The concept of technology transfer (the application of knowledge) and E. M. Rogers and D. K. Bhowmik's (1970) heterophily-homophily distinction is used to help better understand and offer ways to deal with the negative reactions of undergraduates toward foreign teaching assistants (TAs) in U.S. universities. While it is important for foreign TAs to work harder to improve their English language proficiency and teaching skills, this paper focuses more on the role undergraduates can play in improving the situation. This is done for two reasons: (1) given the increasing interdependence among countries today, undergraduates will benefit by improving their intercultural sensitivity by taking steps today for a more fruitful tomorrow; and (2) there are a number of programs focused toward helping foreign TAs and very few aimed at preparing undergraduates to take classes from foreign TAs. (A figure is included; 19 references and an appendix of "Michigan State Bill No. 518" are attached.) (Author/NKA)
The Oh No! Syndrome: Understanding the Negative Reactions of Undergraduates toward Foreign Teaching Assistants

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Abstract
The concept of technology transfer (the application of knowledge) and Rogers and Bhowmik's (1970) heterophily-homophily distinction is used to help better understand, and offer ways to deal with the negative reactions of undergraduates towards Foreign TAs in U.S. universities. While it is important for Foreign TAs to work harder to improve their language proficiency and teaching skills, this paper focuses more on the role undergraduates can play in improving the situation. This is done for two reasons. First, given the increasing interdependence among countries today, undergraduates will benefit by improving their intercultural sensitivity by taking steps today for more fruitful tomorrow. Second, there are a number of programs focused toward Foreign TAs, and very few aimed to prepare undergraduates to take classes from Foreign TAs.
The Oh No! Syndrome: Understanding the Negative Reactions of Undergraduates towards Foreign Teaching Assistants

The scene - the first day of class at a large U.S. universities. Undergraduates adhering to a variety of dress codes (or the lack thereof) meander in to await their instructor. A foreign teaching assistant (henceforth referred to as a foreign TA) walks into the class. There is a general murmur of disapproval. Students exchange glances and fidget uneasily in their chairs. A few walk out of the class.

The reactions of these undergraduates can be summed up as, "Oh No! not another foreign teaching assistant!" Here, this reaction is termed as the "Oh No! Syndrome," defined as a first impression by homogeneous students to a perception that their teacher is very unlike themselves. As Bresnahan and Kim (1991b) note, foreign graduate teaching assistants constitute an important part of the instructional faculty at many American universities. Several universities have a substantial number of foreign TAs teaching a majority of math and sciences courses (Rittenberg, 1992). The Chronicle of Higher Education, analyzing an Institute of International Education report, noted that 1989-1990 marked the third consecutive year in which Asians made up more than half of all foreign students studying in the United States. For example, Michigan State University (MSU) is ranked 18th nationally in overall foreign student enrollment. Fifty-one
percent of foreign TAs at MSU had assistantships while 62 percent of all foreign TAs were from Asia. The top four home countries of foreign TAs were from the People's Republic of China (17.6%), South Korea (13.8%), India (11.1%), and Taiwan (10.3%).

The Oh No! Syndrome is a significant and growing problem. On the one hand, the number of foreign TAs appear to be increasing year after year (Rittenberg, 1992). On the other hand, there is a slow but increasing body of research indicating the hardened lack of receptivity to foreign TAs by U.S. students (e.g., see Bresnahan & Kim, 1991b, Rubin & Smith, 1990, Wol-Young, 1989). Assuming that there will be a greater chance for foreign TAs and undergraduates to meet in more classes, programmatic research in this area is strongly desired. In addition, Wol-young (1989) notes that undergraduates, foreign teaching assistants, and administrators of the university perceive the Oh No! problem differently, and therefore stressing the need for specific strategies for each of the participants.

This paper addresses these concerns by offering a conceptual framework to study the Oh No! Syndrome by: 1) evaluating the present status of the Oh No! problem from the viewpoints of students, their parents, the U.S. government, and the foreign TAs; 2) using the concept of technology transfer (or knowledge transfer) to suggest intervention strategies aimed at three dyads to create the Oh Yes! syndrome; and 3) offering criteria to evaluate the efficacy of these interventions. An Oh Yes!
syndrome is one where both the undergraduates and foreign TAs have positive reactions to their classroom experience with each other.

