization, because of the vast variety of things that we can learn and think about, because of the vast number of social systems that

thinking and environmental pressures can produce, we are functionally an open-innate behavioral species. We have no innate instinctive behavior which causes us to behave in limited and specific ways; our innate drives are open. We have a set of open-ended behavioral incitements which force us to learn to behave within the range of norms which define what it is to be human. It is this range of norms that we must understand. This capability of open-innate behavior repudiates as a dead end, the linear logic of either or thinking about nature versus nurture.

The socialization pattern we learn is the one which created and maintains our social group. But one of the chief conditioners of the creation of the socialization pattern is the existence in all social groups of status hierarchies. Status hierarchies are known by several names. They are called pecking orders, class structures, or dominance hierarchies. Social groups are maintained by status hierarchies. They are innate to social systems. For every social group, some such status structure must exist. Without it the group would degenerate into a mass of contending strangers. Within a social group, individuals strive for a level of status they find psychologically comfortable. They do this via the innate behavioral mechanism I call status questing. Status hierarchies grow from status questing behavior. One of the key elements which allows status hierarchies to exist is the fact that normal individuals seek status and grant deference to other members of their social group. In the majority of societies, the process of status questing is controlled by some system of puberty rites.

The central idea of status grows from a group's judgment of its survival needs. The individuals with the skills to promote that survival are granted status by the group. When status is granted there is an element of deference granted to the status holders. This deference provides the emotional glue which binds the group together. It enhances the status holder's place within the group and gains him status privileges and responsibilities. But there is a reciprocal relationship between status and deference granted and the expected duties toward the survival of the group. Failure to maintain those duties loses the individual status. Status deference extends beyond the deference granted to individuals. The group itself has status and is granted deference. This is the root cause of altruistic behavior. The whole of the group is greater than the sum of the individual parts and individuals grant deference to the institutional whole.

The most fundamental status is that attained by personal merit. The most fundamental status systems are meritocracies. The idea of merit and attainment is a function of the group's value system. This merit can be based on many criteria including experience, intelligence, personal charisma, leadership experience, and/or physical prowess. However, that prowess is not a function of intragroup aggression. Aggression does not hold social groups together. Aggression produces stress, and stress cause groups to fragment into defensive subgroups. **The key concept for the maintenance of social groups is deference.** Deference provides a willing cooperation and acceptance of the leadership of those judged in some way to be superior.

We must distinguish between aggression and competition. Competition is a complex aspect of play. It is cooperative. Competition teaches the members of the group the capabilities of the members and is the first step in the ranking process. It teaches the group what the skills, temperament, and capabilities of each member are. Physical prowess is a valid status marker only as a means of affording the group protection from outside dangers, not as a means of forcing the group to grant status. Prowess is not aggression it is a display of defensive capability.

The only functional definition of aggression is intraspecies predation. Every society has sanctions in place to protect itself from abnormal, aggressive individuals because it recognizes that aggression is abnormal. Remember, there is a myth that man is innately aggressive. That is a false premise. There are about 6 billion peaceful people in the world. A simple test question: are you personally aggressive? Do you think and behave like a Klingon? Only a small minority of people are aggressive and predatory. They are the extreme. You can not judge the mean by the extreme. As a basic rule, **no social species can exist as social when it is predatory on itself.**

However, as part of a learning species which is socialized into belief and behavior patterns, most individuals can be taught some level of aggressive behavior. But the existence of post-traumatic stress syndrome belies the myth of innate aggression as normal. Far too many soldiers suffer psycho-logical damage from exposure to combat for it to be a normal pattern of behavior. Normal individuals must be trained to see the enemy as non- human. Most warfare is long range against impersonal objects, to help protect the psychological stability of the soldier. Therefore, we must not assume society exists to block aggressive impulses, rather some aspects of complex social groupings create aggressive behavior and teach it as a norm.

Institutions as Complex Status Systems

Some individuals are so enamored of status that they go to great lengths to get and keep it. Formal and informal institutions are mechanisms by which individuals can control access to status. A street gang is an informal institution; it gives status to its members, and allows the gang leader to control the means by which others challenge his status. This is typical of one of the two common origins of institutions. The other promotes and controls specialization. As societies become larger there is an increasing need for and opportunity for specialization. Specialization creates the opportunity to perfect the specialization and create an institutional structure to promote and maintain it. Specialization also creates status for the specialist. Societies create four common types of formal institutions. Traditionally these have been the religious, military, political, and economic institutions which are centrally controlled by the status leaders of the social group. In the last two centuries, formal intellectual and scientific institutions can be added to the list.

These institutions are created to maintain groups as they become more complex

and require an increasing level of specialization to maintain them-selves. Every formal institution has a rationale and a value system inherent in its structure and behavior. It involves some claim of support for the society. However, there is an inherent paradox involved in the creation of institutions. Just as individuals grant deference to their society, they grant deference to the institutions to which they belong. This means that they automatically grant deference to those who control the institutions. This can be without regard for the personal merit of those individuals. The assumption is that they have merit, but when institutions become large, only the few in close proximity to the leadership actually know the merit of the leader. And they have a vested interest in maintaining the status quo or advancing their status. Thus, the required reciprocal status relationships that exist in personal groups can be lost, and aggressive or self-serving individuals can seize control of unwarranted status by seizing control of institutions. This can pervert the behavior of institutions and society to the extreme behavior of dysfunctional individuals as they use the institutions to enhance their own status and value systems.

This paradox is possible because the range of personalities and intelligence in every society allows many different manifestations of the status questing drive. The basic rule is that each individual seeks a level and kind of status which is reflective of his personality and aspirations. Not everyone wants lead. Many are only happy when they have someone to follow; others want to lead. It is possible to taxonomically define and stereotype some general types of status questing behavior. There are an easy four which can be picked out of almost all societies. There are Traditionalists who seek status within the roles assigned to them by society. They socialize into granting deference to individuals and institutions without questioning the merit of those granted deference. They live by the rules of their society, and tend to follow in traditional paths son after father. For the Traditionalist, status comes from succeeding within the assigned roles and under assigned rules within a local status group.

The second most common quester I call the Questor personality. These are the individuals who seek to move beyond assigned roles. They quest within the rules of society, but seek to maximize the status that those rules allow. They have been called the talented tenth of society. They seek to rise to the level of their competence and out of their local groups. They are the "go getters"; they want to be somebody. They grant deference to those they perceive as superior and to established authority; but they work to become that authority within the general caveat of recognizing their own capabilities.

Another behavioral questing type I call the Rogue quester. Rogues are the individuals who reject or ignore society's rules. They are the mavericks who do not grant willing deference to any authority. In seeking status they are willing to do so at the expense of the social system and its members. They can be hedonistic and take from society regardless of the damage it might do, or be extreme altruists. They may make major contributions by ignoring the conventional wisdom and thereby create new institutions or ideas. Since they do not grant deference, they struggle to rise beyond the level of their competence. When they gain control of institutions, they use them in their own self interest. This can include changing the

rules of society to prevent others from challenging them. If elected president, the Rogue tries to change the rules so he is president for life. Questors grant willing deference to those they perceive as superior. Rogues grant no such superiority. They may pay lip service to authority, but there is none of the deferential emotional attachment that Traditionalists and Questors feel.

Fundamentalists are another minority in societies. Their chief trait is that they seek to live in a completely homogeneous society. They dislike diversity and seek to blot it out. Their goal is to have everyone in society live and think the same. They feel status to the degree that they can force or persuade others to follow their code of values. They are the most intolerant members of society, and since they are extremely self-righteous in their beliefs and behaviors; they can be its most aggressive members. Since they seek uniformity, it is extremely easy for them to classify anyone who does not agree with them as nonmembers of society. And as excluded group outsiders, they can be treated as legitimate prey and destroyed or driven from society. Fundamentalists find their place within systems which are rule laden. Dogmatic religious or legalistic bureaucracies are their natural haven.

One of the chief driving causalities in societies is the process of status questing. The process of gaining and keeping status functions as an incentive for active behavior beyond the basic survival needs created by the environment. This is true in every society regardless of its value system. One of the socialization functions of a society is to teach its status value system. These value system can be materialistic, religious, intellectual or militaristic. Status is gained as a function of an individual's mastery of the value system. Since institutions function under value systems, control of an institution means control of its status and that means status for those who control it.

Value Systems

Value systems can distort or corrupt the process of status questing by moving the value of status away from personal talent or attainment. This can be to a status value based on the control of things. These things can be institutional office, social title, material goods, or real property. This imposes a materialistic concept upon the idea of status, and status then becomes inheritable. Both status and value are "stored" in material goods or services and titles. These abstractions have no reciprocal relationship to the individuals who grant them status. Since the deference granted by individuals is to the symbols of value, those with control do not have to reciprocate with any duties or responsibilities to maintain their status. This makes wealth act as an institutional system in its own right. It exists without the need to maintain the principle of service which drives all other formal institutions. Most civilizations are based on the principle of inheritable status of some form.

Like individuals, institutions can have questing types as they seek and struggle to maintain status. They too can be Traditionalist, Questor, Rogue or Fundamentalist. As institutions compete for status among themselves, they socialize their members

into supporting the status of their institution against all others. This creates a system of inclusive group versus an excluded group thinking among the members. Questers who control institutions use the institutions to enhance their personal status by promoting the status of the institution. In questing, leaders recognize that it is easier to maintain internal order when the group is facing some form of danger. Groups facing danger tend to be more cohesive and less individualistic. Self-interested status seekers can exploit this by making any excluded group the "enemy" of the status group. The creation of prejudice against excluded groups is one chief mechanism by which this is done. Prejudice creates a permanent enemy whose existence requires constant diligence by the status leaders and constant reinforcement of their power.

Conclusion

As a social species, man has had to develop mechanisms for defining who is a member of the social group and who is a threat to it. As a social species, man has had to develop mechanisms for establishing and maintaining a functional social hierarchy which delineates the chain of command and responsibility within the social group. These are the starting places for all societies and, hence, for civilizations. Each of these needs is complicated by the fact that every individual is capable of thinking and acting in his own self interest or of acting altruistically in the interest of the group. Like self interest, altruism is a complicating factor, but both can be addressed once we reach the point of agreeing on the fact of status and deference systems being fundamental to the ordering of human society. Knowing the range of human questing behaviors and the ways in which men and institutions control those behaviors allows us to develop a universal awareness of the common roots of social behavior and our learned and cognitive adaptation to our social and physical environments. Awareness of these innate mechanisms which create and structure societies can tell us much about why there is conflict between societies and between individuals.

Works Cited

1. The following paper is drawn from a manuscript in draft tentatively titled A Prolegomena to the Causality of History.

2. See Karl Peter and Nicholas Petryszak, "Sociobiology versus Biosociology," in Ashley Montagu ed. Sociobiology Examined (New York: Oxford Univ. Press, 1980), pp. 39-81. for discussions of the distinction between biosociology and sociobiology. I use the concepts to mean biosociology is deterministic behavior that is innate and genome triggered, while sociobiology is innate but open behavior, which has an open learned element to its manifestation. It is innate that something be leaned, what is learned is open within the parameters of a species learning capabilities.

3. The concept of open innate is from Konrad Lorenz's On Aggresion in the chapter "The Great Parliment of Instincts", he uses the term to treat those behaviors which while innate to a species must be learned to be activated. My usage expands that concept and says that while a behavior must be learned there is no specific pattern that

results from the learning process. The pattern itself, like the need to learn, is open.

4. For an introductory discussion of chaos theory see, John Briggs and F. David Peat, The Turbulent Mirror (New York: Harper & Row, 1989). For the concepts of complexity and emergence see, John L. Casti, Complexification (New York: HarperCollins, 1994).

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PROMPTING THEORY:
BACKSTAGE AT THE INTRODUCTION TO LITERATURE CLASSROOM

Barbara Graham Cooper

Abstract

Many students seem to miss the magic of literature as they struggle to find the key to the puzzle of interpretation, the answer to the riddle the teacher seems to set for them, the hidden meaning. It is false to assume that analyzing and enjoying literature are opposed; indeed, an understanding of theory can, in fact, liberate the student from the bonds of the passive learner. In this presentation, Ms. Cooper will present classroom techniques for exploiting social frames already familiar to the students (such as letter writing, the courtroom trial, the quasi-serious talk show) as a means to lead them to do theory without knowing it and after doing a variety of theory, learning to match what they have done to some jargon. This "theorizing" will enable the students to make their own discoveries about literature: it will evoke in them a self-awareness of their own critical decisions and help them develop the confidence to respond to literature in meaningful and honest ways.

Notice

Persons attempting to find a motive in this narrative will be prosecuted; persons attempting to find a moral in it will be banished; persons attempting to find a plot in it will be shot.

BY ORDER OF THE AUTHOR
Per G. G., CHIEF OF ORDNANCE.
Mark Twain, Adventures of Huckleberry Finn

Why can't a story just be a story? Why does it have to *mean* something?
Sharon Ryan, Student

Education is not the filling of a pail, but the lighting of a fire.
William Butler Yeats

Many students like Sharon Ryan would probably like to have the teachers shot who insist that studying literature means dissecting the work to uncover "motive, moral, and plot," and in the process of dissection, killing the "story." In "Against Interpretation" Susan Sontag sympathizes with Sharon's viewpoint: "Interpretation based on the highly dubious theory that a work of art is composed of items of content, violates art. It makes art into an article for use, for arrangement into a mental scheme of categories (548)....The function of criticism should be to show *how it is what it is,* even *that it is what it is,* rather than to show *what it means*" (550). What we need is to experience the "luminousness" of the thing in itself. Sontag asserts that the earliest "*experience* of art must have been that it was incantatory, magical; art was an instrument of ritual" (545). Louise Rosenblatt observes that certainly "to the great majority of readers, the human experience that literature presents is primary. For them the formal elements of the work--style and structure, rhythmic flow--function only as a part of the total literary experience. The reader seeks to participate in another's vision--to reap knowledge of the world, to fathom

the resources of the human spirit, to gain insights that will make his own life more comprehensible" (7). Many students in introduction to literature classes seem to miss the magic of literature as they struggle to find the key to the puzzle of interpretation, *the answer* to the riddle their teacher sets for them, the *hidden* meaning. Indeed, they miss the enduring value of literature.

Twain anticipates the tendency of critics to make things difficult for the reader and to even obliterate the story with their probing. Indeed, as Huck would say, some interpretations seem to be "stretchers" (Graff and Phelan 4). But it is actually false to assume that analyzing and enjoying literature are opposed; indeed, "the more conscious and reflective our understanding of a text, the deeper our enjoyment of it is likely to be" (Graff and Phelan 4). The definition of theory that applies best here is one offered by John Warnock: "a theory is *a* way of seeing, not *the* way, and this implies other ways of seeing, which may be not only possible but preferable, depending on the situation in which we find ourselves" (25). An understanding of theory can, in fact, liberate the student from the bonds of the passive learner, the container in Yeats' educational "filling." It can enable her to make her own discoveries about literature, to discover that luminousness that Sontag speaks of. Theory can evoke in her a self-awareness of her own critical decisions and help develop in her the confidence to respond to literature in meaningful and honest ways. Included in the conversation about literature, she can become an active member of the community of learners.

Today "theory" seems to be everywhere in the academy. The Dartmouth Seminar held in 1966 sought to define English as a subject and to outline the ways it could best be taught. For many Dartmouth

> has symbolized a kind of Copernican shift from a view of English as something one *learns about* to a sense of it as something one *does*. After Dartmouth, that is, one could imagine English not simply as a patchwork of literary texts, figures, and periods...but as the study of how language in all its forms is put to use....An old model of teaching centered on the transmission of skills (composition) and knowledge (literature) gave way to a "growth model" focusing on the experiences of students and how these are shaped by their uses of language (Harris 631).

Also in 1966 the Johns Hopkins' conference, "The Languages of Criticism and the Sciences of Man" introduced Derrida, Lacan, Barthes, and Goldman to the American literary scene. The 1987 English Coalition Conference was envisioned as a 20 year follow-up to the Dartmouth Seminar. Sixty participants from elementary, secondary, and college/university levels as well as representatives from eight professional groups met to discover if a consensus could be reached about the teaching of English, and "to identify solutions to problems English teachers have encountered as a result of changes in the student population, in institutional and community circumstances, and in the field itself" (Elbow 5). One agreement that emerged is that "theory is a central and unifying focus for English studies" (Elbow 50). Robert Scholes remarked that "I see that teaching and theory are always implicated in one another" (qtd. in Elbow 52). In a position paper for the conference, Paul Armstrong asserts that students should be given practice in interpreting stories, plays, and poems as well as practice in theoretical reflections about the assumptions that are implicit in various ways of reading (Elbow 64). The Conference concluded that the central activity in the English class should be a "process of inviting and

affirming multiple readings instead of a right reading and then explicitly reflecting on where those readings come from and where they go, what is at stake in those readings, what premises are implied and interests are served by those readings" (Elbow 52-53).

Over the past thirty years, theory has gained such prominence in the profession that the popular press has even criticized English departments for overlooking literature in favor of theory. In a mocking description of the program for 1995 MLA Convention in the New York Times Walter Kendrick observes that "academic critics' main business has nothing to do with teaching..."; in fact, "after centuries in servitude as literature's handmaidens, critics now own the castle. Literature waits on them" (12). In the 1991 and 1992 NCTE Summer Institutes, teachers gathered to consider how theory practiced in academic criticism reflects the kind of thinking they would like their students to do (Slevin and Young xviii). It was agreed that the following have ended in the English classroom: coverage as a model; the canon as an agreed-upon certainty; the professor as the agent of learning; the classroom as the place where learning is delivered (Slevin and Young ix). The debate about theory and about its use and effectiveness in teaching literature continues in professional journals and conferences. But what exactly is happening to theory in the introduction to literature classroom?

Reliable indicators of how much play theory is actually being given in the introduction to literature classroom are the textbooks typically used in this course. Publishers respond (although perhaps slowly) to the trends in the field and to the needs of those who teach the courses. An examination of nine anthologies from nine publishers[1] reveals that at the least, theory is not mentioned at all, and at the most, theory is given only a brief acknowledgment. These texts illustrate that introduction to literature classes "where most Americans are exposed to 'lit crit,' are by and large insulated from the winds of fashion and continue to be conducted in the traditional way--close readings of great books" (Yagoda 6). This is not, however, a "theoryless" environment; the theory in that classroom (undercover as it were) is primarily New Critical. The situation is paradoxical: New Criticism is discredited as a theory, yet it is widely employed as a teaching method (Dasenbrock "What" 63). Paul Lauter calls this a "pedagogical canon" (259) which directs how to read and interpret literature. In addition, Lauter asserts that a result of adherence to the Eliotic "pedagogical canon" is "how [his] students, almost uniformly, regard poetry as a code for which another, observably more 'mature' person--the teacher--has the only correct key" (259). This approach to teaching is crippling for the students.

Another important question is raised: is it possible or even advisable to include enough information about theory in the introduction to literature class to enable the

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[1] The following anthologies were reviewed: St. Martin's Literature: The Human Experience (1988) eds. Abcarian and Klotz; W W Norton's The Norton Introduction to Literature (1995) eds. Bain, Beaty, and Hunter; D C Heath's The Heath Guide to Literature (1992) eds. Bergman and Epstein; Allyn and Bacon's Literature, the Evolving Canon (1996) ed. Birkerts; Harcourt Brace Jovanovich's To Read Literature (1992) ed. Hall; Houghton Mifflin's The Riverside Anthology of Literature (1991) ed. Hunt; Macmillan's Literature: A Contemporary Introduction (1994) ed. Hurt; Prentice Hall's Literature: An Introduction to Critical Reading (1996) ed. Jacobus; Bedford's The Bedford Introduction to Literature (1996) ed. Meyers.

student to understand it, let alone master and use it? It seems that it might not be possible to do much more than confuse the student about the theoretical approaches if theory is simply "added-on" to the already full syllabus. A danger inherent in trying to "cover" theory is that the student may misunderstand the theory that is being "poured in." Roger Shattuck, a college teacher with forty years experience, recalls an incident in his sophomore humanities class. A young woman interpreted Emily Dickinson's "A bird came down the walk" as being about a lesbian encounter: Shattuck said he "did not find evidence for her reading in the poem itself, in Dickinson's other poems or in Dickinson's life. [He] later learned that the student based her comments on interpretations she had heard in an English course" (70). Clearly, just putting theory into the classroom is not enough (Graff "Taking Cover" 44). Nor is it practical to require the student to master theory as a prerequisite to the introduction to literature class. But ignoring theory entirely is not the answer either because an understanding of theory is essential in any discussion about literature (Flynn 195). As D. G. Myers asserts, "an established literary theory is not a methodology or paradigm or 'strategy' that one puts on to dress for academic success. It is an argument. It is an uncompromising reflective struggle to work out a vexing tangle in literary experience" (9). Gerald Graff states that since "theory provides a meaningful framework for the myriad activities connected to literary study, it should play an explicit role in any course devoted to such study" ("Literary Theory" 39). So, acknowledging the value of theory in the introduction to literature classroom, the next question to ask is *how* can theory be made a viable part of the class?

Kathleen McCormick offers a solution to this dilemma--integrate the practice of *theorizing* into the course. She asserts that indeed we cannot choose whether or not to have theory in the classroom because theory "is always there--in us and in our undergraduates. We are always already theorists. We have a choice only of whether we and our students will be self-conscious (that is to say, theoretical) about the theories that guide our perceptions" (114). As Peter Elbow puts it, "it's no fair pretending one is theoryless" (54). This active process of theorizing, of questioning and debating, grows out of a definition of theory as "the kind of discourse that is generated when presuppositions that were once tacitly shared about literature, criticism, and culture become open to question. Theory is what breaks out when agreement about such terms as *text, reading, history, interpretation, tradition,* and *literature* can no longer be taken for granted, so that their meanings have to be formulated and debated" (Graff "Taking Cover" 41).

If the student is to truly theorize his own position and to act on his theoretical assumptions, then the student must be moved away from the detached "filling the pail" model of the traditional college literature classroom where the teacher assumes the role of the authority[2] dispensing information and where students mimic that authority. Once

[2] Another weakness of the traditional classroom frame is that it assumes a certain academic preparation in students. That is, it is assumed that students performing in this frame can indeed mimic the teacher's authority by listening attentively, synthesizing ideas, and capturing the important ideas in effective notes. The reality is that many students may be able to follow the "form" of the classroom, but cannot successfully perform the requisite activities.

theory becomes a conscious part of the class, students can no longer just adopt a position because the teacher presents it as right or wrong (McCormick 120). Theory can help students --and teachers--explain their "commonsensical and intuitive interpretive statements and literary judgments" (Flynn 195). In short, learning to theorize is an intellectual process that is an intrinsic part of learning to think (Roughley 247). A first step in effectively "rethinking" this classroom is to examine what actually goes on there.[3]

Considering the classroom as an example of the theatrical frame as described by Erving Goffman in his Frame Analysis: An Essay on the Organization of Experience helps to reveal the implicit assumptions operating in that classroom. The "frame" is Goffman's metaphor for the inevitably relational dimension of meaning. The frame, a basic context of understanding available in our society for making sense out of events, incorporates both the participant's response and the world he is responding to. By analyzing the frame, Goffman reveals those unstated rules or principles that govern our interaction and understanding and that are carried implicitly by the frame itself.[4]

The frame imposed by the traditional college literature classroom is indeed much like the theatrical frame Goffman describes. To signal the beginning of the frame, a *key* is necessary. The key is a "set of conventions by which a given activity, one already meaningful in terms of some primary framework, is transformed into something patterned on this activity but seen by the participants to be something quite else" (Goffman 43-44). The participants in the activity know and actively acknowledge that a frame is operating and that the frame radically reconstitutes what it is for them that they think is going on (Goffman 45). (For example, students know that this is a college literature class, not a conversation in the hall, not a football game, and think and behave accordingly.)

When the classroom door closes (the *key*), the performance begins as teacher and students impose the classroom frame on their behavior and understanding. As Goffman points out, there is "some sort of voluntarily supported benign fabrication" (136) going on. The students (*audience*) are in place facing the *stage:* "a line is ordinarily maintained between a staging area where the performance proper occurs and an audience region where the watchers are located" (139). With the blackboard as backdrop, the teacher stands (or sits on or behind the desk) on stage and faces the hushed audience. Both the students (*audience*) and the teacher (*performer*) have expectations about the college classroom frame. If there is no audience, there is no performance. If the teacher (*actor*) doesn't show up, the class (*performance*) is canceled. When the teacher begins class, the students become quiet and begin taking notes. Further, the audience participates in the performance only when invited to. For example, the teacher must ask a question or acknowledge a student's raised hand before the student may participate. Goffman notes

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[3] "The most neglected reality in education is the reality of the present moment, of what is happening here and now in the classroom itself" (Palmer 88).

