Preparing International Teaching Assistants: Intercultural Training from a Genetics Perspective.

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The variety of cultures represented by international teaching assistants (ITAs) demands a skillful accommodation of intercultural information to assist effective adaptation for the American classroom. The literature on intercultural communication often provides a simple illustration of persons representing different cultures interacting to create a "third culture" or negotiated social reality which becomes the new milieu for their interaction. This illustration is analogous to the genetic process in the combination of chromosomes. The genetic model helps to chart the evolutionary process of birth and/or rebirth of the culturally sensitive person. A consulting interview model serves as a framework for a distinctive profiling technique based on the model drawn from genetics. This approach can guide the consultant/trainer in the allocation of time and topics to accommodate the diversity of clients; such an approach has been used in a program at the University of Oklahoma. The potential increase in effectiveness and efficiency render this approach distinctly superior to its generic-orientation alternative. Two figures representing aspects of the genetics analogue are included. (Contains 19 references.) (RS)
PREPARING INTERNATIONAL TEACHING ASSISTANTS: 
INTERCULTURAL TRAINING FROM A GENETICS PERSPECTIVE

By
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ABSTRACT

The variety of cultures represented by International Teaching Assistants (ITAs) demands a skillful accommodation of intercultural information to assist effective adaptation for the American classroom. This paper proposes a distinctive profiling technique based on a model drawn from genetics. This approach will guide the consultant/trainer in the allocation of time and topics to accommodate the diversity of clients. The potential increase in effectiveness and efficiency render this approach distinctively superior to its generic-orientation alternative.

This convention program provided a unique opportunity to combine three strong interests of the authors of this paper: First, during 1986, we began work with a special committee at the University of Oklahoma to address the problems presented by the use of international teaching assistants (ITAs), generally identified as graduate students for whom English is a second language and who were raised outside the prevailing culture of the United States of America. Based on this work, the committee designed a major six-day training program which the second author actively helped to implement. Second, as the second author's doctoral dissertation (Lakey, 1988) attests, we are seriously concerned with the weak theoretical orientation of intercultural communication. Both of us firmly believe more attention should be given to the creative generation of intercultural communication theory. Third, as teachers we are both fascinated by the potential of modeling to address the two preceding concerns. The excitement of a genetic model was even further invigorated by a recent New York Times article (9/8/92) which

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addressed contemporary musical compositions based on DNA codes and other uses of genetic analogies. This paper will partially address all three of these concerns as it uses a "model" drawn from genetics to redirect intercultural communication theory and training to confront the distinctive problems of international teaching assistants.

We must begin with a confession: Credit for originating the idea of borrowing from genetics goes to Drs. Paul and Lynda Shaver who encouraged us to examine its potential. Knowing well our tendencies to become entrapped by the mysteries of provocative analogues, they insidiously persuaded us to postpone until next spring our original paper addressing and projecting the program at Oklahoma University. We are pleased, however, with their postponement as the questions which surfaced in preparing the immediate paper forced us to address more deeply some crucial problems with the preparation of ITAs. For the time being, the students in our intercultural communication classes are certainly fascinated to discover the new language we employ to discuss our topic. They hardly expected such classes to address reproduction and fertilization processes.

The ITA Problem

In recent years, most major research institutions in the U.S. have experienced an increase in the number of international teaching assistants (Woodcock, 1982; McMillen, 1986; Heller, 1986) and in problems associated with their employment. Their relative unfamiliarity with American culture and language frequently presents unique difficulties in the American classroom. The increase in university dependence on ITAs, especially in the sciences and mathematics, has led to an increased dissatisfaction and complaints from American undergraduates and their families regarding the alleged "foreign TA problem" (Mestenhauser et al., 1980; Paige, 1983; Bailey,
Part of this ITA problem is perceptual on the part of undergraduates since research "suggests that assumptions of widespread inadequacies in the language and teaching competencies of ITAs and dissatisfaction with preparation programs are unwarranted" (Chism, 1987, p. 249). However, hardly anyone questions the well-intended desire and need to increase ITA effectiveness in the classroom.