The Present Status of the Oh No! Syndrome

As Bailey (1984) notes, the Oh No! Syndrome is perceived and explained differently by the variety of people involved. She identifies three groups of people who play a significant role in this issue: 1) the foreign teaching assistants, 2) the undergraduates and their parents, and 3) the university officials and administration. To this list, the U.S. government is added since many state senators have taken an interest in this issue. This section explains the reactions of these groups to the Oh No! Syndrome, while stressing the need for more research in this area.

Reactions of Some State Governments Bresnahan and Kim (1991b) report the following testimony offered to the House Education Committee of the Ohio State Legislature in May, 1985:

I first became aware of problems faced by students who take classes from foreign-born teaching assistants when my daughter told me about her difficulty understanding her college math instructor. Although the instructor has a thorough knowledge of the subject matter, his limited experience in speaking English made it difficult for him to convey that knowledge to the students. Conversations with other college students confirmed that this is not an
isolated problem. In fact, the problem is not restricted to Ohio. The University of Pittsburgh granted tuition refunds recently to students who complained they could not understand the English spoken by two foreign-born instructors.


In January, 1988, a similar bill was passed by the Michigan State Senate (see Appendix A). While this bill was defeated in the Michigan House of Representatives, it argued that anyone who taught in publicly supported higher education should be able to communicate in a manner that could be comprehended.

The bills in the Ohio and Michigan Legislatures see the Oh No! Syndrome problem primarily as the language deficiency of foreign TAs. However, Bresnahan (1990) stresses the lack of formal complaints to the university by undergraduates indicating that the language proficiency issue may be exaggerated. In addition, in the student newspaper of a large midwestern university (1989), university officials explained that if there is a problem, it has been in continued departmental monitoring (or the lack of) rather than in initial screening of candidates (italics included). University officials note that foreign TAs
have to pass stringent tests at both the national level (like TOEFL - Test of English as a Foreign Language), and at the university level (conducted by English language centers in many universities) before being admitted into the university. However, most students require some form of departmental monitoring to maintain the teaching standards. University officials, as suggested above, think that individual departments fail to keep up this monitoring process as it involves significant amounts of time and effort.

Reactions of Undergraduates and their Parents

Given the lack of formal complaints from undergraduates regarding the ability of foreign TAs to communicate their thoughts effectively, researchers have attempted to identify other reasons for the Oh No! syndrome. Bresnahan (1990), and Bresnahan and Kim (1991a, 1991b) have conducted a number of systematic studies to explain the undergraduates' negative reaction to foreign TAs.

Bresnahan (1990) surveyed attitudes towards foreigners among about 350 undergraduates in a large midwestern university. This survey focused on three areas of student concern - interpersonal relationships, receptivity to foreign immigrants, and level of acceptance of foreign TAs. Results confirmed students' concern about the inability of foreign TAs to communicate effectively. This study also suggested that these feelings are equally strong whether they originate from actual encounters or hearsay complaints of friends. In addition, Bresnahan (1990) indicates
that language attitudes tend to be enduring and resistant to change. Children as young as 3.6 years of age are able to differentiate high and low prestige dialects of English. Acknowledging the importance of language proficiency, Bresnahan and Kim turned to other areas to provide a more comprehensive view of the Oh No! syndrome.

Bresnahan and Kim (1991a, 1991b) attempted to identify personality characteristics of undergraduates to explain the Oh No! syndrome. In their first study, Bresnahan and Kim (1991a) found a significant relationship between undergraduates' level of authoritarianism (measured using Altemeyer's Right-Wing Authoritarianism Scale) and their receptivity to foreign TAs. Higher authoritarian students were less receptive to foreign TAs. These students also indicated that dealing with foreign TAs was unpleasant, and saw the discussion of foreign culture as wasting their time in class.