[4] Similarly, Michel Foucault asserts that the "shape and categories of discourse" always actively shape the discourse that emerges from the situation (Dasenbrock "English" 54).

that one "person at a time tends to be given the focus of the stage....Turns at talking tend to be respected to the end" (140).

As in a theater, the students/audience can respond to the teacher/actor by appropriately laughing, nodding, etc. But the teacher is in control of the performance, having planned (*scripted*) it and practiced it in advance. The individual who is the teacher is transformed by this role into a performer, and so a certain formality and distancing from the audience is maintained. (That is, the private life, likes, dislikes, etc. of the teacher are usually concealed behind the "professional mask.") As Goffman notes, "utterances tend to be much longer and more grandiloquent than in ordinary conversation" (143). (This would apply to both what the teacher says and to what students say.) In addition, the accepted assumption is that nothing that occurs is to be taken as insignificant (Goffman 143).

Students could also be categorized into *theatergoers* and *onlookers* (Goffman 129-131). The *theatergoer* student has registered and paid for the class (bought a ticket), has managed to get to the correct room on time and into a seat. But he may not be participating in the performance. That is, he may daydream, doze off, or be unprepared to understand what the class (*performance*) is about. The *onlooker*, on the other hand, participates in the classroom frame, attending to the ideas being presented and following them in the abstract. The *onlooker* would laugh at the teacher's joke; the *theatergoer* would laugh at the teacher's mistake (misspelled work on the board, dropped book, etc.).

When the teacher/actor signals that the class/performance is over (the "hour" is up), the students (audience) close their books, pack up their backpacks, and file out. The teacher puts off the *performer* role and becomes more relaxed as he puts away his notes and closes his briefcase. After class, a student can enter the staging area and approach the teacher to ask about the performance. The teacher's response would be more conversational and less formal than a response to the same question during class.

This "theatrical interaction" in the classroom is systematically different than other frames. As such, it imposes certain expectations of behavior and understanding on the student: the audience "responds indirectly, glancingly, following alongside, as it were, cheering on but not intercepting" (Goffman 127). As Stanley Fish "reminds us, our students are already in possession of (or more often than not, possessed by) a set of assumptions, or interpretive practices, that shape their approaches as readers and writers" (Nelson 411-412). And those approaches usually include the definition of the good student as one who passively accepts "what's in the book or what's said in an authoritative tone--following orders and feeding back material on tests in the form it was given" (Elbow 32). Interestingly, this theatrical frame is related directly to the original meaning of *theory*. As Parker Palmer observes, *theory*

> comes from the Greek *theoros*, or "spectator," one of a complex of Greek words having to do with the sort of viewing and observing that characterize a theater audience. This image suggests another feature of modern knowing: we regard what we know as "out there," on stage, and we relate to it from a distance. Our knowledge does not draw us into relationship with the known, into participation in the drama. Instead, it holds us at arm's length as detached analysts, commentators, evaluators of each

> other and the world. Like theater-goers we are free to watch, applaud, hiss and boo, but we do not understand ourselves as an integral part of the action (23).

This traditional classroom frame may encourage the student to respond to the teacher's commands, but it does not encourage him to engage the subject or confront a challenge. This frame also elicits certain behavior from the teacher, actual classroom practice which may not reflect the values the teacher preaches (Tompkins 653). Jane Tompkins asserts that teachers are often "still performing for the teachers who taught us" (655). She has discovered that she prepares for class with three things in mind (the unconscious mind, that is): she wants to show students how smart she is, how knowledgeable she is, and how well-prepared she is for class. Fear of being "unmasked" as a fraud has propelled her to this performance model of teaching (654). Similarly, Gerald Graff feels that he has vacillated between a "bully" and a "wimp" role in the classroom: the "bully" is the authority figure forcing the students into the role of passive receivers of information; the "wimp" is the is the one who holds back his opinions and defaults on his responsibilities as a teacher ("A Pedagogy" 181-182). This frame created by the culture of the academic community with its explicit rules and implicit relationships, in fact, imposes a "'hidden curriculum' which can have greater formative power over the lives of learners than the curriculum advertised in the catalogue" (Palmer 19-20). As Stanley Fish observes, the classroom context provides "practices, purposes, and goals that enable communication to take place....These strategies constrain so that a limited number of meanings are possible for any utterance" (qtd. in Flynn 197). If all we do is add theory to the traditional script of the classroom, then what the students will have is just more "received" information, another "tale/Told by an idiot, full of sound and fury/Signifying nothing" (*Macbeth V.v.26-28).* Rather than actively engaging with literature and theory, students will just add *theory* to the list of performances they've beheld in the literature classroom.

Breaking this traditional frame and providing new frames for the classroom experience and discourse can alter this ritualized student and teacher behavior and perhaps lead to a "lighting a fire" model of learning.[5] If the traditional "theatrical" classroom frame remains the same, then nothing can really change; the teacher will still be "filling the pail." What the teacher and student need to realize is that "to educate" means "'to draw out' and that the teacher's task is not to fill the student with facts but to evoke the truth the student holds within" (Palmer 43). Breaking the traditional frame can create what Mary Louise Pratt calls the "contact zone" in the classroom, where conflicts and different ways of seeing and understanding can come into play (34). New frames, and playing roles within those frames, can create safe spaces where students can construct shared understandings and claims on the world that they can then bring into the larger classroom contact zone (Pratt 40). Gerald Graff observes that the "paradoxical goal of teaching is to render the teacher unnecessary, to obviate the authority of the teacher as students eventually become authorities themselves" ("A Pedagogy" 184). Jacqueline Jones Royster

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[5] Another weakness in the traditional classroom frame is discussed in the 1992 American Association of University Women's study, "How Schools Shortchange Girls": the traditional college classroom tends to privilege males over females. This report states that "boys are twice as likely to be seen as role models, five times as likely to receive the teacher's attention and twelve times as likely to speak up in class" (Pipher 63). Conversely, females tend to do better in cooperative learning situations.

suggests that teachers are challenged to "create an evolutionary space that supports an interfacing of people, knowledge, and context; to fashion a curriculum that responds positively and productively to current needs, which recognizes that conditions and circumstances change, that encourages critical and creative thinking, and that can make it possible for us to take risks, live through the process, and come to understand with a more powerful lens" (148). Parker Palmer describes this positive learning environment as one "where truth is central...a place where every stranger and every strange utterance is met with welcome"(74).

The learning space that is created by imposing a particular frame needs to be carefully crafted to include openness, boundaries, and hospitality (Palmer 71). Openness simply refers to a classroom where students will be able to study with a teacher who "not only speaks but listens, who not only gives answers but asks questions and welcomes our insights, who provides information and theories that do not close doors but open new ones, who encourages students to help each other learn..." (Palmer 70). Neither teacher nor student should fear "not knowing" because we are after all brought to education by ignorance. This classroom should be a place where we recognize "that not knowing is simply the first step toward truth, that the anxiety created by our ignorance calls not for instant answers, but for an adventure ride into the unknown" (Palmer 72). But this is *not* a classroom where anything goes, a place without boundaries. Rather, it is a comfortable place where the imposed frame will provide those boundaries, ones that are unusual in the classroom and so are liberating, yet ones that are familiar in the students' lives. For example, the classroom activity could be framed as a TV talk show, a courtroom trial, a game, letter-writing, or acting. Finally, because learning something new can be uncomfortable or even painful, the learning space must be hospitable. Students are so conditioned by the traditional theatrical classroom model of learning (where they are spectators) that they may feel threatened by an invitation to learn for themselves, to perform. To be a student is to assume a certain role. The role in the traditional classroom is the rather safe and predictable one of the passive container. Students can be helped to break out of that role by being offered other *active* roles in the classroom, roles that emerge naturally from the frames imposed. A student may feel most free to take risks and learn when he does not have to reveal himself--when he does not have to feel that every time he makes a comment in class, his personal self is being made vulnerable. By having a playful role in a frame he is already familiar with, paradoxically, the student is freed to be himself. Hospitality, suggests Palmer, "means receiving each other, our struggles, our newborn ideas with openness and care" (73-74). Hospitality is important not for itself but for what it can encourage in the classroom: "A learning space needs to be hospitable not to make learning painless but to make the painful things possible, things without which no learning can occur--things like exposing ignorance, testing tentative hypotheses, challenging false or partial information, and mutual criticism of thought" (Palmer 74).

Providing students with a different frame through which to view the experience of reading and understanding literature will also provide a platform for effectively integrating theory into the introduction to literature classroom. Students can begin with their understanding of the text to generate questions about what they have read, questions

which emerge from "commonplaces." This scrutiny is a natural human reaction to "storytelling." As T. S. Eliot asserts, "criticism is as inevitable as breathing" (467). It is neither advisable nor possible to teach students all the "isms" of theory in a fifteen week introduction to literature course. Learning an elegant theory for its own sake or as a prerequisite to experiencing literature is not only counterproductive but also gets things backwards. This type of theory has been portrayed as "the obscurantist, jargon-filled, self-indulgent and sometimes downright meaningless noodlings of the superannuated '60s radicals that allegedly dominate the academy" (Yagoda 6). But neither is it desirable to ignore theory, for as Coleridge reminds us, "To think at all is to theorize." Rather, students should be allowed, encouraged, and motivated to *theorize*, to interrogate their reading, to discover theory through action. Teaching students to theorize their own position helps them become aware that they respond to a text in a certain way because they are influenced by some particular theory or theories (McCormick 115). In fact, students are often complacent about their own views which they have probably inherited from an authority figure (Lu 64). They need to be helped to resist "the impulse toward closure and right answers" (Elbow 32). Properly framed, classroom activities can be created which will evoke theory, and which will provoke the students to understand that their questions are in fact already revealing and/or leading to certain theoretical positions. Kathleen McCormick has learned that "students want to become theoretically self-aware once they discover that theories are working in them anyway" (116). In short, students should be participants in making theoretical knowledge, not just in receiving it.

In creating this evocative learning environment, the teacher herself needs to be self-aware about her theoretical assumptions. Gerald Graff asserts that "any teacher is unavoidably a literary theorist. Whatever a teacher says about a literary work, or leaves unsaid, presupposes a theory--of what literature is or can be, of what literary works are worth teaching and why, of how these works should be read and which of their aspects are most worth being noticed and pointed out" (qtd. in Schilb 59). As the teacher becomes aware of the theory operating within her, she will lose the "*illusion* of objective authority" in the classroom (McCormick 116). Then she needs to select texts which evoke varied interpretations and controversy. Robert Scholes suggests making a conscious decision in selecting texts by asking "what texts should we teach and how should we teach them? Behind that question, of course, lurk the more properly theoretical questions of *what* are we trying to teach here and *why* we are trying to teach it" (19-20). Finally, the classroom "frames" and attendant activities need to be carefully planned to optimally exploit the students' ability to *theorize*. The assignments that accompany a particular frame will help students recognize that their usual way of reading a text may have limitations and that they can develop a new understanding of what it means to interpret a text (Lu 64). Further, teachers need to create assignments which "make it impossible for students to generate a reading without also having to consider alternative viewpoints, without having to reflect on the politics of choosing one, but not other, viewpoints" (Lu 74). Since language acquisition occurs through conversation and social interaction, providing a frame for interaction in the classroom will help students learn the "language" of theory (Flynn 201).

Putting Theory Into Practice

The study of Tim O'Brien's "How to Tell a True War Story," a frequently anthologized short story, can serve as a model of how "frames" can be imposed on the introduction to literature classroom to evoke *theory*. In this first-person narration O'Brien recounts the horrendous events that Rat Kiley, Curt Lemon, Mitchell Sanders, Norman Bowker and the narrator (all U.S. soldiers) experienced in the Vietnam War and the fallout that reverberates years later from those experiences.

Before being introduced to a particular frame and before reading the assigned text, students would be asked to respond in writing to a prompt which would help them discover their own assumptions about the issues raised in the text. Writing about their feelings about the Vietnam War can help them enter O'Brien's story. Then students would carefully read the story, thus establishing a common space for further learning to take place. To open the discussion and to displace fears of making a "mistake," students would be asked to write for one minute on this question: *What did you find most disturbing about this story?* Writing before speaking provides each student with something to contribute to the class discussion and helps to focus each student's understanding of and confusion about the reading. (This helps to create the "hospitality" needed in the classroom.) Students might reply in a variety of ways: killing the baby water buffalo, singing "Lemon Tree" while picking pieces of Lemon from the tree, the older woman who doesn't listen to the "truth," the "filthy" language, etc. After writing, the students would pair up to share their responses. (Reader-response criticism is evoked in this discussion of varying interpretations.) Then after about five minutes of talking with a partner, students would join the at-large classroom discussion. Students will inevitably engage in lively discussion about the story and will begin generating questions: such as, *Did Tim O'Brien really experience these events in Vietnam? Why didn't Lemon's sister answer Kiley's letter? What in the world did he mean about the "gook music" in the mountains? Why aren't there any Vietnamese people in this story? Does O'Brien hate women? Why is this story so confused? What does he mean by a "true" story? What is true in this story and what isn't?* These questions will then serve as a transition to the next stage of the learning space as the frame is imposed. During all of these activities, the teacher is "backstage" *prompting theory*.

The Oprah Winfrey Talk Show Frame

The TV talk show is a familiar frame to most students. Using the specific Oprah Winfrey Show guides the students to consider this as a relatively serious forum for discussion of the issues to be raised. (Being vague about the particular show can lead to disaster if the students decide to create a "sleeze" show similar to some produced for *daytime TV.)* The frame provides the "boundaries" for the activity and the resultant theorizing.

For the first assignment in this frame, students will work in small groups (three to four students in each group) assuming the role of writers for the show. Their assignment is to prepare for the 30th anniversary retrospective show on Curt Lemon's death and the Vietnam experience. Each group will generate questions for a pre-show interview that

they would like to ask of a "person" (assigned to the group by the teacher) who will be a guest on the show. The idea is to set-up the background for Oprah's interviews on the show. The "people" to be interviewed could include Tim O'Brien, Rat Kiley, Curt Lemon's sister, Norman Bowker, O'Brien's publisher. Each student in the group should be assigned a specific role: discussion leader, recorder, or reporter roles. (Assigning specific roles ensures that everyone participates.) Because each group has a different focus (although a similar goal), the class can cover more material more efficiently (with less repetition). In addition, each group has a real responsibility for "teaching" the class. Groups are also asked to list people (other than their assigned guest) that they would also like to see on this show. (Asking for additional suggestions takes advantage of the class' creativity.) After about twenty minutes, the individual groups will report back to the entire class.

The questions that the class generates, questions which represent their scrutiny of the text, lead to a theoretical discussion. Because O'Brien raises the issue of what it is that makes up a *true* story, a consideration of what literature is and what it should be naturally arises. Because the women in the story are presented negatively and because no mention is made of American women who served in Vietnam, feminist issues are right at the surface. Because the baby water buffalo incident in the story mirrors the Mai Lai massacre, a question of "historical "truth" versus "fictional truth" arises. The need to understand the context of the Vietnam War as a historical moment leads to historical criticism. The question of where meaning resides (in the text, the writer, the reader, or elsewhere) emerges because of the emotional power in this story and because of the Vietnam baggage many readers bring to the story. Questions about what was going on in Kiley's mind as he tortured and killed the water buffalo and about the other horrors and mysteries described lead to a consideration of psychoanalytic criticism. Postcolonial criticism is obviously relevant in a story about Vietnam which does not include any Vietnamese characters!

The final activity for this class period is to have students anonymously write a "One Minute Paper" on the following questions: 1) What is the big point you learned in class today? and 2) What is the main, unanswered question you leave class with today? Their responses will reveal what theorizing they have been doing. Following are some actual student responses: *I learned to think about the characters outside the voices they are given in the story and how they could interact in ways that are more real to me; The big point I learned in class today had to do with the interchangability of truth and fiction in rendering of a war story; I thought about the effects of time on experience. How horror might be mitigated in time; I learned there are lots of different perspectives on a story—that one person's version may not necessarily be the definitive one; I learned there is a difference between author and narrator; I learned the impossibility of writing a true war story is that truth and fiction (or non-truth) become interchangeable during the process; Tim O'Brien made the narrator's voice <u>so real</u> it blurred the line between author/narrator, just like in the story the line between truth/untruth was blurry.*

The "frame" can be continued in a number of activities. For example, students

could be asked to take the questions they generated and imagine the answers their "guest" would give. These questions and answers can then be written as a script for the taping of the Oprah show. The entire class could then actually put on the show. Everyone in the class could be involved as Oprah, guests, stage crew, camera people, audience, etc. The show could be video taped and then used later as a "text" for further theorizing. As a follow-up to the "show" students could write a review of the show for a newspaper. (This assignment would involve rhetorical criticism because the students would need to discover what goes into a TV review.) From her "backstage" position, throughout the activities, the teacher will alert students to the fact that they are indeed theorizing; she will identify the theories the students have evoked.

The Courtroom Trial Frame

Having seen *Perry Mason, Court TV,* or the Simpson murder trial, most students are familiar with the operation of our judicial system. Students could take on the roles of judge, jury, prosecutor, defense attorney, defendant, plaintiff, etc. Kiley might be prosecuted for cruelty to animals. The U. S. Government might be tried for damage inflicted upon U. S soldiers by Agent Orange. Students could create the issue to be tried. Developing questions for the defense and prosecution witnesses would lead to theorizing.

Trivial Pursuit Game Frame

While there are many game frames that can be created, the *Trivial Pursuit* game works very effectively. Students work in groups to develop questions and answers for a particular category, such as *History, The Woman's Point of View, Music, Literature.* Once the questions have been prepared, the class can play the game in teams, using a regulation *Trivial Pursuit* board. Developing the questions and answers in relation to the story is where the theorizing occurs. While playing the game in class, disagreements about interpretations may very well arise. This offers yet another opportunity for the teacher to "prompt" theory.

Letter Writing Frame

While students probably do not write many letters today, most do know what goes into a letter and may very well be familiar with e-mail. Assuming a role is very easy in the letter writing frame. Students could be assigned a role as writer (such as Lemon's sister) and be assigned an audience to write to (Kiley). Or students could be themselves and write to anyone of their choice. Students might write to Tim O'Brien to ask about the truth of the incidents in the story. Or they might write to Lyndon Johnson (death is no barrier when using frames) to interrogate him on what he thought he was accomplishing in Vietnam. The possibilities are extensive. The letters should be copied and distributed to everyone in the class. Then the writer will read her letter aloud. The letter as well as the discussion that should follow the reading will evoke the theory.

Acting Frame

As already described, students can assume roles to act out in the *Oprah Winfrey Show* frame, in the *Courtroom Trial* frame, and in the *Letter Writing* frame. In addition, a section of the story can be chosen for performance. For example, the narrator's encounter

with the "older woman" who says she liked his story (but who he knows didn't listen) could be acted out at a "cocktail party" that would follow his speaking engagement. Each group of students could prepare a skit imagining how the narrator might react, and even introducing other characters, such as Lemon's sister, Bowker, or Sanders. After the "performances," the class could discuss the varying interpretations of intention, character, etc. Again theory emerges from the students' action and discussion.

Conclusion

Thus, by altering the traditional frame of the introduction to literature classroom, the student will occupy a hospitable learning space where she will have real opportunities to *theorize*. And by *theorizing*, the student will discover theory, what it does and how it relates to the study of literature. Then the student, like Sharon Ryan, will have no need to ask in anguish, "Why can't a story just be a story? Why does it have to *mean* something?" Having been prompted from backstage, she will be able to form and answer her own questions with confidence.

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REFLECTION: IT'S NOT JUST A MIRROR IMAGE

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Abstract

Over the last few years there has been increased interest in the use of reflection in the areas of teaching and learning. Reflective teaching is any practice that encourages the teacher or the student to step back, think about the learning process that has just occurred, and then actively use that information to improve future teaching and learning. This presentation gave the participants an inside view of reflection, as a student learning and instructor effectiveness process. Ideas generated to increase student reflection of their own learning included: journaling, student portfolios, pre and post conferences, etc. Ideas generated to facilitate instructor reflection of the management of their classroom learning environment included: use of a teaching portfolio as an opportunity to reflect on philosophy as carried out in all aspects of a course (assessment tools, class activities), a variety of uses of class evaluations, video taping etc.

REFLECTIVE TOOLS PRESENTED

I. Evaluation

A. End of Year

1. Tip them off that you are going to do something like this in the class before.
    a. Try to get them to think of past projects, papers, tests, etc.
2. Hand out evaluation form.
    a. Could be simple or detailed to fit your class and you.
3. Write on board (or overhead) course projects, assignments, exercises, tests, etc.
    a. Use as a checklist, especially if there is no or little response.
4. Try not to be judgmental, it will help you in gathering responses.

B. Midsemester

1. This should help in seeing where your students are at this point.
2. Questions should be organized to foster participation. Nonthreatening.
3. You must find time in the next class to respond - if you do not they will not take this seriously.

C. Periodically

1. Almost the same as the midsemester, but not as in-depth.
2. Could be just a question or two to get a barometer reading of the class/course.
3. Could be attached to a test or assignment.
4. Devote some class time to this. Schedule it in when you are planning the course.

II. Journaling

A. Diary

1. Daily - set up to record or respond to various data.

B. Periodic - when writing an assignment/paper

C. Response - an event

III. Portfolio

A. Teaching

1. Philosophy
2. Translation to course
    a. Goals, text, syllabus, activities and evaluation instruments
3. Reflecting on how a certain class/lesson/exercise went.
4. Reflecting on feedback from others
    a. Student evaluations, peer observations
5. Areas of growth
6. Strategic plan

B. Student/Learning

1. Aspirations
2. Objectives and goals
3. Reflecting on assignments, tests, exercises, progress
4. Reflect on areas of growth
5. Strategic plan

Think/Pair/Share

1. Think:

What can you do to increase the amount of reflection you use in your teaching next semester?

What can you do to increase your students' use of reflection in one of your courses?

2. Pair:

Explain your examples to one another.

3. Share:

Pool your examples and develop two lists of activities, one of teacher centered reflection and one of student centered reflection. Report to the other groups.

Findings

Reflective Tools (ideas) for Students

Writing prompts
Critical thinking journals
Debunking personal myths
E-mail
Videotape the last class with students advising the next semester's class and discussing misconceptions they had in this class.
Schedule time for reflection
Self-grading
Write a journal by student/class
Group processing of unanswered questions
Self evaluation tools based on objectives of the course and personal goals
Post conference interviews
Have students look at own test and quiz scores - to evaluate learning
"What areas were weak or difficult?"
Peer observations
Video tape in the lab setting
Develop writing assignments that enable students to reflect on ideas being taught
Have another instructor (in same discipline) come in as a consultant in order to have them evaluate course and instructor
Portfolio development
Reflect on how they prepared for test
What worked
What didn't
What to do differently next time
Swap notes
Question box
Care plans
Interactive journaling
Diary including evaluation
Post conference of oral presentation
End of program journals
Encourage reflection through open ended questions

Findings

Reflective Tools (ideas) for Teaching

Midterm reflection
Yearly self evaluations - more preparation in stages
Journaling (interactive)
Diary w/evaluation
Pre and post conferences
Frequent feedback from students
Videotaping - viewing alone and/or with others (activities or teaching behavior)
Mentor (helping teacher assigned to new faculty
    peer consultation
    self critique/peer critique
    peer observation w/ pre and post conferences
One minute paper - used frequently after assignments and lectures
Incorporate own research into course - use as a teaching tool
Attach strengths/weakness section to homework assignments
Index cards - "What did you learn from this class?" and "What are you still confused with?"
Pre and post activities designed for sharing
Journal kept by instructor on new course reflections
Write discovery statements
Reflective listening in advisement for struggling students
Critical reading journals with discussion and responses
Analyze (+) and (-) of presentations/content
Formal evaluation - classroom/clinical
Diary on a disk at end of each class
Annotated lecture plans
Questions from last class used in beginning of next class
Schedule time for reflection
Write a journal by student/class

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NON-PHARMACOLOGICAL CONTROL OF BLOOD PRESSURE

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Abstract

The facilitator's research has led to the development of a behavioral treatment regimen for high blood pressure that has proven effective for normalization of blood pressure levels while lowering, and often eliminating, the need for antihypertensive medication. The regimen involves regular monitoring of blood pressure by the patient and by health professionals along with training and regular practice of a relaxation procedure and/or systolic blood pressure biofeedback.