Universities have responded to the challenge of ITA preparation by providing various types of orientation programs ranging from days to weeks. Commitment to ITA preparation demonstrates support for effective undergraduate instruction, as well as an awareness of the opportunity to increase the proficiencies of ITAs and undergraduates in intercultural communication. Because of their tremendous investment in ITAs and the undergraduates who will be their students, all universities with a significant portion of their undergraduate instruction committed to ITAs need to provide special training and evaluation for them.

Since 1986, the authors have been variously involved in ITA training at the University of Oklahoma. With the University facing the same concerns over its use of ITAs as other programs nationally, a training program was initiated. The program grew from a pilot orientation of half-day duration to a University-wide six-day program. These programs and others elsewhere have been considered successful based on results from evaluation measurement and unsolicited personal feedback from participants. We are currently working on a synthesis of these results and projections based on them.

Even though past programs have achieved a level of success, concerns remain for enhancing the efficiency and effectiveness of ITA training. These programs typically use a general orientation framework and concentrate on the
areas of language, pedagogy, and cross-cultural awareness. When we consider the best interest of ITAs and their students, the efficiency of the general approach to prepare ITAs for the challenges they face appears to be questionable. Due to time, resource, and experience constraints, general orientation training programs represent a type of compromise between totally individualized instruction and the general training offered for all teaching assistants. The implicit assumption is that all ITAs have the same challenges and needs which will be satisfied in this generic format. This type of preparation is certainly better than no training at all and is considered to be helpful by participants and organizers. Ultimately, however, we must move beyond the general level of preparation to identify specific challenges faced by ITAs in their interaction with their students.

Based on their experience and familiarity with the literature, LaLande and Steward (1987) report several findings which were contrary to their expectations. For example, their survey showed that 74% of the ITAs had visited the USA previously, either as tourists or as students. Furthermore, nearly 75% of all ITAs arrive in the U.S. more than one month before their reporting date at the university. Only 52% of ITAs attended university orientation programs for new, international students. The data suggest that aspects of present general orientation programs may appear unnecessary for international students who have arrived early and been in the U.S. previously. At least, these ITAs consider them unnecessary. Further, we have personally experienced widely divergent reactions by different cultural groups to common materials. In other words, a need exists for a training model that will identify specific individual needs and address them practically. This paper proposes to develop a potentially more effective model grounded in the analogue of genetics.
Toward a Genetics Model

The literature on intercultural communication often provides a simple illustration of persons representing different cultures interacting to create a "third culture" or negotiated social reality which becomes the new milieu for their interaction. Consider Figure 1:

Figure 1: Negotiation of "Third Culture"

As we examined this simple illustration in various publications, we have been struck with the parallel with the genetic process in the combination of chromosomes. As strings of DNA combine, they do so in relatively predictable patterns to create distinctive organisms. Pursuing this analogue invites us to expand our simple illustration of intercultural communication into a model which captures the salient features of the construction of the social reality of the "third culture."

This apparent set of relationships invites us to use a genetic analogue to generate propositions about intercultural communication. Before we attempt to fit this specific piece of the genetic puzzle into our intercultural concerns, we need to examine some basic genetic concepts, starting with the word genetics itself. "Genetics" traditionally has referred to the inheritance process of the organism, i.e., the transmission of characters from one generation to the next. More recently, the term has expanded to include the

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1 Materials for this section are drawn from Stine, 1989, and Maxson and Daugherty, 1989. We apologize for our liberties with their presentations of genetic realities.
control over the interaction of cultural representatives as they create the social reality within which subsequent interactions will succeed or fail.

Chromosomes are chains of DNA which transmit the distinctive features of an organism. They occur in pairs with each unit of a pair reflecting one of the parents. The specific components of these chromosomes, patched together in a richly variable process, create the genetic potential of a new organism. The word chromosome means colored bands which refers to the staining process which identifies the distinctive genetic compositional bands of the chromosome. These distinctive features combine into 46 pairs of chromosomes which constitute the human organism or the human karyotype, the total complement of chromosomes for the human organism.