Bresnahan and Kim (1991b) also studied the relationship between three more individual traits (dogmatism, individualism, and communal orientation) and receptivity to foreign TAs. Dogmatism is the extent to which an individual is open-minded across situations. Individualism (Triandis et al. 1988) is the degree to which an individual is oriented towards his/her own goals (individualistic) compared to his/her group goals (collectivistic). Communal orientation (Thompson & DeHarpport, 1990) is the extent to which individuals attempt to resolve
conflict to the mutual benefit of both parties. Results indicated that focusing only on the language proficiency issue did not explain the Oh No! syndrome completely. Undergraduates who were highly dogmatic were less receptive to foreign TAs. In addition, there was a weak negative correlation between communal orientation and receptivity to foreign TAs.

So, undergraduates perceive the Oh No! syndrome as a problem with the language proficiency of foreign TAs. In addition, undergraduates who are highly dogmatic, highly authoritarian, individualistic, and have low communal orientation have a low receptivity to foreign TAs.

Parents play an important role in this interaction between undergraduates and foreign TAs. Parents provide tuition and boarding costs for most undergraduates. In addition, their tax dollars (in part) pay for the salaries of both professors and politicians. Therefore, it is not surprising when undergraduates and/or their parents offer an argument as an irate consumer: "I pay for this education and I have a right to expect teaching assistants who can speak English fluently. You cannot expect me to work harder to understand foreign accents." However, as Bresnahan and Kim (1991) note, "other than parental anecdotes about the misery of their kid's math class, systematic evidence about the attitudes of parents is rarely available" (p. 4). This clearly stresses the need for programmatic research in this area.
Reactions of foreign TAs

The unit of analysis to analyze the Oh No! syndrome is dyadic - the relationship between undergraduates and foreign TAs. While there is some research concerning the views of undergraduates about the Oh No! syndrome, it is very disturbing to note that there is limited research about the attitudes of foreign TAs in this situation. This is ironic as the onus for the Oh No! syndrome is often placed squarely on the shoulders of only the foreign TAs, expecting them to make all the changes to create an Oh Yes! situation (Rubin & Smith, 1990). In fact, it is fairly common to recommend that all foreign TAs go through more intensive language training to improve their speaking skills (Bailey et al., 1984).

However, there are other factors that contribute to this issue. Rittenberg (1992) stresses the need for individual departments and English language centers to have more stringent quality control measures. He explains that over the last few decades, there have been fewer American students (in percentage) joining and completing graduate school (especially in the natural sciences). At the same time, there has been a study increase in the number of foreign graduate students, predominantly from China, Taiwan, Korea, and India. Except for India, English is not taught in these countries until students reach high school. Thus, when students come to the U.S., while their ability to write is often fairly good, their speaking skills require significant improvement. Most of these students spend a term or
two improving their language skills in an English language center.

This is where the vicious cycle begins. Individual departments, with fewer and fewer American graduate students, clamor for foreign TAs to be cleared through English Language Centers quickly. The Center Staff, therefore, are not able to spend the required time with the students to improve their skills. To make matters worse, these students are then allowed to teach without any teacher training by the individual departments. Thus, there is a need for departments and English language centers to tighten up their quality control checks for allowing instructors to teach.

While it is appropriate to expect the foreign TAs to learn and speak English proficiently, the interaction between undergraduates and foreign TAs has certain unique characteristics which makes it difficult to expect only the foreign TAs to make all of the changes. Rubin and Smith (1990) have ably demonstrated that undergraduates "own" a part of this problem. They argue that to the extent undergraduates react stereotypically to foreign TAs independent of the foreign TAs language proficiency, undergraduates are responsible for the Oh No! problem. Rubin and Smith (1990), from their study, contend that no training can remove the accentedness of foreign TAs, and that a more useful route would be to train undergraduates to be more sensitive cross-culturally, and to improve their listening
skills.