All procedures involved the use of a sphygmomanometer designed for self-monitoring of blood pressure, and all could be practiced in the home and most work place environments. Systolic blood pressure biofeedback is accomplished by a "constant cuff" procedure that has resulted in significant reductions in blood pressure and/or medication requirements for patients with moderate to severe hypertension. Workshop attendees will be trained in the systolic blood pressure biofeedback procedure.

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DESCRIPTIVE ESSAY IN THE PHYSICS CURRICULUM

Richard M. Gottfried

Abstract

Examples of the use of descriptive essays in the physics curriculum are presented. Advantages of using descriptive essays are discussed. Use of these essays in the more quantitative aspects of problem solving is also explored.

Introduction

How to communicate effectively, particularly in written form, continues to be of significant importance in teaching undergraduate students. Writing across the curriculum efforts continue in many schools. Further, employers view written communication as a valued job skill. So one might ask, how do you develop writing skills in a quantitative physics class? I have employed three types of writing assignments that my students and I have found most useful. These types of assignments have improved student conceptual understanding of material studied and has made assessment of student understanding a more supportive process.

Types of assignments used in Physics classes at Frederick Community College:

- Laboratory Summaries: These summaries are used in place of standard laboratory-reporting formats. Students are asked to address the following questions:

  (1) What did you do in the laboratory session? (i.e., types of data collected, laboratory design procedures, methods of analysis);

  (2) Why did you follow this approach? (E.g., log-log plots to establish or confirm relationships, linear regression, spreadsheet analysis);

  (3) What do you conclude from your results?

  These questions are addressed in a narrative format with supporting data and analyses. Summaries are to be kept to three pages or less. This format is most effective for those laboratory sessions where only the problem to be investigated is stated, but no specific procedure given. In this type of lab session, the procedure developed and any modifications made during the lab session can serve as the focus of the summary.

- Homework problems: Students write about the concepts involved in solving specific problems and their procedure for solving the problem before actually performing any calculations. This includes mathematical procedures necessary for solution to the problem. Students often evaluate each other's strategies in collaborative teams. This has been so successful for enhancing student understanding, that I have now extended this format to exam problems, where students can receive substantial partial credit on quantitative problem-solving items for well-written strategies for their solution.

- Class Reconstruction: Using notes taken from class discussions, problem-solving sessions or lectures, students reconstruct previous class as a homework assignment. Concept maps may serve as a starting point and may be submitted with written reconstruction.

Evaluation and Conclusions

The advantages and disadvantages are summarized in Table. I would like to emphasize that these types of assignments help students focus attention on the role of conceptual knowledge, even in the case of problem-solving. As students develop strategies for addressing the content of these writing assignments, they become more comfortable with the application of principles and methodology and less focused on the rote application of numerical manipulations. Ironically, as they come to fully understand the principles underlying the problem to be solved, their ability to "find the right [numerical] answer" improves.

TABLE 1
Descriptive Essay in Science Curriculum

Advantages:

- Provides student with more reflective instrument for personal assessment of progress in course.

- Provides opportunity for employing writing and critical thinking skills in science.

- Provides opportunity for students to demonstrate a qualitative competence on quantitative problem-solving.

- Allows for greater personal experience and interaction for students.

- Improves student confidence and performance.

Disadvantages:

- More time writing means potentially less time for other aspects of course.

- Takes time to grade with appropriate commentary.

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MANUFACTURING AND EDUCATION: PARTNERSHIP FOR EXCELLENCE M.E.P.E. PROGRAM

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Abstract

The Upper Shore Manufacturing & Business Council (USMBC) considers education key to the future productivity and vitality of our region. Thus, a major strategic goal adopted by the Council is to "facilitate technology awareness and opportunities among middle/high school students and teachers."

With the growing demands of "Career Connections" at all grade levels, educators need to know how their course work meets a specific requirement in business and industry. To meet this need, the USMBC developed a regional teacher orientation program "Manufacturing and Education: Partnership For Excellence" (MEPE) whereby area educators spend time in USMBC member companies.

The MEPE program provides an opportunity for communication between teachers and business executives. The program consists of a series of eight evening seminars and facility tours involving 3 teachers/educators for each of the five county Upper Shore public school systems and 3 faculty members from Chesapeake College and management officials from the region's business community. Thus, the program's purpose was to take educators out of the classroom, across county lines, and into real world manufacturing businesses.

The initiative was developed as a joint partnership effort by the USMBC, the Career and Technology Coordinators of Caroline, Dorchester, Kent, Queen Anne's and Talbot county school systems, area chambers of commerce, and the TECH-PREP Consortium (now the Upper Shore Career Connections System). Business executives share their company, business philosophy, organization, video (if available), individual presentations by key staff members, specific issues and concerns facing their industry, and personnel needs and policies.

MEPE gives teachers an opportunity to interact on-site with business officials in whose operations particular social studies (economic) principles, math principles, and communications concepts are applied. Teachers, on the other hand, have an opportunity to discuss their problems in transmitting business information to their students. At the conclusion of the 10-week program (orientation session, 8 visits, and final session) the educators will in oral and written form present their completed project to the audience of business professionals and educators. The curriculum project will demonstrate concepts learned by the educator and how this can be implemented in the classroom. Three hours of in-service credit is awarded to the teachers by the Maryland State Board of Education.

The success of MEPE is directly attributable to the USMBC member hosting companies. The MEPE Program is now in its 5th year and receiving extremely favorable evaluations concerning the program, its intent, and the amount of time and effort each company devotes to their portion of the orientation.

Overview of MEPE participant--Donna Hoy

Initially, I was a reluctant participant in the MEPE program. The background information indicated that participants were to visit eight manufacturing sites and see the onsite operations. The end result would be to get a better idea of what employers needed and wanted in an employee. The participants were also to develop a final project to be presented at the last meeting in which information gleaned from the visits could be incorporated into our curriculum. As chairperson of a computer department, I thought our instructors were doing an admirable job in training potential employees in how to program and use software; I thought my slot would be better filled by an engineering and manufacturing instructor. However, encouraged by my supervisor that this would be an "enlightening" experience, I nevertheless agreed to the adventure.

I was sure I would get little valuable information observing workers assembling widgets with detailed preciseness, operating loud machines with controlled unwasted movements, and examining odd-looking parts for minute imperfections--all part of the quality control process that I admired but really could not get much from. I was totally turned around upon my second visit. I noticed that the assembly line workers, the machine operators, and the quality control people appeared to be very happy. I started asking various workers if they liked their jobs, if they liked their work, if they liked the plant, and other similar questions. I was especially curious about one worker who seemed entranced in his repetitive motions on a machine. It appeared to be the most boring job in the world. I interrupted his concentration when I simply had to ask if he found his job boring. He emphatically answered "absolutely not. I love it here!" I found it very hard to believe and asked his supervisor during the question-and-answer period about this particular person. The plant manager indicated that "Tom" was $10,000 richer from the company because he had invented a part for his machine to cut down on movement and increase productivity! I thought Tom was bored--he was really concentrating on a new invention! The answers were resoundingly positive. It appeared that the employees were happy, motivated employees that liked working that liked their jobs, which were productive. I wanted to find out what the supervisors were doing to have happy employees. I questioned the plant managers of the companies. I wanted to know how they were creating such motivated employees. Every successful plant manager responded with the same response--Reward stimulates motivation which creates a happy employee who produces for the plant which makes the plant money!

The following are some of the "rewards" that some of these companies give their employees with fantastic results.

- Supervisors reward employees for jobs well done with handwritten notes. The original goes to the employee, one copy is kept by the supervisor, and one copy goes in the employee's personnel file.
- Employees who exceed production quotas for the month get rewarded with an "Employee Parking Spot" close to the front door.
- Employees who do not miss time within a quarter are rewarded with a special recognition dinner, free car wash, or free Wal-Mart dollars.

- Employees are provided free tuition for courses taken to increase salaries and/or get promoted.
- Wellness programs are provided for employees to quit smoking and start an exercise program.
- In-house courses are provided for employees who want to upgrade their skills and get promoted.
- Monetary incentives are given for departments who exceed their production quotas.
- Days off are given for yearly perfect attendance.
- Employees are allowed to participate in decision making responsibilities
- Most companies had open-door policies and supervisors were accessible to staff.
- Supervisors sent flowers. to their employees for special days, special jobs, or excessive overtime
- One company offered English as a second language to its Hispanic employees.

It was not hard to conclude that a happy employee who is motivated will improve the morale of a company, come to work (and on time), and produce--sometimes far exceeding expectations. I also concluded that possibly I could relate this same concept to the classroom. Through recognition by reward, possibly I could stimulate the learning process and increase learning while decreasing absenteeism.

I tried some tricks in one class. Some of my rewards included:

- Post-its on excellent papers; it's amazing how much a little effort put forth by the instructor in writing a simple "good job" note will boost the attitude and productivity of a student
- Miniature candy bars to those students who did especially well on quizzes and tests. Few students missed test days and grades improved because only "A" papers got the candy.
- Verbal praise proved especially valuable to deserving students. If the instructor is sincere in doling out the praise, the student will try harder.
- Bonding with the student proved to make the student work harder. If the instructor asks about the student's family and children, (especially remembering family names), and keeps a log about the student's personal accomplishments, trials and tribulations, that student will form a bond with the instructor and attempt to try harder.

As a "graduate" of the MEPE program, I was enlightened and "turned on" to a new teaching tool. One successful semester is not a true test as to whether my "reward" system works However, it is an encouraging start. As one student put it last semester, "Mrs. Hoy, you must spend a fortune in candy!"

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PERFORMANCE PORTFOLIOS TO ENHANCE STUDENT EMPLOYABILITY

Diane Auer Jones, M.S.

Abstract

As technology advances and work-place demands increase, employers are less interested in the coursework students complete during their college years and are placing greater emphasis on the workplace skills students have acquired and the practical experiences they have gained. As art students have historically demonstrated skills and competencies through the use of portfolios, so, too, can students in the sciences compile a record and reference of competencies through the creation of a Laboratory Standard Operating Procedure. Whether your students go on for further education or enter the workforce directly, documentation of workplace policies, procedures, and practices is of paramount importance, especially as more companies adopt ISO 9000 Standards. Prepare your students for the world of work, document their competencies, and enable them to demonstrate their credentials to potential employers through student-generated Laboratory Standard Operating Procedures.

Introduction

While all teachers strive to insure that students master the facts, theories, and concepts of each discipline and course, it is equally important that teachers impart upon their students the skills and competencies required in the workplace. It is necessary that educators maintain ongoing dialogue with local employers to be sure that our students are prepared for the demands of the current marketplace. Over the course of the past ten years, I have through my own experiences as a laboratory director and owner and through communication with other employers, professional organizations and societies, assembled a list of competencies deemed important by employers for entry-level technicians in the following areas of laboratory science: molecular biology, environmental monitoring and toxicology, biological sciences. Perusal of the literature, conversations with representatives of several professional organizations, discussions with many laboratory directors , and informal surveys distributed to 20 Maryland environmental laboratories enabled me to assemble a list of competencies which should be considered in curriculum design and planning. The surveys revealed some surprises.

Firstly, nearly 90% of the laboratories which were identified as biological sciences laboratories cited that employee competencies in mathematics and chemistry are more valued than an employee's mastery of biology. Respondents stated that while they are well equipped to train employees in necessary areas of biology, employers did not have the personnel or support services to teach employees basic math or chemistry. Secondly, while 88% of respondents value the employee's ability to follow directions, only 25% value an employee's ability to formulate his or her own hypotheses or develop her own experiments.

Employees who can read and follow laboratory protocols are preferred, especially given that over the past ten years, a time frame that corresponds to the introduction of outcome based education and inquiry-based pedagogy, employers have seen a sharp decline in the ability of new graduates to read and follow directions. Perhaps this tells us as educators that we need to temper the "inquiry-based rage" with the inclusion of traditional "read-and-follow-the directions" laboratory exercises. Some employers, especially those who direct academic labs, stated that "inquiry-based" learning might be more appropriate for Senior level undergraduates and graduate students than for freshman and sophomore students who should be more concerned with gaining basic skills.

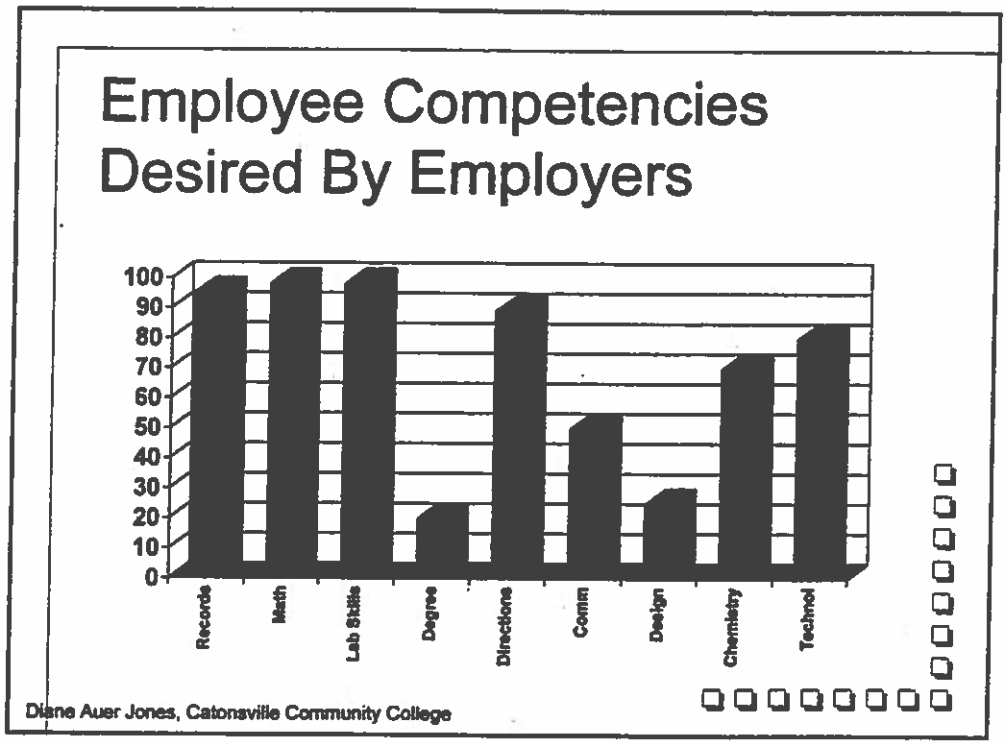

Figure 1 - Skills and Competencies Deemed Important by Laboratory Directors for Entry-Level Technicians. Data was collected through personal conversations, formal surveys, and discussions with laboratory directors at professional meetings.

As shown in figure 1, over 90% of respondents cited accurate record keeping and general laboratory skills such as glassware maintenance, chemical storage, solution preparation, materials procurement, chemical storage, and equipment maintenance as necessary competencies for entry-level technicians. At the technician level, only 20% of respondents cited the employee's degree (Associate or Bachelor) to be important. Degree was listed as important only at the level of the doctoral degree. Finally, 50% of respondents cited communication to be important, but responses indicated to me that there was a lack of clarity on my part in the definition of communication. Those who interpreted communication to be intralaboratory communication rated it high, while those who inter-

preted communication to mean interlaboratory communication (such as professional publications and presentations) did not rate this skill highly for entry level technician.

Employers did not indicate that they expected students to be trained on specific pieces of laboratory equipment prior to employment. With the rapid evolution of equipment, employers understand that it is impossible for academic institutions to keep up with advancing technology. Employers did, however, expect new employees to at least have experience operating computer-interfaced equipment as nearly all equipment has the commonality of computer-interfaced operating systems. While computer-interfaced instrumentation was seen as a "must have", employers strongly recommended *against* the use of computers for laboratory simulations. Employers would rather have employees who have developed manual dexterity and "hands on" skills while completing simplistic student labs than employees who may have experienced more complicated student laboratories through computer simulations in which "hands on" skills are neglected.

As community college educators, we can make a significant impact on improved technician training and scientific preparedness of our students entering the workplace directly or after pursuing additional education. According to the National Science Foundation publication, *Shaping the Future*, 2-Year colleges teach 41% of all undergraduate Science, Mathematics, Engineering & Technology (SME&T) courses (1). Additionally, of 12,334 people who received biology doctorates between 1987 and 1990, 1073 or 9 percent began their undergraduate education at two year colleges. Community colleges can and do impact the quality of scientific research, an important consideration given that the Baltimore/Washington corridor is the third largest region of scientific research in the U.S. In developing the laboratory portions of the biology courses I teach at Catonsville Community College, I have include activities related to each of the competencies desired by employers. Additionally, students document their competencies and skills in the Laboratory Standard Operating Procedure which they generate as part of their coursework and carry forth as a personal reference and skills portfolio. Students are encouraged to add to the portfolio as they complete additional coursework in mathematics, chemistry, biology, and physics.

Methods

To insure that students are developing workplace competencies, I have been working to restructure the laboratory format of the courses I teach beginning with Biology 101-Introduction to Life Science. In addition to meeting traditional content requirements, it is my intent to augment the existing laboratory exercises by including appropriate work place competencies in each activity. The new laboratory format I developed includes four main components: Interdisciplinary Laboratory Activities, Workplace Simulation, Record Keeping, and Communication (Figure 2).

Because students appear to have difficulty applying material learned in one discipline, for example in chemistry class, to a problem or exercise in another discipline, such as a biology class, I feel that it is imperative that all science laboratories are Interdisciplinary Laboratory Activities. Therefore, this new laboratory format integrates concepts of biol-

ogy, chemisty, and mathematics in each laboratory. For example, students use chemistry and math to calculate the molarity of solutions used in the biology laboratory exercise. In addition, I have reorganized my lecture format so that chemistry and biology are not taught sequentially, but in an integrated fashion. No longer do I teach chemistry as the first unit in my biology course, which is understood by students to mean "Now that we're done with that chemistry stuff, lets forget it and move on to biology". Rather, I present chemistry gradually throughout the biology course introducing pertinent topics as needed and in conjunction with relevant applications to biological sciences.

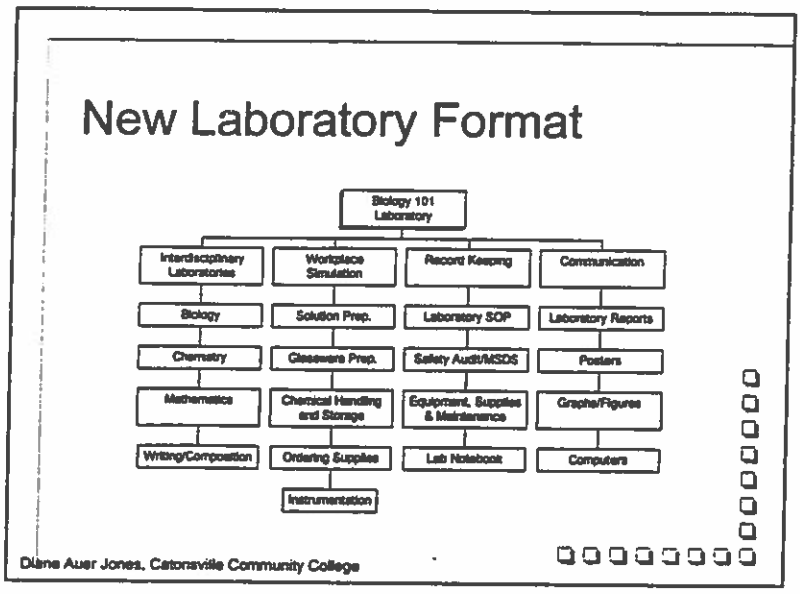

Figure 2

In addition to a multidisciplinary format, it is also important to include workplace skills through Workplace Simultaion in each laboratory. Recently, in an effort to cover more complex concepts and to "wow" our students with sophisticated activities, many educators are utilizing premixed solutions and expensive kits which allow students to skip "prep" steps and move on to complex applications. Unfortunately, when students use kits or work from laboratory carts set up in advance by the teacher or a technician, they never learn the very important skills associated with setting up an experiment or maintaining a laboratory. In my new laboratory format, students have to "order" needed supplies, determine through appropriate calculations how to make molar and percent solutions, make the solutions they will use, and discuss how each chemical would be stored. When appropriate, instrument calibration and maintenance is also discussed.

The primary tool for teaching Record Keeping is the Laboratory Standard Operating Procedure (SOP) which students assemble during the semester. The SOP mimics documentation that each laboratory is required by law to maintain and includes sections for *Laboratory Equipment and Supplies*, *Laboratory Procedures*, *Experimental Design*, and *Laboratory Safety* (Figure 3). In the *Laboratory Equipment and Supplies* section, students file information pertaining to basic laboratory equipment. In the first lab, for example, students simply draw each piece of glassware including beakers, graduated cylinders, volumetric flasks, Erlenmeyer flasks, and pipettes, and label each picture with the name of the glassware and a brief description of the its use. Since I have added this simple activity, I no longer see students measuring with beakers! Students draw pictures to document that they know how to measure with "to deliver" and "to measure" pipettes. Students also generate

instructions for the use of measuring devices as well as basic laboratory instruments. The *Laboratory Procedures* section of the SOP contains basic laboratory protocols common to all laboratories as well as specialized instructions. For example, this section contains instructions for using the metric system, making English/ metric conversions, preparing stock and working solutions, making standard dilutions, generating calibration curves, and preparing precision/accuracy documents. The *Experimental Design* section of the SOP contains the actual protocols students write for weekly experiments. While I provide the students with general guidelines, each student group determines the parameters of the experiment and completes calculations to figure out how to prepare necessary solutions or culture media. Finally, the *Laboratory Safety* section of the SOP contains a laboratory safety audit which each student must complete, as well as Material Safety Data Sheets and emergency procedures. This SOP serves as the student's personal reference as well as skills portfolio. Students also maintain a laboratory notebook recording procedures as well as data.

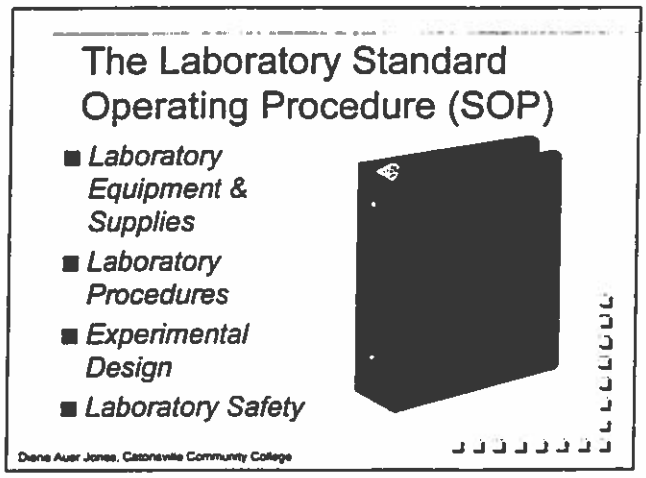

Figure 3

The final component of this new laboratory format is Communication. Students learn to communicate with one another and make group decisions as they determine the parameters of each experiment and refine the experimental design of the lab. While I give students basic guidelines, they have to develop the exact parameters and procedures of the experiment. Also, each week students must prepare data reports of the week's activities as if they were participating in a laboratory meeting. Students submit data tables and graphs such as those found in scientific papers. Using transparencies and an overhead, the class views and critiques the charts and graphs generated by each student (the overheads do not include the name of the student who produced it) to discuss the effectiveness of each graph as well as the interpretations of the data collected. Finally, at the end of the semester, each laboratory group must produce a poster presentation of one of the laboratory activities as if they were presenting at a professional meeting. The students do not know until the end of the semester which laboratory activity they will be assigned; therefore, they have a vested interest in keeping a complete laboratory notebook throughout the semester so they can replicate the laboratory and utilize the data much later in the semester.

In order to complete all the necessary pre- and post- laboratory activities, each laboratory activity actually extends over a three week period. In the week prior to the actual exercise, while students are conducting another experiment, the group determines the parameters of the next exercise, makes the necessary calculations in support of solution preparation, and "orders" the supplies needed for the next week. If the students run out of time,

they can hand their calculation sheet, overview of laboratory protocol, and supply order in at any time during the week prior to the laboratory class. In the week of the actual exercise, solutions are prepared and the experiment is conducted. Prior to the next lab, students write a summary of the activity and prepare data tables, graphs, or diagrams representing their data. During the next laboratory period, students present their graphs and the class discusses the efficacy of each graph and, when necessary, discusses why a given graph is superior or how other graphs might be modified to more clearly or concisely portray the data. Therefore, students are working on two labs concurrently for most of the semester, introducing yet another workplace skill of working on several projects simultaneously. The students meet for two hours each week for the laboratory component of this course.