The complex process of reproduction basically entails the reduction of male and female chromosomes through meiosis, transmission of the reduced number of chromosomes through fertilization, and consequent integration and duplication through mitosis as the distinctive organism or offspring is created. By knowing the distinctive features of the parents one can anticipate the organization of the created organism. With even more careful control of the chromosomal patching, we can potentially predict and/or control aberrations and avoid certain problems.

The rich potential of this model for intercultural communication rests in the primary areas emphasized above: (1) We can characterize or profile the distinctive features of each "parent" culture. (2) We can anticipate the potential patching of genetic materials between chromosomes as they create the essential "stuff" of the "offspring." (3) We can identify aberrations and exert some control. And (4) we can reasonably anticipate the resulting organism or third culture. The accuracy of this approach for intercultural
relations is constrained by our inability to identify and label the "chromosomal bands" with the precision of genetics, but we can capture several dimensions and project their prospective combinations.

Finally, chromosomes can be classified by the position of their centromeres which direct cell movement during combinations. If we can identify a small number of dominant cultural qualities which may so govern other combinations, then we may have the essentials for predictions. Although we may lack genetic precision, we have a promising corrective feature with the imprecision of our flexibility. Intercultural relations once set into various combinations can be re-combined and in shorter evolutionary time we can learn to avoid certain combinatory patterns.

Our colleagues on this panel have chosen to use only a part of the genetic model for their analysis. Their focus on chromosomal bivalency is very interesting, but stops short of the full potential of this genetic analogue. Despite these differences of approach, we are proceeding from one central assumption: the area of intercultural communication is in desperate need of improved conceptualization. As our literature quickly reveals, we are getting lost in comparative research and losing the potential distinctiveness of the area. As we turn to examine the preparation of ITAs, let us try to concentrate on the distinguishing features of intercultural communication and not merely on the use of communication to get at intercultural relations.

With profuse apologies to geneticists the world over, we have reduced the complex process of cell division in human reproduction to the following oversimplification. We represent each parent as having a two-part chromosomal
composition from which one part meiotically combines with that of the other parent through fertilization to create the unique basis for the offspring. The cells of the resulting zygote multiply in the mitotic production of the new organism. Expressed another way, the chromosomes of each parent 'culture' provide the genetic materials which combine with great variability to form the third culture from which the new and potentially improved representative(s) emerge.

To use this analogue requires one to treat the genetic stages metaphorically and perceive the new organisms as reborn improvements of their parents as transformed in the context of culture C. It also requires one to think of culture in the biological sense of development in an artificial medium, as well as we traditionally think of it in intercultural relations. If we think of the meiotic process as the combining of the reduced number of chromosomes from each parent through several phases, we are further encouraged to view this as the opportunity to exercise control over the permutations through intervention in intercultural training and education to influence the specific genes involved and their combinatory patterning. As the resulting zygote begins to reproduce cells for the new organism, the mitotic processes also encourage corrective intervention and control as we once again use intercultural training and education to modify the compositional elements as they develop. Unlike the normal reproductive process where only one organism results, we project the generation of dual organisms with each primarily representing one of the parents. These new "prime" specimens should better reflect the third culture C and be more interculturally sensitive. Figure 2 represents this analogue:
With this very general model in mind, let us consider its relationship to the ITA problem. The ultimate goal of intercultural communication is an important point of departure. As with human evolution, the goal is to produce more culturally sensitive individuals who can function more effectively in intercultural relations of our world. We are, therefore, trying to prepare ITA's and to some extent their students so that through more effective interactions they can become more culturally sensitive. The genetic model helps us chart the evolutionary process of birth and/or re-birth of the culturally sensitive person.
This line of thought involves a few assumptions: Within each of us is the potential for cultural sensitivity, an interest in differences, even if only out of curiosity. So the "genes" of potential cultural sensitivity are present. Thus we need to think of the several phases of the meiotic process as steps in the intercultural communication training and education process whereby certain genes are cultivated and others suppressed. Hopefully across "generations" of birth and rebirth the results will generate a more culturally sensitive and interdependent world. One should note here that the ITA thus becomes a teacher of intercultural communication as well as a teacher of their primary subject matter. As the third culture spawns new organisms we can during these mitotic processes examine the aberrations and take corrective action. As we all know, intercultural communication education and training does not necessarily produce a promising third culture for future prospects. So, we may need an opportunity to monitor and check our products to insure that the new organisms will promote cultural sensitivity more effectively.