**Summary** The analysis of viewpoints offered by some state governments, undergraduates and their parents, and the foreign TAs make it apparent that the Oh No! syndrome is a problem at many levels. For some of the state governments, undergraduates, and parents, it is purely a problem of rectifying the language deficiencies of foreign TAs. However, research indicates that undergraduates’ traits, such as dogmatism, individualism, authoritarianism, communal orientation, and their expectations based on the foreign TAs accentedness play a significant role in defining their attitudes towards foreign TAs. Further, Rubin and Smith (1990) suggest that both foreign TAs and undergraduates "own" this problem, and that undergraduates also need to be trained cross culturally to tackle the Oh No! issue. Finally, there is absolutely no indication of how foreign TAs feel about their role in the Oh No! syndrome.

This overview stresses the need for systematic research to identify the status of the Oh No! syndrome at many levels. The most useful approach would be to involve all the concerned parties (foreign TAs, undergraduates and their parents, university officials, and the state government), identifying their perception of the problem from a variety of perspectives, and then suggesting changes oriented towards specific individuals and groups.

To design intervention programs to change the Oh No!
Syndrome to an Oh Yes! situation, a three-pronged approach is proposed. This approach targets messages to three groups separately: change agent to undergraduates, change agent to foreign TAs, and change agent to foreign TAs and undergraduates together. This approach is offered as the unit of change is dyadic, generally one foreign TA to many undergraduates. While parents, individual departments, the English language center, and state governments play a significant role, with efficiency (and effectiveness) in mind, the actual participants in this drama, (foreign TAs and undergraduates) are targeted for change. In addition, these two groups have the ability to influence the other groups in the long run.

While there are any number of ways to address this issue, the concept of technology transfer is used to suggest intervention strategies to create an Oh Yes! situation. Here, the role of technology transfer (or knowledge transfer) is explicated.

The Role of Technology Transfer

Williams and Gibson (1990) note, "In a broad view, technology transfer reflects all or some components of the process of moving ideas from the research laboratory to the marketplace. In brief, technology transfer is the application of knowledge" (p.10). In the present case, technology transfer would involve communicating strategies and ideas offered by researchers about the Oh No! syndrome to the undergraduate
students and foreign TAs. This is an unique situation. Communication is generally the medium by which other technologies, for example, changes in computer chip technology are transferred from the laboratory to the market place. In this situation, however, the nature of communication is the technology to be transferred.

Williams and Gibson’s definition, while providing an useful framework, ignores the role of the user’s (undergraduates + foreign TAs in this case) perceptions of the technology’s utility. A more comprehensive definition of technology transfer is viewing it "as the communication of information put to use. Use is a relational concept comparing source and receiver perceptions of utility. Effectiveness is the degree of correspondence between source and receiver perceptions" (Alman et al. 1991). The key characteristics of this definition are used to explicate the Oh No! syndrome.

First, the nature of information is based on intervention strategies suggested by various researchers. Second, it is studied as a relational concept, identifying three dyads: 1) the change agent and undergraduates, 2) the change agent and foreign TAs, and 3) as the technology is being transferred to another dyad, viz., the undergraduate-foreign TA link, the third dyad would involve information being transferred from the change agent to the undergraduates-foreign TA link together. A change agent is a person or a group of people who have the task to diffusing
the innovation to the specified audience (Alman et al., 1991). Transfer strategies for each dyad will vary depending on the unique characteristics of each dyad.

Figure 1 identifies the three dyads, and the relationship between them. Third, the utility of interventions will be judged by comparing source and receiver's perception of utility.

Williams and Gibson (1990) note that successful technology transfer involves overcoming communication barriers created by interactions between people of different cultures with differing expectations. This is especially true in the present situation in which the foreign TAs and undergraduates hold incongruent motives and expectations due to their differing backgrounds. In an attempt to make a successful technology transfer with these communication barriers, Rogers and Bhowmik's (1970) propositional inventory on homophily-heterophily is used as a benchmark.

First, a brief description of Rogers and Bhowmik's inventory is offered. Second, applications of relevant propositions are made to change the Oh No! syndrome to an Oh! Yes situation, varying the strategies for each of the three dyads.