Results

I have been utilizing this new laboratory format for four semesters now and have found student performance to be outstanding. By the end of the semester, students are comfortable with solution preparation, know how to construct appropriate graphs, can design experiments which include appropriate controls, and have a ready-made portfolio which substantiates their skills and competencies. Additionally, student test scores reveal that student mastery of course content (lecture material) has also improved since I have modified the laboratory component of the course. While the new format appears to take more laboratory time, in reality, the students appear to be more enganged and, in fact, cover more material than covered in the traditional lab. In their course evaluations, students have communicated that they feel like they are doing "real science" and not just "boring classroom labs which bear no connection with the real world". Student poster presentations have been of a quality far superior to my expectations. Even other faculty in the department have commented on the outstanding posters produced by my students. The students in the Spring, 1997 class generated a poster presentation of a laboratory activity utilizing bioluminescent bacteria which was presented at an international scientific meeting. Because the students prepare their posters weeks after the completion of the activity, they must rely on their laboratory notebooks to recreate the protocols, methods, and data of the lab. This has helped them better understand the importance of the laboratory notebook.

There have already been several students, including one who assured me that she would never work in a scientific laboratory, who have come back to tell me that they were hired as laboratory technicians "on the spot" when they presented their SOP at an interview. Finally, because students have to "order" their supplies from me using a scientific supply catalogue, they have gained a real appreciation of the high cost of laboratory equipment and consumables. They appear to be more respectful of equipment in the laboratory and rarely ask why we don't have more supplies.

Future Goals

In the future, I plan to continue to modify each of my laboratory courses to follow the format I adopted for my Biology 101 class. I encourage students to continue to expand their SOP as they complete additional coursework. I would like more faculty to adopt this

format so that they could assist their students in maintaining and expanding the SOP. I am working to encourage all faculty to include workplace competencies in their laboratory courses. Finally, I am working with outside organizations and employers to increase student exposure and access to current equipment and technologies.

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[1]National Science Foundation Directorate for Education and Human Resources, *Shaping the Future: New Expectations for Undergraduate Education in Science, Mathematics, Engineering, and Technology*, 1997. pgs. 33-35.

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SOCIAL PSYCHOLOGY AND THE FINAL SOLUTION: A PSYCHOLOGICAL EXPLORATION OF THE DESTRUCTION OF THE POLISH JEWS

Sherry Lynn Kinslow, Ph.D.

Abstract

In the summer of 1997, I participated in a Fulbright-Hays Travel Study Grant to Poland. I received a wealth of information on my trip about the country, its people, its culture, its history, and its institutions. One aspect of Poland, however, had overwhelming significance for me personally, and, I felt, professionally in my advance academic preparations for the trip. My interest in this topic became even more fervent when I visited Poland and found out a great deal more first hand. My module is dedicated to a psychological exploration of the Holocaust in Poland. Specifically this module is designed to teach basic concepts in social psychology through the plight of the Polish Jews during the Second World War. I have integrated the module into my 101 General Psychology courses, using one and one-half fifty minute classes to cover the material encompassed by the module. The module is also highly appropriate for the social psychology courses I teach. Portions of the module also have relevancy for personality and adjustment courses as well as abnormal psychology classes.

In every Polish heart these words
must be engraved as in stone;
Dachau and Auschwitz and our ravaged home,
Every nameless grave and every prison cell, unite us all.

From *To the Polish Jews* by Wladyslaw Broniewski

Objectives of the Module

Upon completion of this module, the student should be able to:

1. Understand the position of the Jews in Europe from the death of Christ until the reign of Constantine in Rome in the early 4th century and the changes that took place in the status of the Jews following his reign.
2. Define stereotyping and apply this concept to the depiction of the Jews in Eastern Europe and in Poland as well as to the depiction of other groups.
3. Define prejudice and apply this concept to the attitudes toward Jews in Poland as well as toward other groups who are the target of prejudice.
4. Define discrimination and apply this concept to the regulations enacted in canonical law historically against Jews and by the Nazis during W.W.II. Generalize the concept of discrimination to other groups as well.

5. Distinguish between prejudice and discrimination and give an example of each in the context of the Polish Jews.
6. Articulate the primary psychological theories used to explain the origins of prejudice and apply these to the treatment of the Polish Jews during World War II.
7. Define and give examples of social norms and report on an instance in which the student intentionally violated a social norm and recorded the results of this violation.
8. Define conformity and explain how it operated in Asch's classic experiment and in the treatment of the Jews in Poland.
9. Define obedience and summarize the findings of Milgram's classic experiment designed to test whether the Nazis were unique in their adherence to obedience in their treatment of the Jews in Poland.
10. Articulate the main aspects of the bystander effect and apply this phenomenon to the Polish Jews in W.W.II. II.
11. Explain the concept of deindividualtion, as suggested by Zimbardo's prisoner-guard experiment, and apply this concept to the behavior or Nazi soldiers during W.W.II.
12. Contemplate the nature of forgiveness.

Content of the Module

I. In the Beginning
    A. Fulbright-Hays Travel Study Grant to Poland
    B. My Interest in the Holocaust
    C. *A Poor Christian Looks at the Ghetto*
    D. Ghetto Quote
II. The Holocaust
    A. The Beginning
        1. Dachua Slides
        2. Dachua-Personal Memoir
    B. The End
        1. Auschwitz Slides
        2. Auschwitz-Personal Memoir
    C. Schindler's List (Video clip)
    D. Lodz Film School-Holocaust original photo and short film
    E. The Face of the Ghetto-Holocaust Survivor
III. Brief History of the Polish Jews
    A. Statistics
    B. Systematic Destruction Quote
    C. Status from Death of Christ to Constantine's Reign
    D. Status of the Jews in Poland pre-W.W.II
IV. Psychological Theories of Social Cognition Applied To Polish Jews
    A. Stereotypes: Defined, Examples of, Application to Jews
    B. Prejudice: Defined, Examples of, Application to Jews
    C. Discrimination: Defined, Examples of, Application to Jews

D. Difference Between Prejudice and Discrimination
E. Theories of the Origins of Prejudice and Discrimination
F. Theories of Origins of Prejudice and Discrimination Applied to Polish Jews

V. Psychological Theories of Social Interactions Applied to Polish Jews
A. Social Norms: Defined, Examples of, and Student Experiment
B. Conformity: Defined, Examples of, Asch's Experiment (Film Clip)
C. Conformity Principles Applied to Jews
D. Obedience: Defined, Examples of, Milgram's experiment (Video Clip)
E. Obedience Principles Applied to Persecutors of the Jews
1. Eichmann's Nuremberg Defense
2. Pallon's Statement
F. Bystander Effect and Application to the Holocaust
G. Deindividuation and Application to the Holocaust, Zimbardo's Experiment (Video Clip)

VI. Holocaust: The Aftermath
A. Controversy: Hitler's Willing Executioners
B. Stories of Ordinary Germans (Der Spiegel)
C. Anti-Semitism in Poland Today (Slides)
D. The Holocaust Museum

VII. The Nature of Forgiveness: Sunflower Scenario

Content of the Module-Narrative

I. In the Beginning

The introductory section of the module is devoted to familiarizing the student with Poland and preparing the student to engage in examining the Holocaust and its relevancy to the principles of social psychology. I introduce the module with a discussion of the Fulbright-Hays Travel Study Grant and my trip to Poland, showing the students a brief slide show illustrating some of the things I saw and did on the trip. I establish my interest in the Holocaust which was fueled by my visit to Poland. Then I do a dramatic reading of *A Poor Christian Looks at the Ghetto*. We explicate the poem using the questions presented in the Assignments and Activities section of this module as a starting point. This section ends with the quote by Wladyslaw Broniewski at the top of this report

II. The Holocaust

This section begins with a look at the first concentration camp, Dachua. Though actually in Germany, Dachua has relevancy for this module because it was the beginning of the internment and extermination campaign the Nazis waged against the Polish Jews. For me starting with Dachua provides the opportunity to show my slides from this camp and to share something of my own history since as a young man, my father was one of the liberators of Dachua. Years later as an infant, I was taken there by my parents to meet the two elderly German sisters whose house my father was billeted in during the liberation. From the beginning of the experience of the Polish

Jews in Dachua, the students are then transported, again by slides I have taken, to the "end" or certainly the height of the destructive Nazi extermination machine, Auschwitz-Birkenau. Once again I can relate a personal memoir, this time of our train trip in the rain to Auschwitz last summer. I show the slides of Auschwitz today, then a clip from *Schindler's List* to remind the students of what the camps looked like in W.W.II when they were not the hollowed edifices of past destruction my slides reveal today, but were teeming with inmates and unspeakable tortures. This section of the module ends with two more remembrances from the Poland trip--a brief retelling of the story of a powerful short film inspired by a famous Holocaust photo. (We saw the film at the Lodz Film School). The second remembrance is of a pre-trip interview at the Holocaust Museum in Washington DC with Jan Novak, a Catholic member of the Polish underground who served as a courier during the war. Novak described the death of a young boy in the Warsaw Ghetto explaining that it was the death of this solitary boy that put a face on the Warsaw Ghetto for him and led him to risk his life so that other lives might be saved. The sheer, raw pain still visible on the face of Jan Novak when he spoke of this memory was one of the moments that most galvanized me in our preparation for this trip. Novak's story is a powerfully compelling one--one I would like the students to experience more directly than by my simply retelling it.

III. A Brief History of the Polish Jews

In this section, I provide the students with an historical background of the treatment of the Jews in Poland. An historian we worked with in Poland defined the scope of the Holocaust there for us in statistical terms. In 1921, there were 2.1 million Jews in Poland, in 1931, 3.1 million. In 1954 there were only 70,00 Jews in Poland and by 1992, 10,000. I relate the words of noted historian Raul Hilber (1985, p. 7) to the students: "The destruction of the European Jews between 1933 and 1945 appears to us now as an unprecedented event in history. Indeed, in its dimension and total configuration, nothing like it had ever happened before. As a result of an organized undertaking, five million people were killed in the short space of a few years. The operation was over before anyone could grasp its enormity, let alone its implications for the future." I present this information to the students then discuss the status of the European Jews from the death of Christ to Constantine's reign emphasizing the lack of discrimination the Jews experienced until the 4th century. When Constantine adopted Christianity as the state religion all this changed. I then discuss the pressure put on Jews by Christians to abandon their religion and subsequently to be persecuted by Christians if they did not do so. I then reveal the unique status of the Jews in Poland pre-W.W.II . Jews comprised one third of the Polish pre-W.W.II population and were a vital part of the larger communities. Photos of the palace of Poznanski we visited in Lodz testify to the students the prominence which some Jews held in Polish society before W.W.II.

IV. Psychological Theories of Social Cognition Applied to Polish Jews

This section is designed to begin to make linkages between the history of the Jews in Poland and basic psychological theories. I start by having students describe people who are "cowboys" and "bikers," evoking the stereotypes the class has of these

groups. We then define "stereotypes," giving more example from our own culture. Some of the stereotypes of the Polish Jews are then discussed. We follow the same format defining "prejudice" next, providing examples of it the students can relate to in their own culture, and then applying it to the attitudes held toward the Polish Jews. The last term we define in this manner is "discrimination." Again examples from our own cultures are provided. Then we discuss the discrimination against the Jews tracing it back, as Hilberg (1985, p10-11) does to the Synod of Elvira in 306 and paralleling such early canonical measures with anti-Jewish measures instigated by the Nazis. We further discuss the difference between prejudice and discrimination, then brainstorm ideas about the origins of prejudice and discrimination. Several different themes will evolve from this discussion reflecting ideas from social learning theory, motivational theory, cognitive theory, and personality theory. We then discuss these theories in the context of the Jewish Holocaust..

V. Psychological Theories of Social Interaction Applied to Polish Jews
The assignment for the Social Norms Experiment, "Violate That Norm," will actually be given and explained to the students at the class prior to this one, so that all the students will come to class with their own example of a social norm they have violated. Thus students will have conducted their own "experiment" by manifesting behavior in conflict with a social norm before our discussion. We discuss the outcome of the students" experiments at this time. We then define "conformity" giving examples of it in our own culture and learning some basic psychological principles of it by watching a film clip of Asch's classic experiment on conformity. We then discuss conformity as it applies to the treatment of the Jews during W.W.II. Next we define "obedience," giving examples of it in our culture, then watching a video clip of Milgram's classic study on obedience. This experiment is particularly relevant to our discussion since it was undertaken to try to discover, as a result of the rhetoric at the Nuremberg trials, if the adherence of the Nazis to orders was unique or more typical human behavior. We apply the obedience principles more directly to the persecutors of the Jews by examining Eichmann's Nuremberg defense and Pallon's recent statements to the news media about his role in the deportation of French Jews to Auschwitz. We then define the "bystander effect" and apply it to events in our own culture and in the Holocaust. Lastly we define "deindividuation," giving example of it in our own culture and applying it to the behavior of Nazi soldiers including concentration camp personnel during the War. To better inform our discussion, we view a video clip of Zimbardo's classic experiment on role-taking involving mock prisoners and guards.

VI. Holocaust: The Aftermath

We discuss the controversy generated by the recent book, *Hitler's Willing Executioners*, as well as works by opposing theorists. The book maintains that many people were accomplices in the destruction of the European Jews. This leads to a discussion of the role of ordinary Germans which incorporates the impact of the Nazis on ordinary German lives as well. Hitler's plan to create a master race is examined through a memoir of my German nanny and through an article in *Der Speigel*

magazine. anti-Semitism today in Poland is touched on through slides of graffiti taken through-out Poland. The Holocaust Museum in Washington DC is also discussed.

VII. The Nature of Forgiveness: Sunflower Scenario
The final exercise for the students is a most fitting one. It is the central dilemma posed by the book by famed Nazi hunter, Simon Weisenthal called *The Sunflower*. Students receive a copy of the scenario provided in the Assignment and Activity section of this report and then write their response to the Nazi soldier. A discussion of their responses is likely to generate a consideration of a variety of issues focusing on morality and ethics, guilt and atonement, and forgiveness. I end the module with the famous promise to the victims of the Holocaust: "Never again."

Assignments and Activities:

1. *A Poor Christian Looks at the Ghetto*

Students will hear a dramatic reading of this poem. They will then explicate and discuss the poem using the following questions as starting points for the interchange:

1. What is the feeling conveyed by this poem?
2. What words or images contribute to this feeling?
3. What was the Warsaw Ghetto?
4. What images are associated with the Guardian mole?
5. Who might the Guardian mole be?
6. What is the significance of the year in which the poem was written?
7. What might the title of the poem mean?
8. What does the author seems to be saying about Christians and the Ghetto?

2. Social Norms

Prior to the onset of the class session(s) devoted to this module, students will be given the Social Norm Experiment form: Violate That Norm. They will be given the task of violating a social norm and recording the responses of those around them to this violation. During class, we will discuss social norms and the experiences the students had when violating them. We will then apply these ideas to the treatment of the Polish Jews during W.W.II.

3. *The Sunflower*

This exercise uses the wording of a Washington Post Book Section review of *The Sunflower* which uses the scenario of the Nazi soldier's request for forgiveness as its center piece. Students will be asked to write their response to the Nazi soldier. These responses will then be discussed. Issues of morality and ethics, standards of conduct, obedience and dissension, blame, guilt, atonement, and forgiveness typically emerge from the discussion generated from the scenario.

A Poor Christian Looks at the Ghetto (By Czeslaw Milosz)

They used to pour on graves millet or poppy seeds
To feed the dead who would come disguised as birds.
I put this book here for you who once lived
So that you should visit us no more. 1945

Bees build around red liver,
Ants build around black bone.
It has begun: the tearing, the trampling on silks,
It has begun: the breaking of glass, wood, copper, nickel,
silver, foam
Of gypsum, iron sheets, violin strings, trumpets, leaves,
balls, crystals
Poof! Phosphorescent fire from yellow walls
Engulfs animal and human hair.

Bees build around the honeycomb of lungs,
Ants build around white bone.
Torn is paper, rubber, linen, leather, flax,
Fibre, fabrics, cellulose, snakeskin, wire.
The roof and the wall collapse in flame and heat seizes
the foundations.

Now there is only the earth, sandy, trodden down,
With one leafless tree.

Slowly, boring a tunnel, a guardian mole makes his way,
With a small red lamp fastened to his forehead.
He touches burned bodies, counts them, pushes on,
He distinguishes human ashes by their luminous vapour,
The ashes of each man by a different part of the spec-
trum.
Bees build around a red trace.
Ants build around the place left by my body.
I am afraid, so afraid of the guardian mole.
He has swollen eyelids, like a Patriarch
Who has sat much in the light of candles
Reading the great book of the species.
What will I tell him, I , a Jew of the New Testament,
Waiting two thousand years for the second coming of
Jesus?
My broken body will deliver me to his sight
And he will count me among the helpers of death:
The uncircumcised. 1943

Social Psychology Experiment: Violate That Social Norm

1. What social norm did you violate?
2. How did you violate the norm?
3. Describe in detail what happened when you violated the norm.
4. What did you learn by violating the norm?

The Sunflower

The year is 1942. You are a Jewish concentration camp inmate. You have been marched with your labor gang to shovel out the refuse of a German military hospital. You are suddenly pulled aside by a nurse and led to a room where a blinded, skeleton-like soldier lies at death's door. The dying German says he was an SS man. The soldier pleads with you to stay, then launches into a strange and terrible confession. He tells you that one incident has tortured his conscience ever since it happened and that before he dies, he wants to unburden himself to a Jew. He tells you that it is the only way he can possibly relieve some of the anguish in his heart over what he has done. The SS man describes how his unit was ordered to kill a group of Jews, mostly women, children, and old people--how they forced the strongest to carry cans of gasoline into an empty house, how they drove all of them into the house and sealed the door, how they lobbed grenades through the windows, and how they--he, too--shot down those who tried to escape. The whole scene has been burning in his mind ever since, particularly the sight of a family who had jumped from a window in front of him, a father, mother, and little boy with black hair and big dark eyes. You sit through the recitation, then listen as the German whispers a last plea for forgiveness. You understand that what you have heard has been a true confession and true contrition. What do you do?

Note: This incident is the focal point of *The Sunflower* by Simon Weisenthal. The wording of the incident as it appears here is adapted from a review of the book in the *Washington Post Book Section.*

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USING AMERICAN ARCHETYPES IN TEACHING MULTICULTURAL DIVERSITY

Clare B. Lyons

Abstract

Through the use of common symbols in American society, students are able to discuss what values and traditions their reference groups exhibit. Dialogue with other students generates an awareness of the rich and varied experiences that exist in the classroom and therefore in their workplace and among their customers.

Introduction

Over the last five years, there has been increased awareness that there have been significant demographic changes in the United States in terms of age distribution, size and growth of racial and ethnic groups, immigration, religion and the family. There has been an restructuring of the American economy resulting in significant changes in employment and occupations. These have propelled sweeping changes in education and training. Nowhere has the change been more evident than in the need to revamp business education and curriculum at the post-secondary level. Most of the jobs that today's high school students will have in the next ten years have not even been invented yet. One of the areas that I will discuss today centers on creating awareness in business students of the changes that have occurred and are occurring today specifically in demographic changes. I will present an in-classroom exercise which I have developed for use in a Principles of Management class but which is general enough to be used in Marketing, a Freshman Seminar, Sociology, or Political Science/Public Administration.

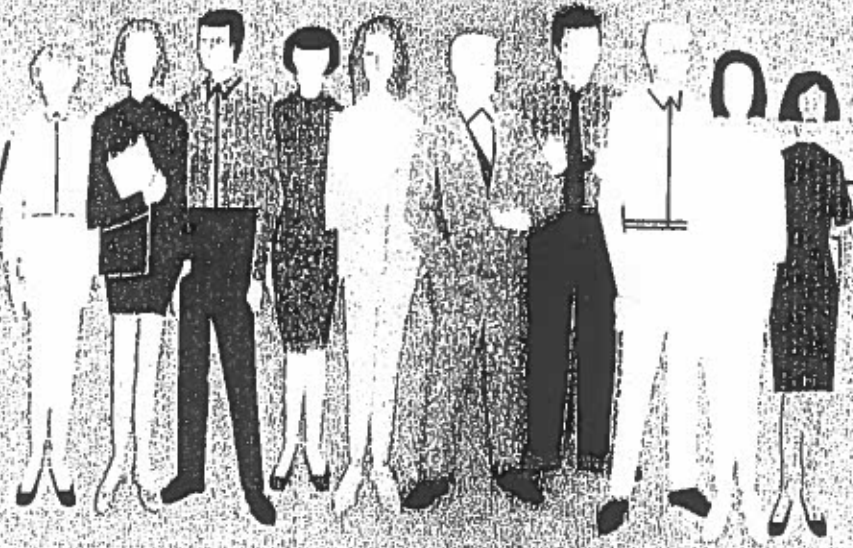
I will also present additional material that is available for purchase from various companies that could be useful in the classroom. and which I recommend.

Multicultural Diversity

A Classroom Training Program

Multicultural Diversity

A Cl



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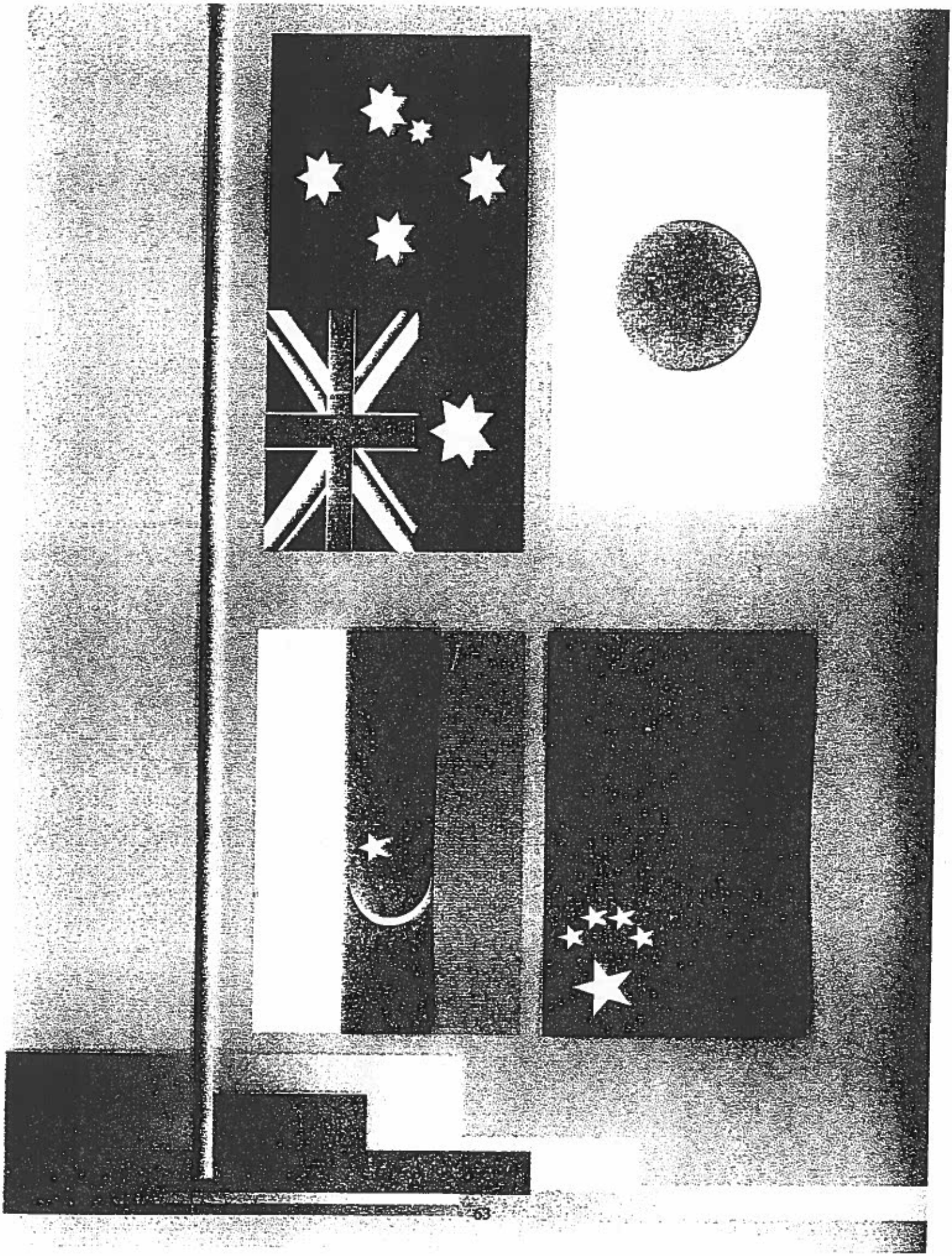