To bring this analogy even closer to the ITA problem, let us reexamine the genetic composition of representatives of culture A and B. The ITA representative of culture A consists of chromosomes from mother culture A as well as expectations of the host culture B. Obviously, features of culture A will dominate. The student representative of culture B consists of chromosomes from mother culture B as well as expectations of the ITAs' culture B. Based on these ingredients, what might we predict about the emergent culture C? For openers, it will consist of a widely variable combination of A and B with a perplexing influence of mixed expectations. If we are to exercise control over the meiotic process, then we must characterize each mother culture and address the expectations: What are salient features of culture A and B?
What are the potential expectations of the representatives? What are the likely points of abrasion? Armed with this information we can plan our intervention tactics and strategies.

So far, we have treated this problem as though we are dealing with only two individual parents, when in fact we cannot enjoy such a tutorial luxury. We must instead plan to treat clusters of parents, the ITAs and students. Obviously this multiplies our problems enormously. To simplify, we must devise a means of profiling these groups to permit special attention. Further, since our intervention strategies are primarily restricted to the ITAs we must help these potential parents categorize the other group of parents for successful interaction. In other words, as an ITA deals with a group of students can we prepare them to perceive the variation within any such group and to make the appropriate accommodations?

As we examine the "chromosomal bands" of the ITAs what features might we cluster so that we can provide each group of similars maximum preparation? Presume that on this chromosome are demographic and social-psychological variables, as well as expectations regarding the host culture. As in genetic research we can stain the bands of distinctive features for comparison and contrast. We can tap into these concerns through short questionnaires in the early part of the general ITA orientation. Among the demographic variables we want to know are where the students originated, their length of stay in the USA, their history of prior visits to the USA if any, their language proficiency, their motivation to adapt to the demands of the host culture and other such concerns. Among the social-psychological variables, we would test for the presence, absence, or degree of those qualities associated with acculturation potential such as those identified by Kim (1988):
cultural similarity, physical salience, background prestige, openness, resilience, education, pre-entry training, prior sojourn experience, and transition circumstance.

This information would enable us to divide the ITA population into sub-groups for special profiling interviews (like focus groups). We are aware of the common complaints of ITA language shortcomings and teaching weaknesses; however, are we certain we have arrived at the core of the problem? How have we arrived at our judgments regarding ITA needs? We are not arguing against the value of language training as part of ITA orientation, but such training and other general topic training has proven insufficient to prepare ITAs for the challenges of the classroom. Profiling interviews which tapped into their expectations about the host culture would be a giant step in the right direction.

The consulting interview model developed by L. Shaver (1992) and P. Shaver (1992) serves as the framework for intense profiling interviews. In this model, consultants use intense, open-ended, unbiased listening of the talk of the client. This initial conversation often contains keys to the "dilemmatic perspectives" of the clients and their assumptions about the perspectives of the other party. In the ITA situation, the two parties are ITAs and their students. The interactants' "dilemmatic perspectives" will have "sites of conflict" that emerge in their talk. These "sites of conflict," the points where expectations and backgrounds clash, are analogous to the meiotic process presented in this paper or complex interactional chromosomal bivalency described by Shaver and Shaver. Throughout these focused profiling interviews, consultants are looking for emerging topics, aka "sites of conflict," between the ITAs and their students.
Application of this model would be as follows: ITA training would now group similar ITAs based upon the questionnaire data and corresponding regions of cultural origin. Facilitators would engage these subgroups in focus groups, like intense, open-ended profiling interviews, which would tap into their expectations about the host culture. Ideally, experienced ITAs with similar backgrounds would participate in these subgroups. The groups would explore "sites of conflict" between the expectations of members of culture A and culture B. These sessions could also utilize simulations which help to illuminate the expectations of both cultures. In fact, all of the simulations would not have to be interculturally based since social/classroom situations which are routine for the host students are often perplexing for the ITA who is now a stranger in the host culture (Lakey & Hill, 1991). Emerging issues or "sites of conflict" would be regarded as topics for special training.