Multicultural Diversity

- Bhinneka Tunggal Ika
- (Unity through diversity)
- National Motto of Indonesia

- E Pluribus Unum
- (Out of many one)
- Motto on all coins in US

Challenges to American Business

- Maintain dynamism of an aging workforce
- Reconcile conflicting needs of women, work and families
- Integrate African American and Hispanic workers into the economy

U.S. Census Bureau the Official Statistics

STATISTICAL BRIEF

SIXTY-FIVE PLUS IN THE UNITED STATES

May 1995
Economics and Statistics Administration, U.S. Department of Commerce

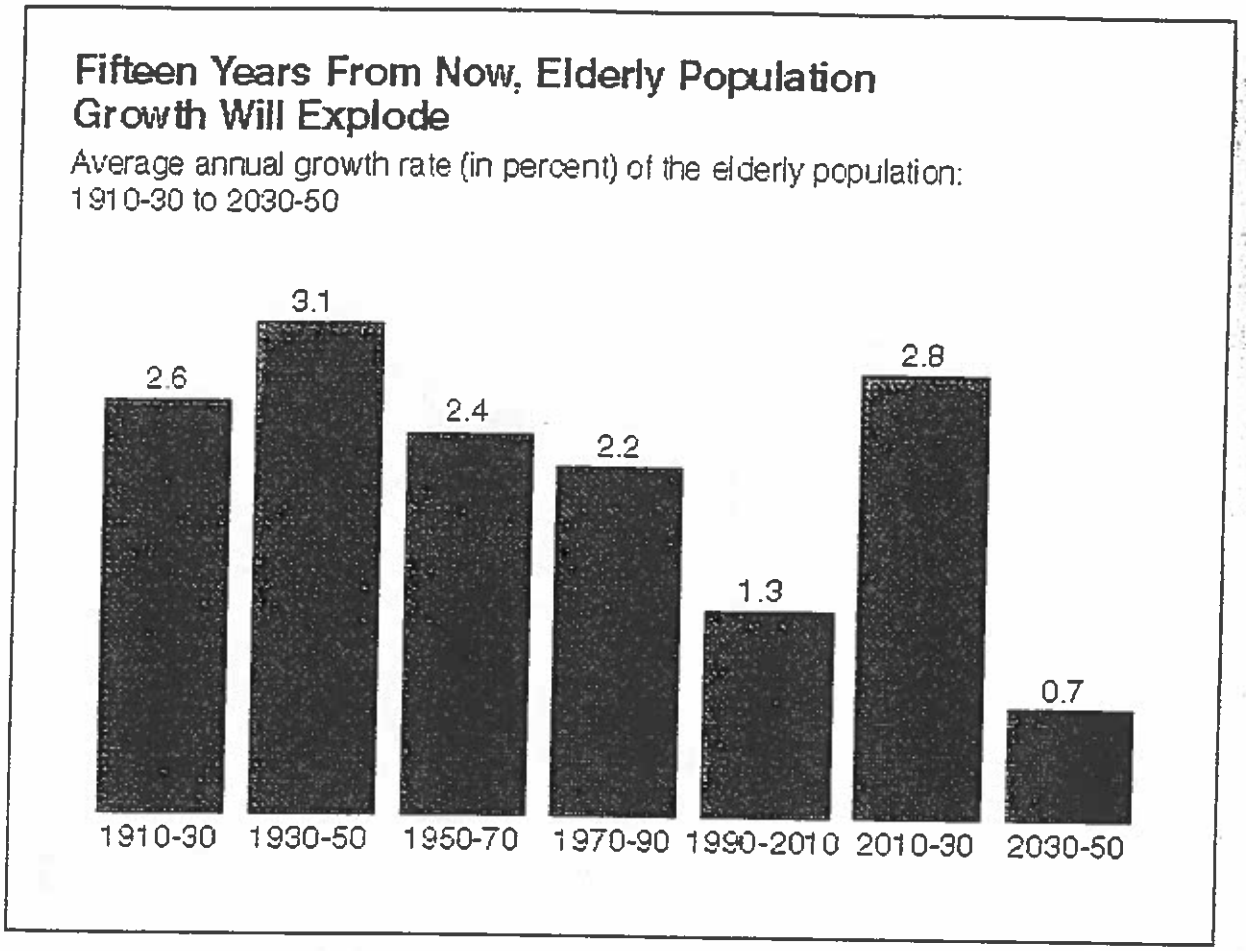
America's elderly population is now growing at a moderate pace. But not too far into the future, the growth will become rapid. So rapid, in fact, that by the middle of the next century, it might be completely inaccurate to think of ourselves as a Nation of the young: there could be more persons who are elderly (65 or over) than young (14 or younger)!

The elderly population has grown substantially in this century ....

During the 20th century, the number of persons in the United States under age 65 has tripled. At the same time, the number aged 65 or over has jumped by a factor of 11! Consequently, the elderly, who comprised only 1 in every 25 Americans (3.1 million) in 1900, made up 1 in 8 (33.2 million) in 1994. Declining fertility and mortality rates also have led to a sharp rise in the median age of our Nation's population -- from 20 years old in 1860 to 34 in 1994.

.... and will continue to rise well into the next century ....

According to the Census Bureau's "middle series" projections, the elderly population will more than double between now and the year 2050, to 80 million. By that year, as many as 1 in 5 Americans could be elderly. Most of this growth should occur between 2010 and 2030, when the "baby boom" generation enters their elderly years. During that period, the number of elderly will grow by an average of 2.8 percent annually. By comparison, annual growth will average 1.3 percent during the preceding 20 years and 0.7 percent during the following 20 years. (See graph below.)



.... especially for the oldest old.

The "oldest old" -- those aged 85 and over -- are the most rapidly growing elderly age group. Between 1960 and 1994, their numbers rose 274 percent. In contrast, the elderly population in general rose 100 percent and the entire U.S. population grew only 45 percent. The oldest old numbered 3 million in 1994, making them 10 percent of the elderly and just over 1 percent of the total population. Thanks to the arrival of the survivors of the baby boom generation, it is expected the oldest old will number 19 million in 2050. That would make them 24 percent of elderly Americans and 5 percent of all Americans.

We're living longer.

Back when the United States was founded, life expectancy at birth stood at only about 35 years. It reached 47 years in 1900, jumped to 68 years in 1950, and steadily rose to 76 years in 1991. In 1991, life expectancy was higher for women (79 years) than for men (72 years).

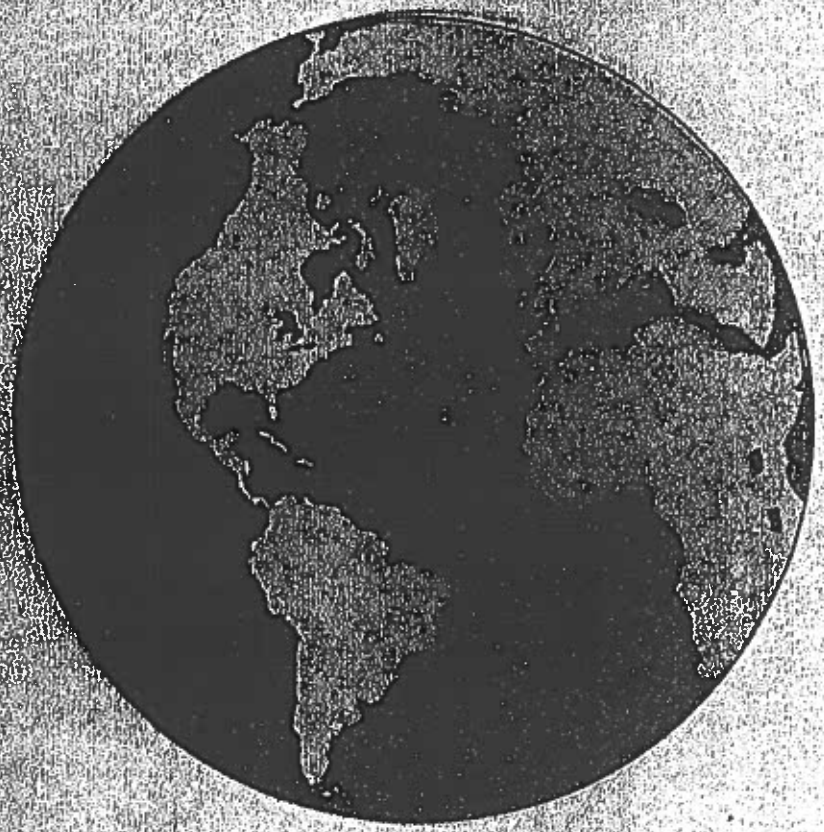
Once we reach age 65, we can expect to live 17 more years. During the 1980's, post-65 life expectancy improved for all race/sex groups. The biggest improvement (a rise of over 1 year) belonged to White men.

The elderly are becoming more racially and ethnically diverse.

In 1994, 1 in 10 elderly were a race other than White. In 2050, this proportion should rise to 2 in 10. Similarly, the proportion of elderly who are Hispanic is expected to climb from 4 percent to 16 percent over the same period.

America's Hispanics

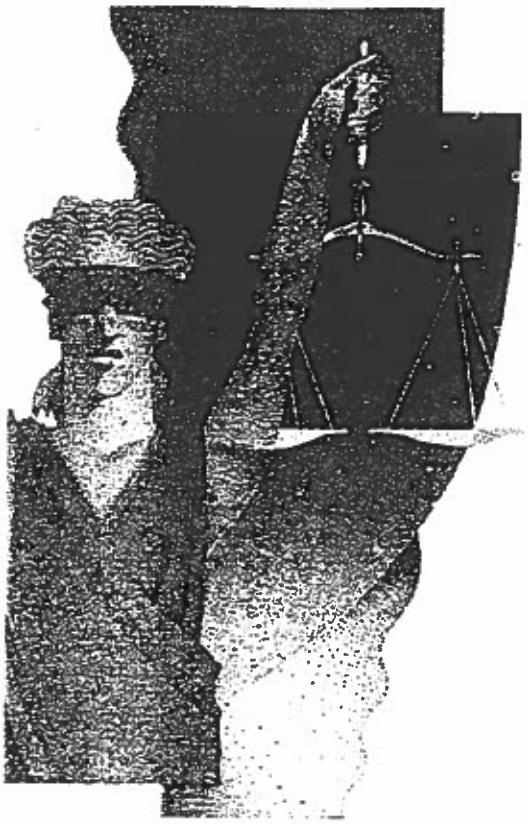
- Mexico 65%
- Central and South America 13%
- Puerto Rico 10%
- Cuba 4%
- Other 7%

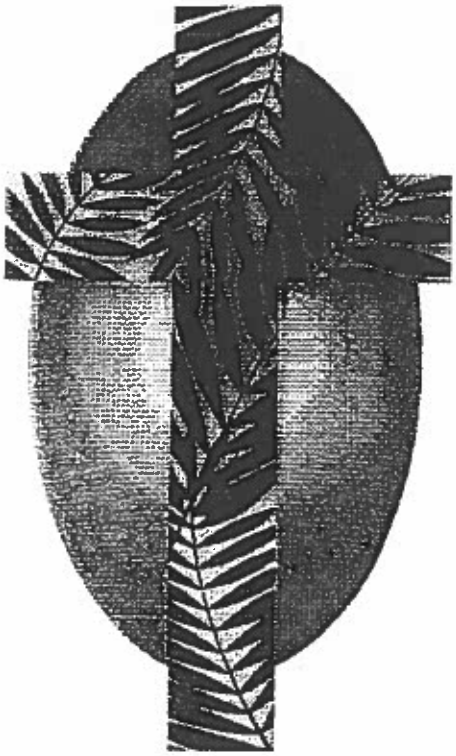


Multicultural Diversity

American Archetypes


POLICE





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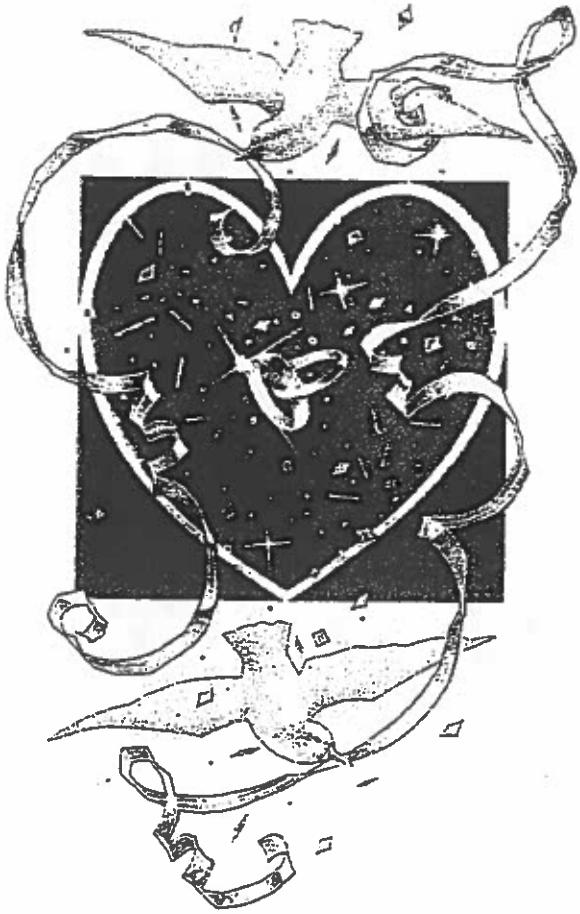

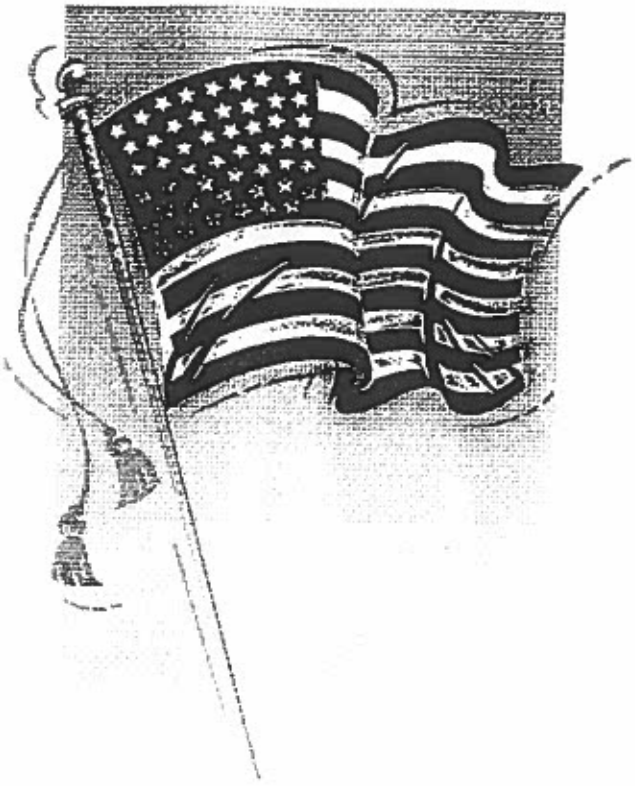


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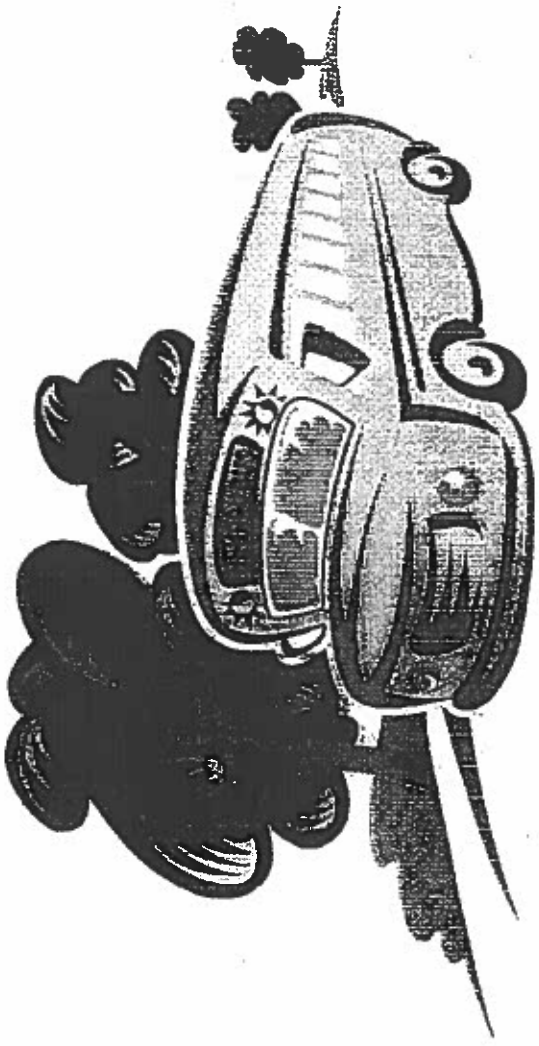
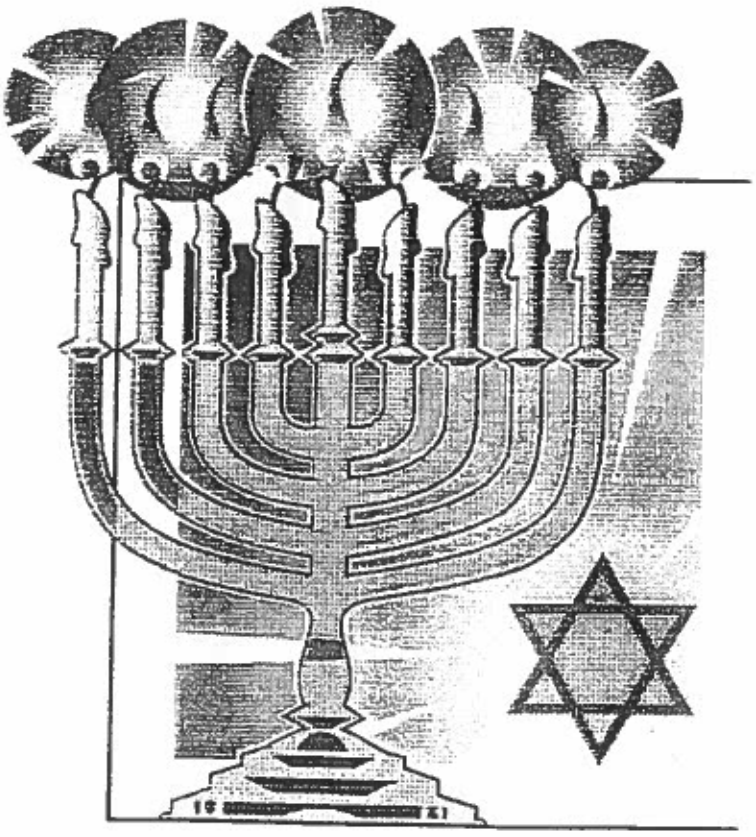
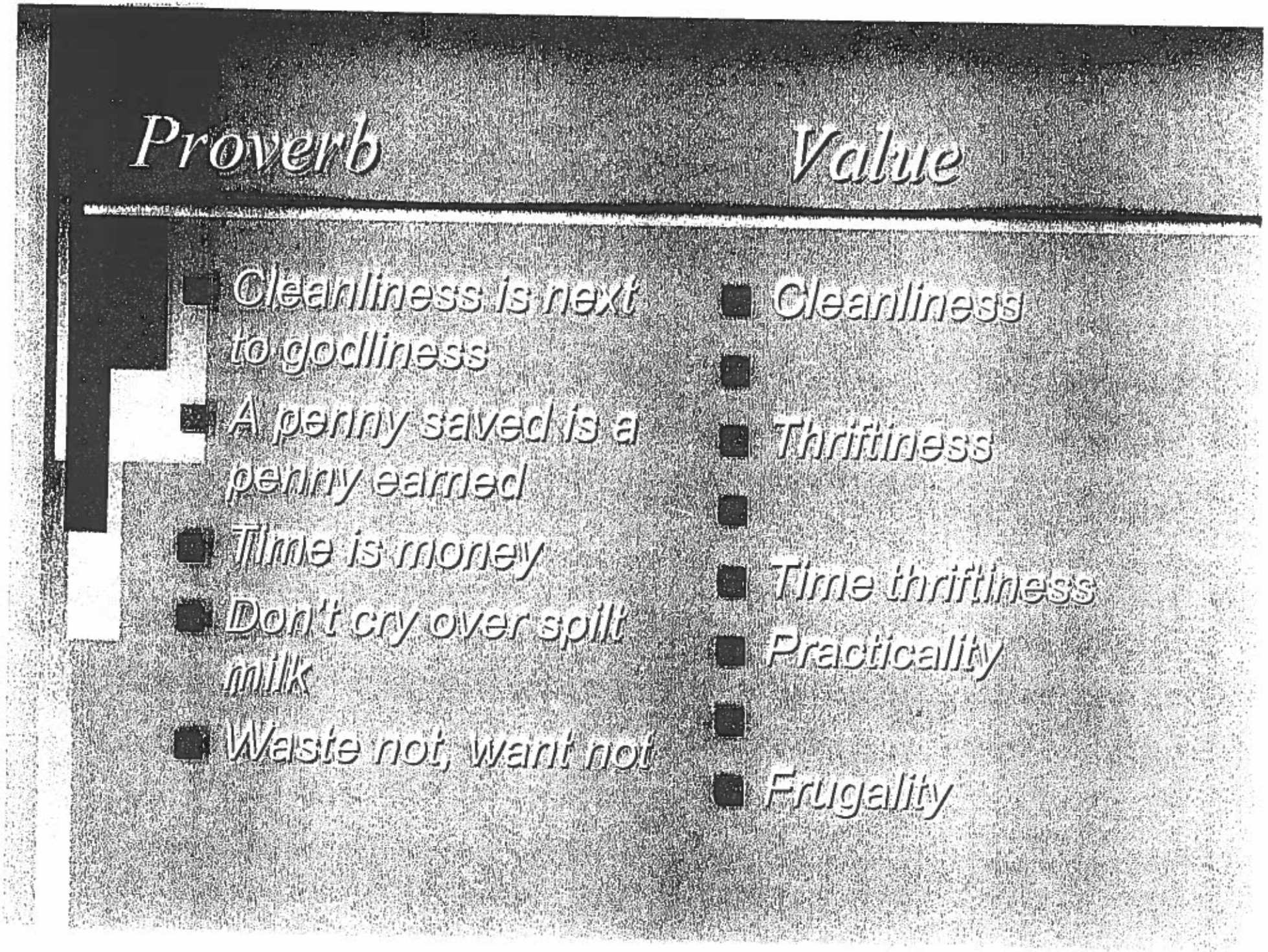




Multicultural Diversity

- Proverb
- Value


Proverb
Value
Cleanliness is next to godliness
A penny saved is a penny earned
Time is money
Don't cry over spilt milk
Waste not, want not
Cleanliness
Thriftiness
Time thriftiness
Practicality
Frugality

Proverb	Value
Early to bed, early to rise, makes a one healthy, wealthy and wise	Diligence, work ethic
The squeaky wheel gets the grease	Aggressiveness
You've made your bed, now sleep in it	Responsibility

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COOPERATIVE EDUCATION

An Innovative Approach Combining Academic Theory and Practical Work Experiences

by

Joseph R. Manno, PhD

Montgomery College, Rockville, Maryland

Cooperative Education (Co-op) may have started with the engineering disciplines but it is now widespread among other disciplines and many colleges.

Purpose

The original purpose was for students to gain work experience. There was little or no relation ship of theory and experience. The program I am involved with at University of Maryland University College requires students to do more than just work. It provides students the opportunity to integrate academic theory with applied learning in the workplace, develop verbal and written communication skills, develop project management skills, manage multiple priorities and use cognitive skills, such as analysis, problem solving and decision making.

Requirements

The basic requirements are that students must have 2.5 GPA and at least 30 credits to be considered for the program. In addition, the students must have a new position or have assumed new responsibilities within the year and the students are required to submit a proposal containing old and new job responsibilities. The proposal is required to state the students' goals and what they propose to accomplish during the 15 week semester.

1. This article was adapted from the Cooperative Education Course Guide, Second Edition,
   Spring 1997, University of Maryland University College.
   * Other eligibility requirements also apply.

Process and Classes

The process requires the students to attend 4 classes, prepare a learning contact, write answers to three questions and make two presentations to complete the course.
The classes consist of three rotating groups. In effect the course has rolling enrollment. One group is completing the course. Group two is half-way through and the third group is in for orientation and observation.

Presentations

The course requires students to make two, five minute presentations. They are the organizational profile and the progress report. The presentations are for students to obtain experience in giving a short, but complete, executive summary of their work. Students are advised to be bright, be brief and be gone!

Organizational Profile

The organizational profile provides the opportunity for students to review the organization's operations and culture. What is the formal structure? Is it hierarchial? Is it centralized? What are the formal and informal lines of communications? What is the culture of the organization?

Progress Report

In the progress report, students describe their learning contract objectives, progress towards accomplising the objectives, benefits of Co-op to self and the organization or difficulties in accomplishing the objectives.

Questions

Three questions requiring written answers must be submitted--one each month. The first question is how the students' work relates to their supervisors' objectives and the organizations' goals.

In the second question the students relate a theory or concept learned in a course to the actual practice at work.

The last question requires students to explain what was learned in the following categories: organizational behavior, communication skills and processes, technical issues and skills, and personal and career development.

Learning Contract

The propose of the learning contract is to integrate academic learning with the actual workplace activities. The contract consists of an educational goal, objectives to accomplish the goal, a demonstration to show how the objective is to be completed, and an evaluation method.

The contract is signed by the students, their supervisors and the faculty coordinator.

Performance Evaluation

The last component of Co-op is a performance evaluation by the students' supervisor.

Student Reactions

Students like the Co-op format because it provides the opportunity for public speaking. The contract format provides structure to completing projects. The organizational profile gives them a better understanding of their organizations. The questions at the end of each presentation provide students with the opportunity to learn about different organizational cultures as well as operations, professions, structure, policies and procedures. The rolling enrollment enables students to learn from other students and develop networks with other students.

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DNA 'FINGERPRINTING' or DNA RESTRICTION ANALYSIS

Dr. Rosemary Nickerson

ABSTRACT

In this exercise students are introduced to the rationale and methodology of a strategy used to analyze and compare DNA sequences. It is completely done 'on paper' and does not require expensive reagents or technical ability on the part of either student or instructor. Students will simulate digestion of DNA samples with restriction enzymes and comparison of the resulting fragments by gel electrophoresis. Applications to criminology, species identification, or related techniques such as molecular cloning can be incorporated. The following can be copied directly from this publication for use as lab materials.

BACKGROUND INFORMATION

The sequence of nucleotide bases in the DNA of an individual, like a fingerprint, is unique to that individual. The same sequence of bases is not found in another individual, except perhaps in an identical twin. In general, the more closely related two individuals are the more similar is the sequence of bases of their DNA. The differences in sequence arises from events such as crossing over and gene mutations. Small changes accumulate over countless human generations and make each individual's genotype unique.

Technically, these differences can be analyzed if a DNA sample is:

1. extracted from the cell and amplified *(POLYMERASE CHAIN REACTION)*:

Extremely small quantities of DNA (one molecule) can be made to replicate thousands of times in a test tube under highly controlled conditions. This technique is used to "amplify" a piece of DNA so that several thousand exact copies of a molecule are made. Polymerase chain reaction, or PCR, makes use of a special DNA polymerase enzyme that works at high temperatures.

2. clipped into small pieces with specific enzymes *(RESTRICTION ENZYME DIGEST)*:

More than 200 restriction enzymes have been identified. Each enzyme will cut a double-stranded DNA molecule in a sequence specific manner. That is, these enzymes are "restricted" in that they can only recognize one particular sequence and cut at that site. Digesting (cutting up) a unique piece of DNA with a specific endonuclease produces fragments of various sizes. The chance that another unrelated person's DNA would produce exactly the same sized fragments has been estimated at 1 in 10,000,000,000,000,000,000 (ten billion billion). There are approximately 6,000,000,000 (6 billion) people alive on earth today.

The use of restriction enzymes is the key to biotechnology research. These, and other enzymes, allow scientists to insert new sequences of DNA into the genome of an organism (recombinant DNA technology, or "cloning" genes). Another use for restriction enzymes is to identify individuals accused of crimes, based on DNA evidence collected from the crime scene. This is a controversial method in the court room because of the technical complexities involved in conducting a restriction analysis and the difficulty in understanding what is being shown by the data.

These enzymes are *endonucleases*. A *nuclease* is an enzyme that will break the covalent bonds of the sugar-phosphate backbone of a DNA molecule, cutting one large

double-stranded molecule into several smaller strands. The prefix "*endo*"means that these enzymes cut "within" the molecule, as opposed to releasing nucleotides from the exposed ends of a strand (*exo*nucleases).

3. the pieces are separated from one another on the basis of size and visualized for examination *(POLYACRYLAMIDE GEL ELECTROPHORESIS or PAGE):*

The mix of DNA fragments produced by enzyme digestion can be separated according to their size. The fragments are forced to migrate through an electrically charged gel. An electrical current is applied to the gel, creating a (-) and (+) pole after a mixture of DNA fragments is applied at the negative pole. Since DNA is a negatively charged molecule it will migrate away from the (-) pole and towards the (+) pole. The different sized fragments will migrate with different speeds depending on their size, as seen in simple diffusion. Smaller fragments will reach the (+) pole first. When the current is turned off, the fragments stop migrating and can be visualized using special stains that make the distribution of different sized fragments appear as pattern of colored bands in the gel.

LABORATORY DIRECTIONS

In this lab, you will resolve which of three suspects could likely have committed a crime. Each pair of students will get 2 differEnt restriction enzymes and a sample of the criminal's DNA recovered from crime scene. The three suspects accused have also provided DNA samples.

Work in teams of two, each using a different restriction enzyme. Team members will need to discuss their results in order to make their final analysis and decide which suspect is the most likely to have committed this crime.

1. Choose which restriction enzyme you will use in your analysis. Remember that your partner will use a different enzyme.

GAATTC CTTAAG	GGATCC CCTAGG
Eco R1	Bam H1

2. Look at the DNA sequences provided on the DNA EVIDENCE form. Locate all restriction enzyme recognition sites in the sample sequences provided and mark them, indicating a cut, or separation of the DNA into fragments.

3. At the top of the GEL ELECTROPHORESIS LABORATORY REPORT form write in your assigned restriction enzyme and it's recognition sequence. Now, model the movement of the DNA fragments in the lanes of the gel on the form:

a. Circle the sample name to simulate placing the sample in a starting block, located at the top of each lane (loading the gel).

b. Count the number of complementary base pairs in each fragment.

c. Fill in, or 'X' the dashed line which corresponds to the number of base pairs in a fragment (fragment size). These lines will simulate the migration of the fragments through the gel. It is the *size* of the fragments that is important not the number of fragments. Note that the size of the fragment is inversely proportional to the distance traveled.

4. When the fragments for all 4 samples have been modeled on your form, consult with your partner and answer the questions at the end of this lab exercise.

DISCUSSION QUESTIONS

1. Looking at *your own* data , is each of the suspect's DNA pattern different from the other two? What might account for these results?

2. Using *your own* data, which suspect(s) can you rule out? Explain why.

3. Is sample mishandling and/or contamination more likely to cause a guilty person to appear innocent, or an innocent person appear guilty?

4. After consulting with your partner who used a different restriction enzyme, which suspect is most likely to have committed the crime? Why can you now be more certain of your conclusion than when you considered only your own data ?

5. Suppose two of the suspects were siblings whose DNA sequences were nearly, but not quite, identical. Using the technique of DNA restriction analysis how could you distinguish between these two individuals?

6. What objections could be made to your conclusion? Why might your conclusion be unacceptable to a jury? How would you explain and defend the data supporting your conclusion?

7. How might this technique be used to determine the evolutionary relationship among different species? What other applications for this technology can you think of?

DNA EVIDENCE

1. Sequence of the DNA sample recovered from the crime scene:

TACGAATTCCATTGGATCCGTCCATGAATTCAACCTTAGGATCCGAATTCCGCGGTGGATCCTCAGAATTCGGCTT
ATGCTTAAGGTAACCTAGGCAGGTACTTAAGTTGGAATCCTAGGCTTAAGGCGCCACCTAGGAGTCTTAAGCCGAA

2. Sequence of DNA taken from suspect 1:

TACGAATTCACTGCCTTTGGATCCGGAATTCATGGATCCCAGAGGAATTCCTTGGATCCGGATCCGAATTCAGGGT
ATGCTTAAGTGACGGAAACCTAGGCCTTAAGTACCTAGGGTCTCCTTAAGGAACCTAGGCCTAGGCTTAAGTCCCA

3. Sequence of DNA taken from suspect 2:

TACGAATTCCCAAGGATCCAAACCCGAATTCAACCGCAGGATCCGAATTCCTAAGGGGATCCCGGGAATTCATTCT
ATGCTTAAGGGTTCCTAGGTTTGGGCTTAAGTTGGCGTCCTAGGCTTAAGGATTCCCCTAGGGCCCTTAAGTAAGA

4. Sequence of DNA taken from suspect 3:

TACGAATTCCCGGGGATCCCTCTGAATTCCAAGAATTCGGATCCGAATTCCAATTGGGATCCCAAAGCCGAATTCT
ATGCTTAAGGGCCCCTAGGGAGACTTAAGGTTCTTAAGCCTAGGCTTAAGGTTAACCCTAGGGTTTCGGCTTAAGA

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GEL ELECTROPHORESIS LABORATORY REPORT

Investigator:_____

1. Restriction enzyme used: _____

2. Recognition site of the enzyme: _____

3. Results of Gel Electrophoresis: Distribution of fragments by size:

Fragment size (base pairs)	evidence from crime scene	suspect 1	suspect 2	suspect 3
30	---	---	---	---
29	---	---	---	---
28	---	---	---	---
27	---	---	---	---
26	---	---	---	---
25	---	---	---	---
24	---	---	---	---
23	---	---	---	---
22	---	---	---	---
21	---	---	---	---
20	---	---	---	---
19	---	---	---	---
18	---	---	---	---
17	---	---	---	---
16	---	---	---	---
15	---	---	---	---
14	---	---	---	---
13	---	---	---	---
12	---	---	---	---
11	---	---	---	---
10	---	---	---	---
9	---	---	---	---
8	---	---	---	---
7	---	---	---	---
6	---	---	---	---
5	---	---	---	---
4	---	---	---	---
3	---	---	---	---
2	---	---	---	---
1	---	---	---	---

NOTES TO INSTRUCTORS

This exercise was designed for use in a one semester non-majors general biology course. The only prerequisite for its successful completion and comprehension is a general understanding of DNA structure. It is recommended that students do a DNA model building exercise (Montgomery & Elliot) before attempting this one.

In this lab, students use 'hands on' techniques to mimic the actual processes involved in analyzing samples of DNA. Students enjoy this lab because they have all heard of 'DNA evidence' and here they have an opportunity to discover its significance. When they are finished students should understand DNA technology in relation to one of its most highly publicized uses.

Before the lab, copy the two restriction enzyme 'templates', provided in the directions, onto acetate film. Give each student a transparent copy of their enzyme with their lab handouts. Students can cut these enzyme out of the film and then slide the enzyme along the sequences of DNA evidence until there is an alignment, identifying restriction sites where the DNA will be cut. Cuts are indicated by drawing a line through this sequence. In more advanced classes you may want to explain how real restriction enzymes produce staggered cuts, leaving 'sticky ends' on the DNA fragments. With general biology students it may be best to keep it simple by using a straight cut directly through the middle of the recognition sequence.

If time allows, an additional demonstration may be added to enhance student understanding of the relationship between a molecule's size and its rate of diffusion through a gel. Try this: Separate your students into groups of varying sizes (1, 3, 6, 10 etc.). Have all the members of each group link arms. Each student symbolizes a nucleotide pair and each group of students a fragment of DNA. Each group must make its way through a simple maze of chairs (without touching the chairs!). Other students time each group and record the data. The relationship becomes obvious as the exercise unfolds.

This is a good 'stand alone' lab, or can be used in conjunction with doing the 'real thing'. Since budgets are often limited, it is an excellent way to introduce molecular biology technology to general biology students without the expense of buying materials and equipment. Safety concerns are minimized. It is a good idea to show students a real polyacrylamide gel and a photograph of a restriction digest gel. Better yet, arrange a follow-up field trip to a molecular biology laboratory where students can view these materials and techniques being used in a working environment.

Be prepared to engage students in discussions of related topics such as statistics, micro-evolution, population genetics, genetic engineering, ethics, and criminal law. This exercise is adapted from a previously unpublished source (Lidgerding).

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DESIGNING WRITING ASSIGNMENTS THAT PROMOTE THINKING

William Peirce

Abstract

A variety of formal and informal writing assignments can promote thinking about the subject matter, engage the students, and not take forever to grade. The conference presentation was a discussion of strategies for designing such assignments. After critiquing a badly designed research paper assignment, participants viewed a series of transparencies (reproduced below) presenting the limitations of traditional term papers, a model of a well-designed research assignment, grading criteria for formal writing assignment, and tips from John Bean's *Engaging Ideas*, closing with a discussion of problems and successes from the group's experience.

Introduction to the Transparencies

Rather than repeat the commentary and discussion, I will duplicate (slightly modified) some of the overhead transparencies I presented. Most are self-explanatory.

Teaching Thinking Through Writing

1. What kinds of thinking do I want students to do? Put disciplinary thinking at the heart of your task.

2. What course content am I trying to teach through this assignment? What information? What procedures?

3. What in this assignment will elicit that thinking? Where have I explicitly asked for it in my instructions?

4. What makes this assignment engaging for the student?

5. Could I use a more productive variety of writing assignments?

   Could I use informal writing tasks to promote thinking and learning?

   Could I use small-group tasks in class?

Source: Modified from a handout presented by Barbara Stout, Montgomery College, at the Cherry Blossom Conference on Critical Thinking, April 7, 1995

Improving Assignment Instructions

Research Paper Instructions

Write a 15-20 page research paper (typed, double-spaced, with 1-inch margins). Your paper should discuss in depth a topic covered briefly in one of the chapters. Cite at least five sources, using APA documentation format. The paper is due the last day of class and is worth 30% of the course grade.

Recommended changes to these Research Paper Instructions:

1. Make clear that the task requires thinking, not information reporting.
Ask students to support a position on a debatable issue, to summarize opposing views, to explain where both sides agree and disagree, to evaluate evidence for a claim, to evaluate a procedure, etc. Use words like "evaluate," "support a claim," "argue," "defend," "compare," "interpret," "decide," "recommend," "propose." Use the language of your discipline.
2. Suggest how it should be organized into sections.
3. Set up a schedule and provide peer and instructor feedback at important steps: selecting an issue, searching for material, planning, reviewing drafts.
4. Engage the student in the task; establish a rhetorical context.
5. Consider using instead a sequence of shorter, formal graded assignments or informal small-group classroom tasks

Limitations of the Traditional Term Paper

1. Professors Write Imprecise Instructions That Do Not Give Enough Guidance

They use vague terms such as "Discuss," "Analyze," "Critique." (Discuss or analyze from what perspective? If students interpret "critique" to mean "criticize," they will tell you their personal likes and dislikes.)

2. Professors Don't Provide Enough Support Throughout the Semester

Students need guidance about workable topics, finding material, checkpoints, models (sample papers), peer rough draft reviews.

3. Consumes Inordinate Amounts of Students' and Professor's Time and the Time Is Not Well Spent

4. Professors Ask for One-Shot Thinking Rather Than Develop Disciplinary Thinking Throughout the Semester

5. Students Report the Thinking of the "Experts" Rather Than Do Their Own Thinking

Students turn the task into an information-recall paper despite your clear instructions and oral explanations about the thinking task you've provided.

6. Students Focus Their Attention on Form Rather Than Formulating a Good Argument

Students worry more about citation style, margin width, and number of pages, rather than how to develop a cogent argument.

SOURCE: Chet Meyers, *Teaching Students to Think Critically* (1986)

Speech 109 Interpersonal Communication

[I will omit here the 2-page instructions from Professor Susan. Richardson. They can be found at the website of the MCCCTR given on the next page in the heading "Resources for Teaching Thinking." Grading criteria for this assignment are given in the next column.]

Speech 109 Assignment Grading Criteria

1. Meets minimum criteria: All instructions followed, conference with instructor; project and method approved in advance

2. Sources and/or diagnostic instruments are sufficient and appropriate

3. Experiment is planned well; survey is designed well

4. Experiment/survey is executed well without bias

5. Introduction explains why project was chosen; describes personal relevance

6. Statement of purpose (one sentence) is clear and complete

7. Pertinent research is summarized accurately in at least two pages, at least 4 non-textbook sources are used; conclusions and major evidence are included in summaries

8. Sources are cited accurately and correctly in APA style without plagiarizing; paraphrases and summaries are not half-copied

9. Contradictory information (if any) is made clear; opposing views are handled fairly

10. Methodology is described clearly and completely; methodology is appropriate for the project and is unbiased

11. Results, findings, and inferences are explained clearly and completely; are based on sufficient and relevant evidence

12. Conclusion explains what was learned from the project

13. Bibliography is accurate and correct; follows APA format consistently

14. Organization follows instructions; uses headings; paragraphs begin with topic sentences; main points of paragraphs are fully developed; sentences are clear; there are few grammar and punctuation errors

15. Oral presentation is clear, well-organized, complete; takes 4-5 minutes

Designing Grading Criteria for Formal Writing Assignments

1. Make all your expectations explicit. Don't trust your students' note-taking or memory.

2. Match the criteria to your instructions. Yes, be redundant all over again.

3. The criteria, like the instructions, should tell the students how to do a good job.

4. Identify what you're looking for (and what peer reviewers, friends, and tutors should look for when they review the drafts).

5. Describe good reasoning; help students make their thinking visible.

6. Design it for rapid grading.

7. Anticipate problems. Provide warnings in advance of their commission.

Resources for Teaching Thinking

The Maryland Community College Consortium for Teaching Reasoning maintains a website with useful documents for teaching critical thinking and disciplinary reasoning. The URL is www_strc.pg.cc.md.us/colleges/mccctr.htm. Among the documents available are links to other websites for teaching thinking, books and articles, workshop handouts (including these), and a suggestion for getting students to do their homework on time so that they arrive in class ready to think.

Checklist Assessment for Article Review

NAME_____

The grade of your article review is circled below. The grade on the final draft is the one that matters. The checked items below are to help you improve your rewrite. Attach this sheet to the front of each article review and always turn in the initial draft with the rewritten final draft. The initial draft is due in class the day the article is discussed and will not be accepted late. The final draft is due one week after being returned by the instructor.

___Initial Draft ____Final Draft Grade: A B C D F

____1. You were not in class on the day this article was discussed.

____2. This article review does not represent your own independent efforts.

____3. You need to give a more adequate (that is, detailed, accurate, or complete) description of the main point or conclusion of the article.

____4. You need to give a more adequate (that is, detailed, accurate, or complete) description of the reasons the author presents in support of the main conclusion.

____5. You need to show more clearly how the reasons provide support for the main conclusion.

____6. If the author's intention is descriptive more than argumentative, you need to more clearly outline the major points of the article.

____7. You need to express the points of the article in your own words rather than using so many quotes and close paraphrases.

____8. You need to explain the significance of the article in relation to issues covered in other readings or in class discussions.

____ **For the initial draft:** This is well done and does not need to be rewritten as a final draft. Good work!

____ **For the final rewrite:** This is failed because it contains an average of 2 departures per page from standard language usage conventions. This includes such areas as spelling, sentence boundaries (fragments, run-ons), verb forms, pronouns, apostrophes, and sentences which make sense.

Source: Workshop by Barbara Walvoord at University of Maryland University College 10/95.

DEVELOP A REPERTOIRE OF THINKING TASKS

1. Problems Presented as Formal Writing Assignments

2. Problems Presented as Thought-Provokers for Exploratory Writing

3. Problems Presented as Tasks for Small-Group Problem Solving

4. Problems Presented as Starters for Inquiry-Based Discussions

5. Problems Presented as Think-On-Your-Feet Questions for Socratic Dialogue

6. Problems Presented as Focusing Questions for In-Class Debates, Panel Discussions of Fishbowls

7. Problems Presented as Practice Exam Questions

SOURCE: John C. Bean, *Engaging Ideas (1996)*

TEN STRATEGIES FOR DESIGNING THINKING TASKS

1. Tasks Linking Course Concepts to Students' Personal Experience or Previously Existing Knowledge

2. Explanation of Course Concepts to New Learners

3. Thesis Support Assignments

4. Problem-Posing Assignments

5. Data-Provided Assignments

6. Frame Assignments

7. Assignments Requiring Role-Playing of Unfamiliar Perspectives or Imagining "What If" Situations

8. Summaries or Abstracts of Articles or Course Lectures

9. Dialogues or Argumentative Scripts

10. Cases and Simulations

SOURCE: John C. Bean, *Engaging Ideas (1996*

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HOW TO CONDUCT NO-BUDGET RESEARCH

Robert Resau, Penny ReVelle, Jan Savage, Jo McCrone, Jim Hershey, Jane Toskes, Dave Thorndill, Wanda Reed and Janet Barletta.

Introduction

We began our project in 1990 with a small amount of money given to the college by Baltimore County in return for space donated by the college for a county water analysis laboratory. But soon after we started, the money was subsumed into the general college budget for financial reasons beyond our control. Since that time we have learned how to do research with equipment and materials we beg, borrow or do without.

We are monitoring the submerged aquatic vegetation (SAV) in Dundee Creek, which empties into the Gunpowder River and thence into the Chesapeake Bay. SAV is important as food for wildlife, it provides a nursery ground for many species including the blue crab, it contributes to good water quality and prevents shoreline erosion. SAV abundance in the Bay has waxed and waned over the centuries but reached an all-time low after hurricane Agnes in 1972.[1,2] Since that time there has been some recovery of SAV species, but the area covered by SAV has not returned to pre-1972 levels. There are several theories as to why this is so, the most popular one being that high nitrogen and phosphorus flows into the Bay, due to human activities, are causing excessive algal growth.[3] The algae shade the SAV, even growing right on the leaves and stems, and rob SAV of needed sunlight. We decided to monitor SAV growth and a variety of physical and chemical parameters in order to see if we could confirm or refute the role of nitrogen and phosphorus concentrations in SAV decline. The time was right to carry out such a study because vigorous efforts to reduce nitrogen and phosphorus inputs to the Bay were being carried out by states surrounding the Bay. And indeed, during our study, we have seen the beginnings of a resurgence in SAV growth,

The types of SAV species differ depending on where in the Bay you look for them. In the upper Bay, where we work, freshwater-tolerant species such as Valisneria americana predominate, while in the lower Bay saltwater requiring species such as Ruppia maritima dominate the community. Beds of SAV are located by aerial survey. From the photographs taken, however, it may be difficult to distinguish between SAV beds and other underwater features. Furthermore, it is not possible to tell what species are growing in a bed. Ground truthing, or actually sampling the beds, is necessary to resolve these questions.

Methods

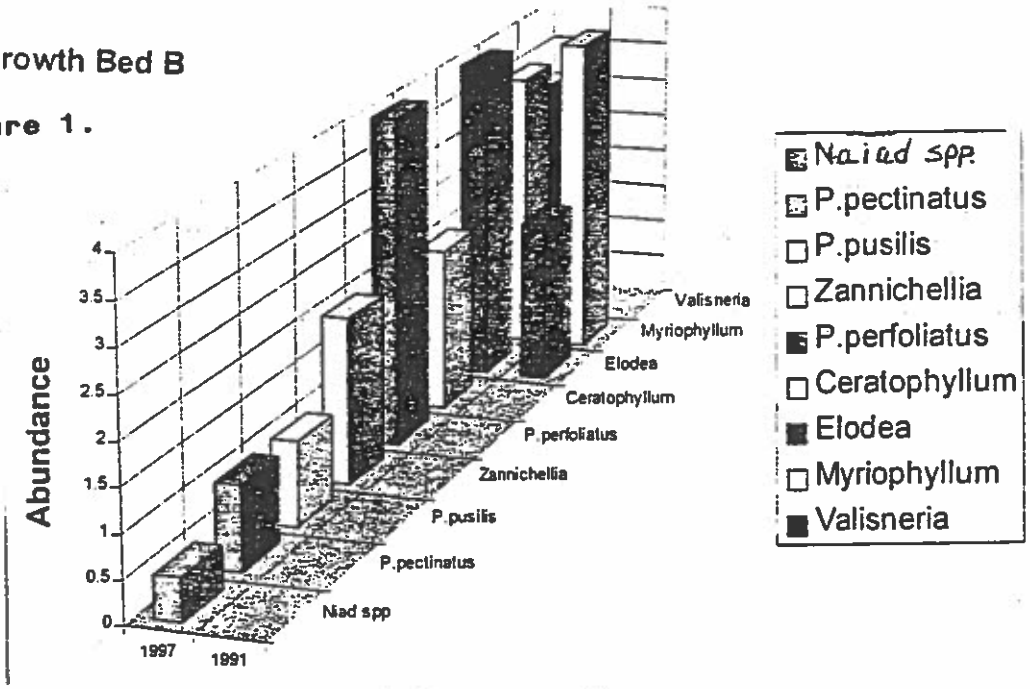
Beds of SAV in our area are noted from aerial surveys. We then use small boats with motors provided by the Gunpowder State Parks Commission. We sample the beds with small rakes, along a line parallel to the horizontal axis of the bed, to identify species and estimate density of growth. We also sample other areas to be sure no beds have been missed. This occasionally happens because aerial surveys of beds are done only once each season, while different SAV species wax and wane over the growth period. We try to sample each bed at least three times per season. We take water samples to test for phosphates, nitrates, ammonia, salinity, dissolved oxygen and pH, using portable test kits. We also track temperature and turbidity (Secchi disk).