Also, focused interviews should be conducted with host students who have experienced ITAs in the classroom regarding their past and present expectations and "sites of conflict." Emerging issues would be compared to those of the ITA subgroups and special training would be developed taking into account the "dilemmatic perspectives" of representatives of cultures A and B and their assumptions about the perspectives of each other. ITA training which developed from this profiling model would prove more effective and efficient because it would match the specific needs of the ITAs and host students involved in contrast to the general orientation model.

Training should include both sessions for ITAs alone and sessions with subgroups composed of ITAs and host students. Activities should be designed with simulation and interaction activities which feature points of conflict.
which emerged from the profiling sessions. L. Shaver (1992) suggests that the activities should be designed to be: "(1) interactive, (2) experiential, (3) neutrally framed so as to be non-threatening, allowing for open interaction, (4) immediately available for post-activity processing, and (5) open-ended for flexibility" (p. 12). During the training process we also want to help ITAs come to understand what we are doing so that they can do similar things with their students, thus enabling them to derive useful information for their accommodation to the students.

Approximately four to six weeks into the semester, the ITA subgroups would be convened again. The purpose of these profiling sessions would be to refine and fine tune the mitotic process actually taking place in the classroom (refer back to Figure 2). As described earlier, this is the opportunity to exercise guidance and control over the permutations in the process through specific "intervention of intercultural training and education to influence the specific genes involved and their combinatorial patterning." Ideally, this profiling could be repeated several more times throughout the school year. After the conclusion of the school year, these "experienced" ITAs would be able to help with the next ITA orientation and profiling of new ITAs.

Obviously, allocation of time and topics would have to be flexible if the objective of the training is optimal effectiveness and efficiency. The personnel for the program could be faculty from across the university since the ITA problem is a university-wide problem. These facilitators along with graduate students in such fields as intercultural communication could be trained to lead the profiling sessions. Host students could be recruited as volunteers interested in improving education at the university
or as their participation could be part of internship programs required by various majors particularly from the social sciences. Undergraduates are utilized on a volunteer basis in "talk-back" panels at the University of Washington's ITA Orientation (Sequeira & Darling, 1987). If the particular university is satisfied with minimal competency, they could continue with a generic brand of ITA training and continue to be assaulted by their critics.

Conclusion

This paper presented an exciting challenge to its authors. Can we use a genetic model to enhance the preparation of international teaching assistants? With a strong apology to geneticists, we abstracted the genetic process and tried to apply it. We believe the results are suggestive, if not downright provocative. By playing with the innumerable analogies involved we found within our task a potential framework for presenting the business of intercultural communication training and education as a primary vehicle for the human evolution to a more culturally sensitive, interdependent world. We encourage each of you to play with this model and many others, as we collectively strive for a better conceptualization of intercultural communication, better ways to teach the subject, and better ways to solve specific intercultural problems such as that presented by our dependence on ITAs.

One recurring theme of this paper deserves a final accentuation. The literature in intercultural communication is increasing in quantity as people from throughout the academic world are joining us. But we urge you to examine closely how that popularity is distracting us from our primary focus on intercultural communication per se. We need to clarify our focus and try to move well beyond the simplistic model of creating a third culture into the many questions about how that occurs, in what ways, and with
what implications. The genetic model forced us to ask just what is that third culture and how does that third culture influence subsequent development of the contributing interactants? These are powerful concerns!

REFERENCES


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