Results

Over the period 1990 to 1997 we have found an increased abundance of SAV, but also a striking increase in diversity. (figure 1). Newly appearing species are known to be native to this area of the Bay.

SAV Growth Bed B

Figure 1.



When we attempted to match changes in water quality parameters to increases in SAV growth, the only apparent match is between lower water temperatures and increased growth. No strong influence of nitrate and phosphate concentrations and SAV growth can be seen, nor do salinity variations or turbidity appear to track SAV growth. (Figures 2,3 and 4)

Figure 2.

Nitrate Concentrations During Months of Greatest Growth

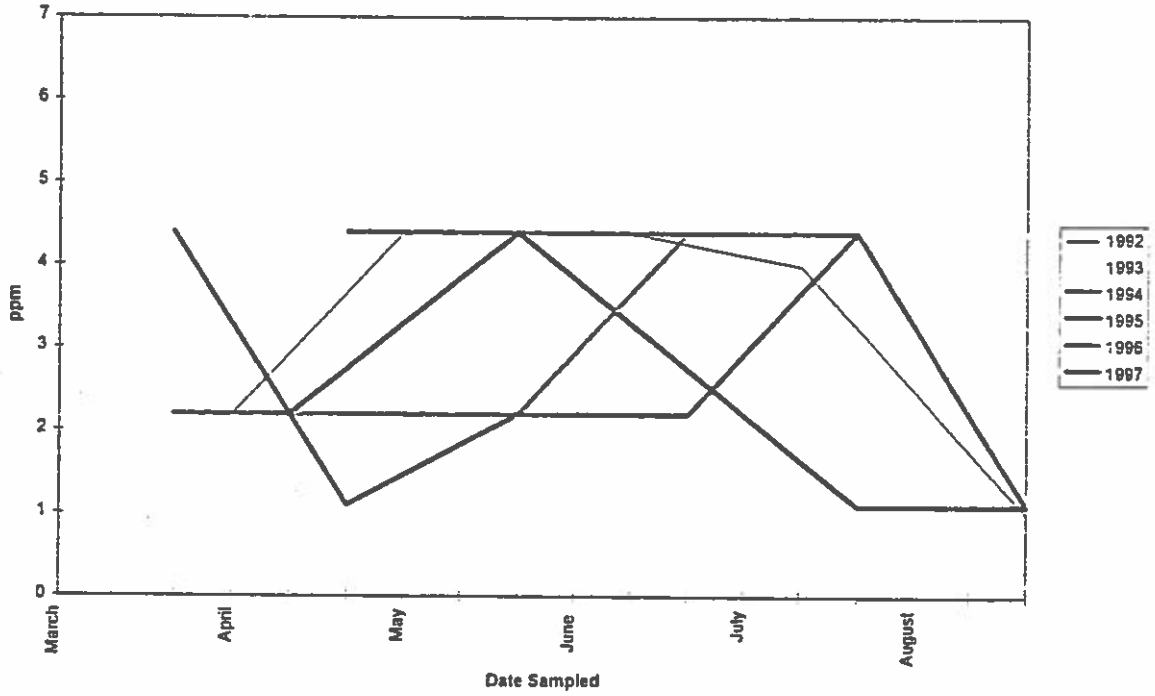


Figure 3.

Phosphate Concentrations During Months of Greatest Growth

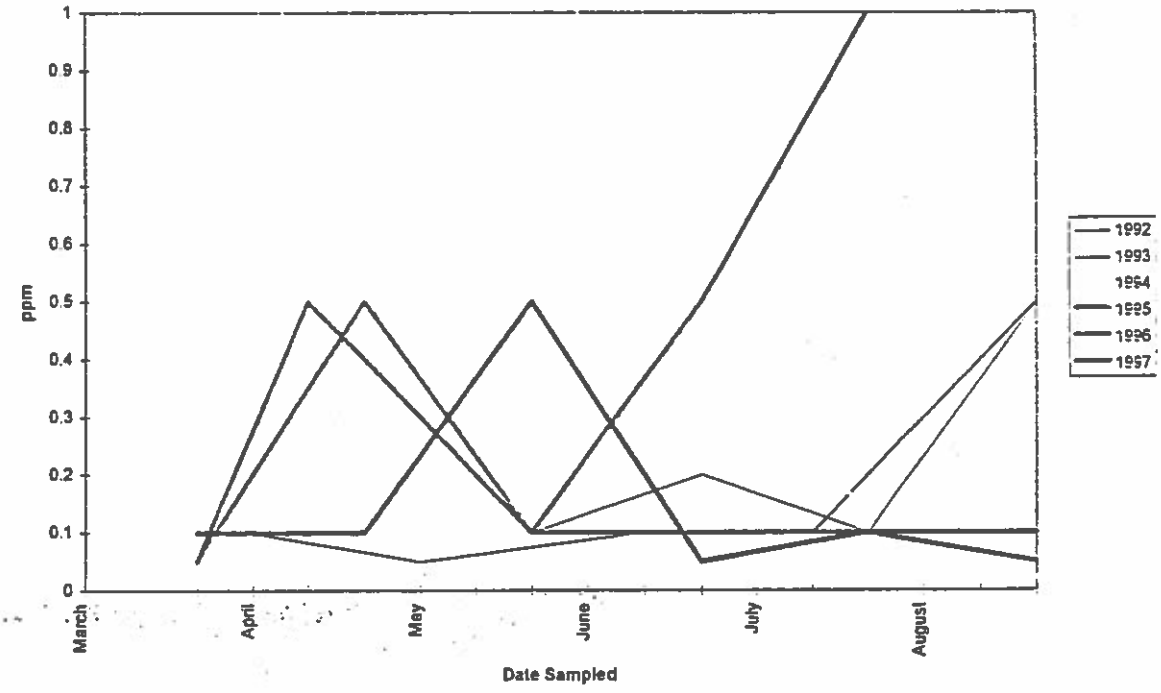
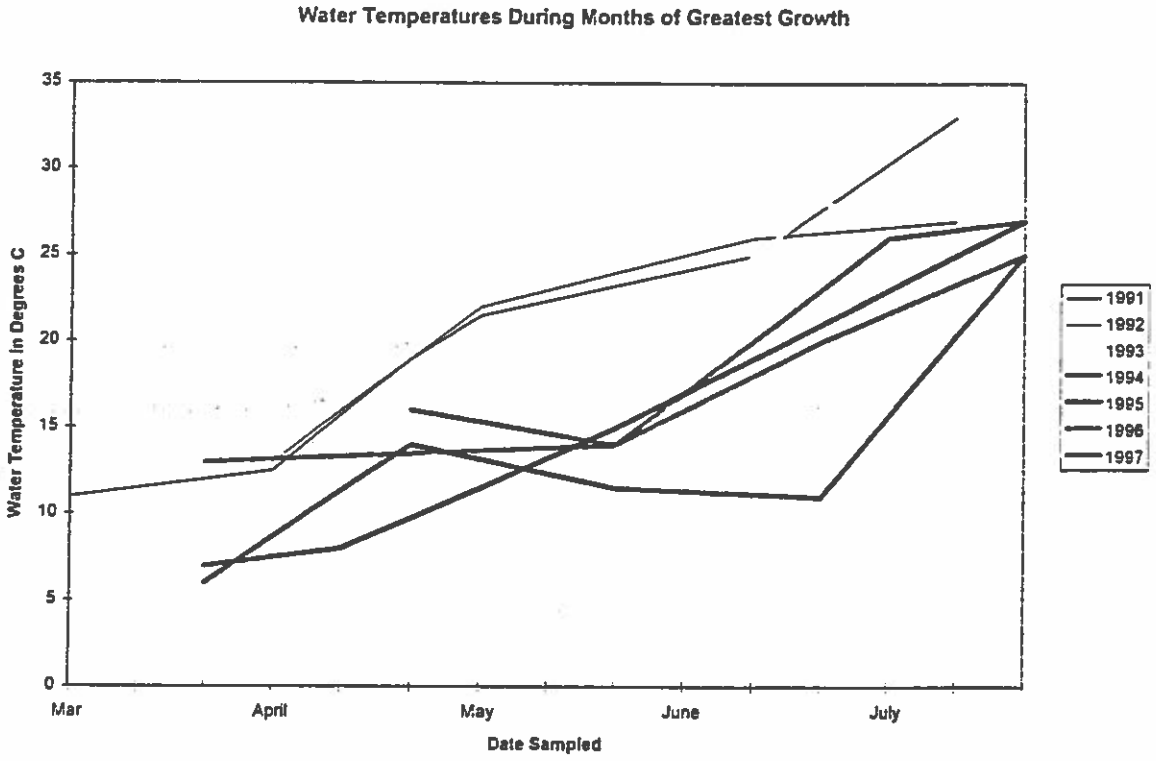


Figure 4.



Discussion

Although we have not found evidence for a strong effect of high phosphate and nitrate concentrations on SAV growth in the Upper Bay, neither do we rule these factors out. Common sense insists that sufficient overgrowth of algae will block light and decrease SAV growth. More likely the effects of nutrient enrichment are complex and interrelated with other factors affecting growth. Several other groups around the country have also found that nitrate and phosphate concentrations alone cannot explain SAV abundance[4]. This year we have added monitoring for pesticides to our arsenal of tests, through a grant from the Essex Community College Foundation, supplemented by donated materials from Omicron Diagnostics Corporation. We expect to continue to try to tease out the factors needed for a healthy underwater vegetation community.

Works Cited

1. Kemp, W.M. et al, The Decline of SAV plants in Upper Chesapeake Bay: Summary of Results Concerning Possible Causes, Marine Technology Society Journal 17(2), (1983) p.78

2. Orth, R. et al, Distribution of SAV in the Chesapeake Bay and Tributaries, Draft Report, Virginia Institute of Marine Science, (1990)

3. Bay Journal, June, September 1996

4. Papers delivered at the Fourth International Conference of the Estuarine Research Society, Providence, RI, October 1997

Penny ReVelle Assistant Professor, Essex Community College, Baltimore, MD 21237

SERVICE LEARNING AND SCHOOL-TO-WORK: MAKING THE CONNECTIONS

Fran Smither, Bernadette Low, PhD., Edward Fangman

Abstract

Recently, much attention has been focused on two federal initiatives, the National and Community Service Trust Act and the School to Work Opportunities Act, that encourage students to explore learning opportunities outside the classroom. Although the acts differ in their intended educational purposes, both are based on similar educational philosophies, principles, and pedagogies. The following information describes the tenets of each reform act, listes the ways two acts are complementary and provides examples of how Dundalk Community College connects the two reforms in effective and creative
ways.

National and Community Service Trust Act

- Seeks to reinvigorate a PUPLIC SERVICE ETHIC IN AMERICA

- Provides states with federal assistance to develop and support school-based programs that use SERVICE LEARNING AS A PEDAGOGICAL STRATEGY

- Encourages local schools and communities to develop programs that meet LOCAL NEEDS

- Consists of three basic program components: SCHOOL-BASED LEARNING, COMMUNITY-BASED LEARNING AND CONNECTING ACTIVITIES

School To Work Opportunities Act

- Supports educational systems that provide ALL STUDENTS with a common core of academic and technical skills

- Provides states with federal support to assist schools(K-16) in developing and implementing educational programs that prepare all students for MEANINGFUL, HIGH QUALITY EMPLOYMENT

- Encourages states and local entities to create school-to-work initiatives that meet the specific needs of the LOCAL ECONOMIES AND LABOR MARKETS

- Consists of three basic program components: SCHOOL-BASED LEARNING AND CONNECTING ACTIVITIES

Dundalk Community College
Service Learning Models

I. College Student Model--For students who wish to enrich a course through service learning, specifically upgrade a course to make it count as an honors course for the Honors Program
   A. Identify three to five students in an Honors English class who wish to tutor elementary or middle school students in literacy in order to upgrade an English course for honors credit.
   B. Connect with our college's school-to-work administrator who will contact principals, identify students to tutor and set up the college students' contact.
   C. Provide students with some training in tutoring and connecting with principals, teachers, and possibly parents and set up guidelines for hours worked.
   D. Provide students with a format for recording progress with student and reflection of their own experience.
   E. Hold several meetings during the semester, at least three, in which students share their experiences. From this derive the best way(s) to share these experiences.
   F. Plan an opportunity for students to present their tutoring experience to a larger group, perhaps the class, the honors committee, the honors association.
   G. Get feedback from students that will assist in developing an evaluation instrument.

II. High School Student Model--For High School Students who wish to enrich their high school service learning requirement by reflecting on it and talking about it with others.
   A. Recruit a few, one to three groups of three to five high school students to the same thing the college students did under the leadership of two to four college students who have been through this process.
   B. Work with our college liaisons, to make high school contacts and middle and elementary school contacts.
   C. Train students, in a one hour session, on tutoring, connecting with teachers.
   D. Provide them a format for reflection and sharing their experiences with others.
   E. Set up meetings lead by college student mentors where students share their experiences and impressions of the value of tutoring and service learning.

F. Provide an opportunity for formal sharing of experience with a larger group, perhaps a class a college or high school committee on service learning, a community association.
G. Get feed back from high school and college students on both aspects of the process.
H. Develop an evaluation instrument for college student response.
I. Revise evaluation instrument, if necessary, developed for student tutors.

III. Faculty Model--For college teachers who wish to enrich their course by infusing service learning into their learning activities.
A. Identify two or more teachers who will use the model above(for tutoring) or develop one appropriate for their area.
B. Research other models to present to teachers who would prefer another model, not tutoring.
C. Help them develop a reflection piece (or offer one used).
D. Help them develop an evaluation piece (Or offer one used).
E. Enlist their assistance in describing their experience and the benefits of service learning at faculty in-service meetings.
F. Investigate a grant to offer $350 a person to encourage this kind of faculty development.

FACT SHEET

BALTIMORE COUNTY CAREER CONNECTIONS

World Class Education That Works

FACT SHEET

1. What is Career Connections in Baltimore County?

Career Connections is Maryland's comprehensive school-to-career initiative. Career Connections is a framework for learning in Maryland's schools and colleges that links students, schools, and workplaces. Career Connections supports school reform, workforce preparation, and economic development through high-level academic achievement and preparation for the world of work. A new way of preparing young people for their ultimate entry into the workplace, Career Connections also encourages schools at primary, middle, secondary and postsecondary levels to develop systems cooperatively with employers, unions, civic groups, and other public and private organizations.

More than anything, Career Connections is about partnerships. At the federal level, the initiative is a partnership between the Departments of Labor and Education. At the state and local levels, management teams are comprised of educators, students, employers, parents, labor, community organizations, and government agencies. Decisions at the county level are made by the Local Labor Market Team, which creates the vision and implements the Career Connections system.

2. What is the goal of Career Connections?

Baltimore County's goal for Career Connections is simple -- to ensure that ALL students acquire the knowledge and skills needed to make the transition from school to careers and further education.

Six objectives for the implementation of Career Connections are:

- the preparation of ALL learners for employment and further education
- an expanded role for employers in the education of ALL learners
- a well-prepared work force to improve economic vitality for the county
- service to ALL learners, kindergarten through adult
- improved student performance
- increased retention rates at all levels of education

3. How will the system work?

In the elementary and middle school, students gain an awareness of the many careers available to them and how the skills learned in school apply to skills needed for future success. While in high school, students will begin a career development plan that will continue through their college and early work experiences. The career development plan is based on information about career paths, specific career requirements, educational opportunities, and the nature of the career field. Students will choose a career cluster to focus on by grade 11; however, their choices will be flexible and open to change.

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Phone (410) 887-3941 • FAX (410) 887-5673

At the postsecondary level students will have the opportunity to focus on a career major in depth through a structured program of study and to continue their personal career development through work-based learning opportunities and career-oriented activities. It should be clear that the Career Connections initiative is for ALL learners, whether they are in alternative schools, regular programs, technical schools, community colleges, universities, or adult training programs.

The Nine Career Clusters identified by the State of Maryland are:

- Consumer Service, Hospitality, Tourism
- Business Management and Finance
- Manufacturing, Engineering, and Technology
- Environmental and Natural Resources
- Health and Biosciences
- Arts, Media, and Communication
- Transportation Technologies
- Human Resource Services
- Construction and Development

4. How will learners benefit from Career Connections?

ALL learners will benefit from Career Connections by:

- being better prepared for further education
- gaining an awareness of all nine career clusters
- exploring their interests and determining their abilities
- selecting course work that is related to a career field
- exploring careers further by working in a career field
- documenting skills and abilities in a career transcript or a portfolio developed at the school or training agency

Parents, faculty, administrators, counselors, and employers will participate in training that will acquaint them with Career Connections and provide them with tools to help learners make sound career decisions. Parents and students will be provided information that will help them see the connections between school experiences and the world of work. Curricula will include specific activities that will help students and faculty to connect the skills, abilities, and attitudes learned in school with those required for success in a career.

5. Who is responsible for implementing Career Connections?

Career Connections is managed by a large team of business persons, educators, community members, labor representatives, and government officials who are committed to improving student performance and employee competency. Local school teams make the major implementation decisions for their schools based on input from community members and central office staff. Faculty and staff from the postsecondary levels make major implementation decisions based on input from the community. Any member of the Baltimore County community may get involved with the initiative by contacting the Career Connections Office, or through individual contacts at the local school, community college, or university.

6. How is Career Connections funded?

Career Connections is funded in Maryland by a five-year, $25.2 million federal grant under the federal School-to-Work Opportunities Act. Baltimore County will receive $2.2 million over a four-year period, beginning in February 1997.

For more information about Career Connections, contact Edward Fangman at (410) 887-3941.

Career Connections
Implications for Post-Secondary

Participate with secondary systems to:

* align curriculum
* develop career programs
* articulate courses
* develop dual, concurrent, parallel enrollment procedures
* sponsor middle and high school visitations
* collaborate on counseling activities
* visit school as guest speakers

Participate in redesign of teaching/learning:

* convene employer groups to inform curriculum development
* redesign instruction to incorporate applied methodology
* encourage students to job shadow
* require internships as part of curriculum
* participate in a faculty externship
* find careers that stem from your discipline and communicate them to students
* invite guest speakers to address issues relative to your discipline
* convene faculty round table discussion relative to pertinent issues

Benefits of Making the Connections
Through An Office Of Experiential Learning

- Mutually strengthens each program

- Enhances leverage for funding

- Provides "one-stop shop" for business and community agencies

- Brings together students with common social, personal, academic and career goals

References

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Furco, A. Service-Learning and School-To-Work: Making the Connections. The Journal of Cooperative Education. Columbia, MD: Cooperative Education Association, Inc., 1996.

Kendall, J.C., Ed. Combining Service and Learning. A Resource Book for Community and Public Service, Volume 1. Raleigh: National Society for Internships and Experiential Education, 1990.

The School-To-Work Opportunities Act: A Status Report, Alexandria: American Vocational Association, 1994.

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USING A BBS FOR COLLABORATIVE, CROSS-CULTURAL LEARNING

Robert J. Spear

Abstract

Bob Spear and a colleague in South Africa used a commercial BBS on the Internet for an asynchronous electronic discussion group among first year computer students at Prince George's Community College and at Technikon Natal in South Africa. Students discussed both technical (content) and cross-cultural issues. This successful and easily replicable project demonstrates how technology can be applied to both achieving cross-cultural communication and enhancing technical learning.

Background

Since 1993 Bob and Mary Helen Spear (Bob's wife) have been consultants to the Management Education in Poland Project, a US AID-funded joint effort between the University of Maryland and the University of Lodz in central Poland. As part of that project, Bob and a colleague in Poland initiated an electronic discussion group between students in a Computer Literacy course at Prince George's Community College in Largo, Maryland, and fifth-year students taking a seminar in Informatics and Econometrics at the University of Lodz. While successful according to all participants, this discussion group was nevertheless inhibited by the wide disparity in technical knowledge between the American freshmen and the Polish graduate students and by the small number of Polish students with sufficient English language skills to participate meaningfully. As a result, the decision was made to seek out another international contact for an electronic discussion group, involving students with more nearly equal computer skills and preferably with better skills in English.

Mary Helen Spear and Nelishia Pillay were both presenters at the Eighth Annual Conference on Teaching and Learning in Jacksonville last year. Mary Helen (on behalf of Bob) approached Nelishia Pillay with a proposal for a discussion group among computer students at our two institutions. This demonstration project was the result.

Project Description

Prince George's Community College uses Worldgroup Manager, a commercial bulletin board system, as the means of achieving student-to-student and student-instructor collaboration and communication for its distance learning courses. The BBS server software runs on a computer at Prince George's Community College. The Windows-based client software runs in campus labs and on students' home computers, either as a stand-alone Windows package or as a plug-in to Netscape or Internet Explorer. Nearby students access the BBS server from an off-campus location by a local telephone call over a modem. Students at greater distances access the Internet from their own ISP, then load their Web browser, and then run the Worldgroup Manager plug-in to access the Prince George's BBS server over the Internet. This BBS system is currently supporting about two dozen class and faculty discussion groups.

During the summer of 1997, Bob Spear and Nelishia Pillay traded emails to agree on the outline of the student discussion group. We agreed on a list of discussion topics and on a schedule, complicated by the fact that academic terms in Maryland and South Africa do not coincide whatsoever. We ended up with nine discussion topics. For each topic, students in both countries would have one week to make an initial contribution, and then they would have a second week in which they would be expected to respond to the contribution of another student. Five of the two-week discussion periods overlapped by one week, so that all nine topics were covered in fourteen weeks.

Bulletin Board System Discussion Questions and Schedule

Topic 1. September 13-20:
a) Introduce yourself to your classmates. Give your name, major, background, previous computer experience, hobbies, and interests.
b) In what ways do you want to become more computer literate?
(Respond to a classmate's introduction September 13-27.)

Topic 2. September 20-27:
Commercial, general-purpose computers represent character data internally by using either the EBCDIC or the ASCII coding systems. Name and describe another coding system which humans have invented, and compare/contrast it with ASCII.
(Respond September 20-October 4.)

Topic 3. September 27-October 4:
Develop an algorithm for getting gas into your car at a gas station. Consider types of alternative actions you might take regarding the grade of gasoline, the use of credit cards, and self-service, depending on the weather and other conditions.
(Respond (critically but gently) to a classmate's algorithm, September 27-October 11.)

Topic 4. October 4-11:
What do you understand by the term artificial intelligence and in what ways do you think the implementation of this concept can be useful to us?
(Respond October 4-18.)

Topic 5. October 11-18:
List and describe three Web sites which you have found interesting and which your classmates should look up. Don't forget to include the URL's in your forum posting.
(Respond October 11-25. When you respond to a classmate, start by looking up that classmate's favorite Web sites before you write your response.)

Topic 6. October 18-25:
Give an example of a real-life situation that could be presented interactively on CD-ROM to help students build problem-solving skills.
(Respond October 18-November 1.)

Topic 7. October 25-November 1:
Which of the computer pioneers in the Smithsonian's Information Age exhibit did you find the most interesting? Why? Which of the pioneers made the most significant contributions to the development of the computer? Why?
(Respond October 25-November 8.)

Topic 8. November 1-8:
Research new career opportunities for people with computer skills.
(Respond November 1-15.)

Topic 9. November 8-26:
Open forum (and makeup discussion): If you missed one of the earlier BBS discussions, or if you just wish to contribute a "parting shot," here is your chance to sound off. Share new Web sites you have discovered. Pleasant good-byes to your classmates and pen-pals. Reactions to the course which you would like to share. Suggested improvements to the course.
(Respond November 8-26.)

Electronic Communication Link

The communication link between Technikon Natal and the Prince George's BBS server was established via the Netscape plug-in. Prince George's Community College granted userids and passwords to the South African students. At Prince George's, Bob decided to include both his class of distance learning students and another class that meets regularly in an electronic classroom. In the end, we had 47 participants in the discussion group -- 37 from Prince George's and 10 from Technikon Natal. Evaluations from the participants indicate that this was a significant learning experience for students on both sides of the world.

Future Research

For the future: Evaluations of the experiences encountered in this project will form the basis of future communication between both institutions. One particular issue that needs to be examined is the number of participants in any single discussion group. Too many voices means that some voices are rarely heard, or that everyone spends an inordinate amount of time reading the plethora of postings. An ideal discussion group might more appropriately have 15 to 20 participants, much like a college seminar. We invite others to research this issue.

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NO-BUDGET BIOLOGICAL RESEARCH
BIRD BANDING

Dr. David Thorndill

Abstract

I have been catching and banding birds on the Essex Community College campus since 1982. My biology students see how birds are caught, and they the observe the technique of bird banding. The fifteen year cost of this project has been about $300: nets, pliers, holding boxes. I have banded about the same number of birds near my backyard winter feeder. Bird banding is a North American research project regulated by the U.S. Department of the Interior and requires a permit and the regular reporting of banding activities.

During the years 1982-1997 a total of 1645 birds of 80 species have been banded at Essex. The most commonly banded species were yellow-rumped warbler (188), American robin (178), and gray catbird (126). There have been 118 recaptures the same year the bird was banded, and 59 recaptures (returns) in a different year. A song sparrow banded the summer of 1982 returned in 1983, 1984, 1988, and 1989. All the recaptures were on the Essex campus.

The Presentation

The presentation included slides of bird banding field locations and close up photographs of selected birds. A mist net had been set up outside a window of the meeting room. We caught a very feisty tufted titmouse.

Contact information for obtaining bird banding information and permits was given. Highlights of the banding data from Essex Community College was also presented. This information is included in this report.

Bird banding permits, regulations, and information may be obtained through:

U.S. Geological Survey
Biological Resources Division
Patuxent Wildlife Research Center
Bird Banding Laboratory
12100 Beech Forest Road STE-4037
Laurel, MD 20707-4037

301-497-5807
John_Tautin@nbs.gov

http://www.pwrc.nbs.gov

Bird Banding at Essex Community College

Eighty species of birds have been banded on the Essex campus. Most were caught in mist nets between May 1st and October 1st. A few nestlings and recently fledged birds were caught by hand.

Summary	1982-97
Total birds banded	1645
Nestlings/locals banded	107
Recaptured-same year	118
Returned-another year	59
Species banded	80

Most Common Banded Birds

Species Banded	Total	Returned another year
Yellow-rumped Warbler	188	0
American Robin	178	9
Gray Catbird	126	7
Ruby-crowned Kinglet	80	0
Common Yellowthroat	76	0
Wood Thrush	74	6
Tufted Titmouse	61	6
White-throated Sparrow	69	0
Carolina Chickadee	61	5
Northern Cardinal	53	4
Blue Jay	51	5
Magnolia Warbler	34	0

Significant Returns

Species	Banded	Returned
Song Sparrow	6-21-82	4-83, 6-84, 6-88, 7-89
Tufted Titmouse	10-4-84	10-10-85, 5-18-87
Carolina Chickadee	10-5-82	8-13-86
Downy Woodpecker	6-21-82	5-18-87
Wood Thrush	6-3-86	7-6-87, 5-3-88, 6-9-88
Northern Cardinal	4-31-91	5-4-92, 5-6-93

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MULTICULTURAL *VERSUS* MONOCULTURAL POLAND: A QUESTION OF IDENTITY

A TEACHING MODULE FOR COLLEGE-LEVEL HISTORY COURSES

Joan M. Welker

Abstract

The history of Poland is a history of repeated struggles for national identity and independence. In this lesson history students will explore the concept of national identity and how it is promoted by examining Poland's history in order to show the numerous significant territorial and demographic changes that have taken place in Poland over the past millennium. In addition, by this lesson students will learn how Poland's history made it a multiethnic and multicultural nation beginning in the early medieval period, how the Poles held onto a national identity even as their territory disappeared in the three partitions in the late eighteenth and early nineteenth centuries, and how Poland became a monocultural nation under the policies of the Third Reich and the Soviet Union.

Introduction

Poland, a country since the 10th century, is preoccupied with its past. In their efforts at self-preservation, the Poles have used the past to perpetuate their most important national traditions as they have struggles to resist foreign-imposed masters. The cultural heritage of Poland is multicultural. The development of a sense of nationhood in Poland over the past millennium has evolved despite shifts in people, realignments in dynasties, occupation of foreign masters and conquest.

In this lesson history students in courses in Medieval History, Early Modern History, and Modern History will examine Poland's history in order to show the numerous significant territorial and demographic changes that have taken place in Poland over the past millennium. In addition, by this lesson students will learn how Poland's history made it a multiethnic and multicultural nation beginning in the early medieval period, how the Poles held onto a national identity even as their territory disappeared in the three partitions in the late eighteenth and early nineteenth centuries, and how Poland became a monocultural nation under the policies of the Third Reich and the Soviet Union.

Poland's ethnic composition changed dramatically in the 20th century. In the years between World War I (1914-1918) and World War II (1939-1945), about 30 percent of Poland's population consisted of ethnic minorities. Many of the

country's minorities, such as Jews, were killed during the Nazi Holocaust of World War II, and others migrated during or after the war. The Holocaust wiped out, once and for all, the Jewish community of Poland, the largest and most vital Jewish community in Europe. Before World War II, some 3.5 million Jews lived in Poland; over 90 percent of them were killed during the German occupation in the war. Border changes also caused Poland to lose some of its ethnic mix. Today, ethnic Poles make up about 98 percent of the population. Approximately 600,000 people are members of ethnic minority groups; the Ukrainians and Belarusians form the largest communities, with much smaller groups of Slovaks, Czechs, Lithuanians, Germans, Gypsies, and Jews.

Medieval History

The history of Poland is a history of repeated struggles for national identity and independence. Poles are descended from the early Slavic tribes that settled in Eastern Europe. Poles date the beginning of their national history to 966 when Prince Mieszko accepted Christianity -- and began the close connection between Poland and the Catholic Church. His son, Boleslav I, firmly established the Christian Church in Poland and began the expansion of the Polish domain to beyond the Carpathian Mountains and the Oder and Dnestr rivers.

During the next three centuries Poland suffered from internal disorder and foreign invasions, but rebounded by the 13th century at which time the ethnic composition of Poland underwent significant changes. First, the Mongols invaded Poland in the 1240s. Then the Teutonic Knights subjugated the neighboring Baltic lands of the pagan Prussians. Finally, German colonists, as well as a large numbers of Jews fleeing persecution in western Europe, took refuge in Polish territory, much of which was under foreign occupation at the beginning of the 14th century.

Recovery began in the early 14th century when the Poles inflicted defeats on the Teutonic Knights, who had controlled the Baltic region and had increasingly enlarged their holdings by taking over Polish land. The power, prosperity, and territory of Poland increased under Casimir III, one of the most enlightened rulers in Polish history. He initiated important administrative, judicial, and legislative reforms, founded the University of Kraków (1364), extended aid to the Jewish refugees from western Europe, and added Galicia to the Polish domains.

While the earliest records of Jewish settlement in Poland date back to the late twelfth century, the key period for Jewish settlement was in the fourteenth and fifteenth centuries. At this time Poles and Jews began their multicultural experience in earnest when economic, social, and political dislocation combined

with persecution to drive thousands of Ashkenazi Jews from northeast France and Germany into Poland. These people brought with them a well-developed culture based on Hebrew texts, a vernacular language, Yiddish, and western European civilization.

In 1386 Jagiello, grand duke of Lithuania, married Jadwiga, queen of Poland, and began the Jagiellonian dynasty. In 1410 Polish and Lithuanian armies won a decisive victory at Tannenberg (known as the Battle of Grunwald in Poland) over the Teutonic Knights, thereby raising Poland to a leading position among European nations.

Early Modern History

Poland continued its expansion in the 15th century when Casimir IV fought the Teutonic Knights and won West Prussia, Pomerania, and other territories by terms of the Peace of Thorn in 1466. In 1569 Sigismund II Augustus united the two countries of Poland and Lithuania. The country was officially termed the Commonwealth (Rzeczpospolita). This was the period known as the Golden Age, which went from 1500 to 1650. The vast Polish-Lithuanian Commonwealth was very different from the lands of the West that were experiencing the deadly religious and political wars of the Reformation. Poland in contrast was a land of great ethnic and religious diversity. Polish religious tolerance was guaranteed in the Confederation of Warsaw in 1573, a document unparalleled in the West at the time. Thus in Poland there lived German Lutherans, Polish Calvinists, Turkish Moslems, and communities of Eastern Orthodoxy.

During the next two centuries, however, the political, economic, and military position of Poland and the size of its territory deteriorated. Disastrous wars with Sweden, Russia, the Ukrainian Cossacks, Brandenburg, and the Ottoman Turks led to the loss of important Polish territories, the devastation of much of Poland, and the end of the Golden Age. Even King John III Sobieski's defeat of the Turkish army at the gates of Vienna, which ended a serious threat to Christendom in central Europe, was unable to halt Poland's decline. Early in the 18th century Imperial Russia opened a systematic offensive against Poland, with the Russian rulers gradually reducing Poland to political impotence until the War of the Polish Succession. By 1764 Poland was defeated and Stanislas II Augustus, a lover of Catherine the Great of Russia, sat on the Polish throne.

This Russian expansionism upset the balance of power in eastern Europe. Prussia and Austria, fearful of a general European conflict and desirous of Polish

territory, submitted a proposal to the Russian government for the partition of Poland. In 1772, by the terms of the first treaty of partition, Russia, Austria, and Prussia acquired large portions of Polish territory, amounting to about one-quarter of the total area of the country.

In response Poles began the draft of a new constitution which proclaimed Poland a hereditary monarchy and strengthened and liberalized the government. The constitution was adopted on May 3, 1791. However, the constitutional government, abandoned by Prussia, soon fell and Poland was partitioned a second time in September 1793, when the area of Poland was reduced by two-thirds.

In 1794 the Poles, under the leadership of Thaddeus Kosciusko, started a revolutionary war for the recovery of their lost territories. Despite their inflicting a humiliating defeat at Warsaw in 1794, the Poles were outnumbered. The numerical superiority of the Russians, as well as Prussian and Austrian intervention, made the Polish cause hopeless and the revolutionary armies surrendered. After settling their differences on division of the spoils, the victorious powers of Russia, Austria, and Prussia concluded treaties between 1795 and 1797 on the third partition of Poland. By the terms of the treaties, the Russian Empire received about half of the remaining Polish territory, and Prussia and Austria each received about a quarter. With these events, the Polish state disappeared from the map of Europe.

Modern History

The Polish people remained under foreign domination for nearly 125 years after the third partition. During the Napoleonic Wars (1799-1815), Napoleon, who had promised to reestablish Poland, got substantial help from the Poles, thousands of whom served in his armies. Napoleon's establishment of the duchy of Warsaw, however, did little for Poland except grant it a liberal constitution while making it a part of the French Empire.

After the defeat of the French Empire, the Russian Empire dominated Poland. In 1815 the Congress of Vienna, which drafted the general European peace settlement after Napoleon's downfall, created the Congress Kingdom of Poland, consisting of about three-quarters of the territory of the former duchy of Warsaw -- but with the Russian emperor as king; and distributed the remainder of Poland among Russia, Austria, and Prussia. Alexander I, emperor of Russia, granted the new kingdom a liberal constitution in 1815, but Polish nationalists

soon started an independence movement, beginning in 1830. The Poles expelled the Russians and, in January 1831 proclaimed their independence. In the ensuing war, the Poles held off the Russians for several months, but the Russians eventually won.

Soon the reprisals against the Poles began. The Polish constitution, legislature, and army were abolished in the aftermath of the rebellion. The Poles were deprived of civil liberties, their country was robbed of literary and art treasures, and severe measures were taken to Russianize public institutions and administration. When nationalist demonstrations and rebellions broke out in 1846, 1848, 1861, and most notably in 1863, the Russian Empire, intensifying its program for the Russification of Poland, introducing the Russian language in the schools, restricting the use of the Polish language, and interfering with the activities of the Roman Catholic Church. Culturally, politically, and economically, the parts of Poland under Russian rule were transformed into mere provinces of the Russian Empire. Meanwhile, the Poles in Prussian Poland were subjected to a policy of Germanization, which was not as severe as Russianization. Only the Poles in Austrian Poland were treated more liberally, and they developed their own leaders and political life. And for Polish Jews in the nineteenth century, as for Poles, much depended on who their new masters were. Life was hardest under the Russians, less hard under the Germans, and even less so under the Austrians.

One change that came to Poland in the 1880s was industrialization in some of the urban centers, that brought commerce to Warsaw and the textile industry to Lodz and Bialystok. This limited industrialization was most often led by Germans, particularly German Jews, though the vast majority of Jews were poor people living in the countryside. But the new industrial cities like Lodz, called the "Polish Manchester," were melting pots of different cultures, religions, and classes. At the end of the nineteenth and beginning of the twentieth centuries, Lodz, Poland's second largest city and its leading industrial center, was a multiethnic and multicultural center. It had the largest percentage of Germans of any Polish city and the second largest percentage of Jews. By the early twentieth century the population of Lodz was approximately one-third Polish, one third Jewish, and one-third German.

During World War I Poles fought in the armies of Russia, Germany, and Austria. After the Bolshevik Revolution in March 1917, the provisional government of Russia recognized Poland's right to self-determination. A provisional Polish government was subsequently formed at Paris. Eventually the republic of Poland was proclaimed in November, and an independent government, the first in 150 years, was installed in January 1919.

The Treaty of Versailles of 1919 defined the boundaries of the new Polish nation. It granted Poland a narrow belt of territory (the so-called Polish corridor) extending along the Visual River to the Baltic Sea, and large sections of Poznan and West Prussia. The treaty also awarded Poland important economic rights in the free city of Danzig. After a war with Soviet Russia in 1921, Poland annexed parts of Belorussia and the Ukraine. In the west, the Poles acquired sections of Upper Silesia in 1921 and 1922.

In the two decades following the war, the foreign policy of Poland was largely determined by fear of Germany and the USSR. Poland saw itself as a plain caught between two mountains. Out of fear of the two Powers at its borders, Poland in 1932 concluded a nonaggression pact with the USSR and one with Germany in 1934. Both these treaties were supposed to guarantee Poland's borders.

Meanwhile, the triumph of National Socialism in Germany and the expansionist policy of Adolf Hitler in the late 1930s posed grave danger to Polish security. After the Munich Pact and the ensuing destruction of the Czechoslovakian state (March 1939), Poland became the next major target of German diplomacy in the form of German demands that Poland consent to give up Danzig to Germany. While the Poles were rejecting these demands, the British and the French pledged aid to Poland in the event of German aggression. On April 28, Hitler renounced the German-Polish nonaggression treaty and on September 1, 1939, Germany attacked Poland and began World War II.

By mid-September 1939, little more than two weeks after the start of the German invasion, German armies had overrun most of western and central Poland. In the same month, Soviet troops invaded Poland from the east, and the two invading powers divided the country between them. In the meantime a Polish government-in-exile had been organized in France. Following the collapse of France in 1940, the Polish government established headquarters in London. Meanwhile, enormous reprisals were exacted against the Poles, particularly against Polish Jews, throughout the German-occupied region. and in the Soviet-occupied area, many thousands of Poles were forcibly deported to Siberia and many others were killed.

The armed forces of the Third Reich occupied all of Soviet-held Poland during the initial phase of their attack on the USSR in 1941. During their occupation of the country, the German armies pursued a policy of systematic extermination of the Polish people, particularly Jews, most of whom perished at

Auschwitz, Treblinka, Majdenek, Sobibor, and other concentration camps scattered throughout the country. For example, in the industrial city of Lodz, a city with the second largest Jewish population in Europe at the time, the Nazis forced the 200,000 Jews of the city into a ghetto, to create a work camp for the German war effort. By 1941 the Jews of Lodz were joined by Jews relocated from Austria, Germany, Czechoslovakia, and Luxembourg. By early 1945 almost all of the inhabitants of the Lodz Ghetto were dead from starvation or from being sent to the death camp at Chlemno. At the end of the fighting, the estimated total of Polish civilian casualties numbered more than 5 million, most of which was inflicted by the Germans.

The last of the German invaders were driven from the country by Soviet and Polish troops in March. In July 1944 the Soviet government-sponsored and Communist-controlled Polish Committee of National Liberation proclaimed itself the provisional government of Poland in December 1944. In June 1945 a Polish Government of National Unity was formed. This government, officially recognized by the British and US governments, had won Soviet promises of free elections at the Yalta Conference in early 1945.

Poland's borders were changed once again after World War II. At the Potsdam Conference, held after Germany's surrender in 1945, the Allied powers placed Upper and Lower Silesia, Danzig (Gdansk), and parts of Brandenburg, Pomerania, and East Prussia under Polish administration pending the conclusion of a final peace settlement.

The war's end brought significant demographic changes to Poland as well. Of a population totaling about 8,900,000 in the German areas assigned to Poland, more than 7 million were Germans. Most of the Germans fled the Soviet Army or were subsequently expelled to Germany. The eastern frontier of Poland, delimited by the terms of a treaty concluded by the Polish and Soviet governments on August 16, 1945, established the Polish-Soviet frontier considerably to the west of the prewar boundary and the USSR acquired a large amount of former Polish territory. The inhabitants of this territory totaled approximately 12,500,000. Of this number, nearly 4 million were Poles, most of whom were repatriated to Poland and resettled in the areas obtained from Germany.

Meanwhile, Communist-Socialist strength in the government grew steadily during late 1940s. Soon Poland, dominated by the Soviet Army, became one of the satellites of the USSR. Later under this Communist regime in a period of improved relations with the West in the 1970s, Poland began the repatriation of some 125,000 ethnic Germans to West Germany in 1975.

In the summer of 1980 Polish workers went on strike. with workers in Gdansk and other Baltic coast ports making political demands. Soon the Communist authorities were forced into making unprecedented concessions including the right to strike, wage increases, the release of political prisoners, and the curtailment of censorship. The recognition of the right to organize independent trade unions led to the formation of the Solidarity federation in mid-September. Under Soviet pressure, the government was unable or unwilling to carry out the necessary reforms at which time General Wojciech Jaruzelski was made premier and party chief. To control the situation he imposed martial law, suspended Solidarity, arrested Lech Walesa and thousands of other Solidarity activists, and banned all industrial and political opposition.

Soviet premier Mikhail Gorbachev broke the political and economic stalemate in Poland during the late 1980s. Reform became possible and Poland began to dismantle its Communist system and move towards democracy. In 1990 Walesa won the presidential election. At this time, however, came another change to the population of Poland with the withdrawal or Soviet troops, which began in 1992 and was completed in August 1993.

In the September 1993 elections the Communists' successor parties gained a large majority, but the recent Polish elections have brought a Solidarity-led party back into power.

Conclusion

In conclusion, over its thousand year history Poland has undergone numerous territorial and cultural changes. Through the migration of peoples and the frequent shifting of boundary lines, Poland gained a truly multiethnic and multicultural society. During most of its history Polish society was multicultural and multiethnic, containing substantial numbers of Russians (Belarusians), Germans, Polish Jews, and Ukrainians. Even during times of the partitions, the Poles were able to hold onto their national identity and keep alive their hope for national sovereignty. Almost as soon as the modern Polish nation was created after World War I, however, it became a target for Nazi aggression and the theater for the Nazi policy of the Final Solution. In an example of the supreme irony of history, German National Socialism, and later, Soviet Communism, bequeathed to Poland a perverted version of Polish nationhood, i.e., a nation of only Poles. Once multithnic and multicultural, today Polish society is monocultural. Nearly the entire population speaks one language and belongs to one religion.

Today, about 96 percent of the Polish population is Roman Catholic. Roman Catholicism exerts an important influence on many aspects of Polish life. In the period since the Reformation, political and religious thought has tended to merge, i.e., a sense of nationhood and religion have fused. When the Polish sovereignty ended with the final partition of Poland in 1831, the Church became what has been called "a surrogate for the state and the nation, thus intensifying the relationship between religious and political values." (Schopflin, 124) When the Soviets imposed Communism on Poland in 1945, the Church was pushed once again into a position as protector of the national tradition. Today, the Church is still influential, its position boosted all the more by visits by the pope to his homeland.

The ethnic diversity of Poland was cut shot by World War II and the migrations of people thereafter. The diversity in Polish society died in Poland by the millions in Nazi death camps. The Jewish population of Poland represented over 10 percent of Poland's total and some 30 percent of the population in such cities and Warsaw and Lodz) before the war. About 3 million Polish Jews died in the Holocaust. Art the end of the war only some 200,00 Jews remained in Poland. Of these about 10,000 mostly elderly Jews remained in 1991, though accurate numbers are impossible to ascertain because the Communist government that ruled Poland until recently did not calculate ethnic groups, emphasizing instead, ethnic homogeneity. Today, the number of Jews is significantly lower.

Postwar territorial and border adjustments pushed about 2 million Germans, and 500,00 Ukrainians, Belarusians, and Lithuanians out of Poland, while approximately 3 million Poles were repatriated from the Soviet Union. (Before World War II the Ukrainian population made up 13.8 percent of Poland's total population.) Most of the Ukrainian population was removed from Poland through resettlement or as the result of border changes. These population shifts resulted in the monocultural Polish population of today.

Student Activities

1. Students can analyze historical maps that demonstrate the changes in the territorial boundaries of Poland since the tenth century.

2. Students can look up population statistics on different periods of Poland's history, graphing and analyzing their results.

3. Students can view the film, "The Battle of Tannenburg" and write an analysis of the film and its content. Students can also pursue further reach on medieval Poland and the Teutonic Knights.

4. Students can view the film, "The Lodz Ghetto" and write an analysis of the film and its content. Students can also pursue further reach on the Holocaust in Poland, Jews in Poland. A comparison can be made between the Lodz Ghetto and the Warsaw Ghetto. Students would consult Dobroszycki, Lucian, ed. The Chronicle of the Lodz Ghetto, 1941-1944 as a source for this assignment.

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Psychological Technology for Education
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A thorough display and demonstration of available multimedia technology was presented at Essex Community College's computer lab by using compact multimedia discs and computer software. This workshop demonstrated the use of computers in the psychology classroom.

Computer software, a more established technology, has provided examples for our use. These uses were to further explain psychology principles, to replace psychology text's studyguides, and to provide an interactive studyguide. Also, software provided psychology simulated experiments (for example conditioning animals) including progress reported to the students professor.

The coordination of software and CD's on a LAN at Essex Community College was beneficial since many of these technologies were networked on individual computers and provided "a hands-on" use of technology. A follow-up will be presented in the future.

I wish to thank the support given by the computer personnel at Essex Community College including Mrs. Carol Sherry, Ms. Phyllis Tripp, and Mr. Elliott Pearson.

Harford Community College
International Nursing Project
Russia: Moscow Medical College #1

Tina Zimmerman and J. Ryker Hughes

Abstract

Harford Community College (HCC) has developed a partnership with Moscow Medical College #1 (MMC). This is one of the leading institutions in Moscow that educates nurses and the MMC faculty, under the visionary guidance of Dr. Svetlana Mukhina, are working fervently to raise the knowledge and skill level of the Russian nurse. Major problems confronting nursing include the lack of knowledge about nursing theories, practices, and technologies, and the absence of professional autonomy.

We journeyed to Moscow in February, 1996 to determine the scope and direction of the project and to initiate a partnership with MMC. The partnership is viewed as a "work in progress" with a multi-phase structure. To date, the following events have occurred:

* A visit to Maryland by two physicians and a nurse from Moscow Municipal Hospital #36 in August 1996. The goal was to observe Harford Community College facilities and examine the administrative nursing structure at the Bayview Burn Center at Johns Hopkins Hospital.
* The presentation of lectures in September 1996 to the MMC faculty by Tina Zimmerman and Laura Putland. The HCC professors presented lectures on the nursing process and on infection control.
* A visit in November 1996 to HCC by Dr. Svetlana Mukhina and three Russian nurse educators. This trip allowed interaction with the entire HCC faculty and provided the Russian educators the opportunity to observe the teaching methodologies utilized in HCC's nursing program. A formal partnership between the two colleges was signed by Dr. Mukhina and Dr. Claudia E. Chiesi, President of HCC.
* A visit by Dr. Chiesi and HCC Board of Trustee member, Dr. Jeffrey Sawyer, to Moscow in May of 1997. Their journey emphasized the value of the project to our Russian partners.
* The return of HCC faculty to MMC in December 1997. A third faculty member, Joyce Jordan, joined us and seminars were presented on Management Concepts for Nurses, Gerontological Nursing, and Nursing Practice and Standards.

This project has allowed us to broaden our perspective on international health issues and has given HCC the opportunity to make an educational contribution to a country struggling to improve the image and status of nursing. We have found the International Nursing Project to be a profound professional and personal experience.

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