Rogers and Bhowmik's Propositional Inventory

Rogers and Bhowmik's (1970) propositional inventory applies well in this situation. First, all the propositions deal with
dyadic communication, which is apposite for changing the Oh No! to an Oh Yes! situation. Second, their propositions explicate situations where the receiver and the source are homophilous and/or heterophilous. "Homophily refers to the degree to which pairs of individuals who interact are similar with respect with respect to certain attributes, such as beliefs, values, education, social status, etc. Heterophily is the degree to which pairs of individuals who interact are different with respect to certain attributes" (Rogers and Bhowmik, 1970, p. 526). The relationships between the foreign TAs and undergraduates are generally heterophilous as both of them come from different cultures, with differing values and lifestyles. To make the relationship between foreign TAs and undergraduates more fruitful, there has to be a greater degree of homophily between them. In addition, this change cannot occur on the part of foreign TAs alone, but should be contributed by both foreign TAs and undergraduates. Rogers and Bhowmik's (1970) fourth proposition is applied to attain this latter objective.

Proposition IV reads: "For maximum communication effectiveness, a source and receiver should be homophilous on certain variables and heterophilous on some variables relevant to the situation" (Rogers and Bhowmik, 1970, p. 532). Specifically, they note that maximum communication effectiveness is possible when the source and receiver are homophilous on all relevant aspects, except for their competence and knowledge about the
promoted innovation. In other words, in each of the three dyads identified in this paper, the change agent should be similar with the receivers (foreign TAs, undergraduates, or foreign TAs + undergraduates) on all aspects except expertise about the nature of information being transferred. For each dyad, Proposition IV is explicated by (1) identifying the profile of the change agent, and explaining the nature of relationship (heterophily-homophily) with the receivers, (2) suggesting a set of messages to fulfill specific goals, and (3) recognizing potential problems and significant issues with each approach.

**Dyad One: Change Agent to Undergraduates** To satisfy Proposition IV and maximize communication effectiveness, the change agent should be another undergraduate student. This would make him/her homophilous with other undergraduates, the receivers. Given that the strength of the negative attitudes towards foreign TAs is high, it is realistic to expect changes to occur slowly. Thus, a reasonable goal is to make undergraduates more tolerant of foreign TAs, and agree to give them a chance by creating an environment that would make the interaction more positive. Change agents with the ideal technical competence would probably be undergraduate juniors and/or seniors who have had predominantly positive interactions with foreign TAs in class. These change agents could achieve specified goals by imparting their positive experiences to other undergraduates. In addition, the change agents could suggest ways to deal with
foreign TAs inside and outside the classroom to turn the interaction into a fun and learning experience.

Given the exploratory nature of this paper, several problems are important to discuss. Some of these are logistic issues, like: 1) identifying, recruiting, and training change agents, and 2) obtaining access to undergraduates across campuses. Ideally, a large number of change agents would meet groups of undergraduates in classes, residence halls, or similar locations. This would be a "rich media" where change agents and receivers have face-to-face interaction, facilitating effective technology transfer (Alman et al. 1991).

There are conceptual issues of comparable significance. First, care needs to be taken in constructing messages that change agents use. Several persuasion researchers (e.g. Petty & Cacioppo, 1979; Petty, Cacioppo, & Schumann, 1983) have suggested the strong relationship between argument quality and elaboration of messages. Specifically, individuals who have high involvement with an issue (like undergraduates in the Oh No! Syndrome) will be more influenced by argument quality than individuals in low involvement conditions. As O'Keefe (1990) notes, "As involvement increases, counterattitudinal messages with strong arguments should be more effective, while those with weak arguments should become less effective" (p. 105). Second, while constructing these messages, the input of the users (undergraduates and foreign TAs) is absolutely essential. Leonard-Barton (1990)
offers two reasons for user involvement in designing the technology that are particularly relevant in this situation: "1) acquiring knowledge from the user/receiver in the development process so as to create value, that is, relative advantage over previous practices, and to ensure usability; and 2) attaining user "buy-in" - that is, user acceptance of the innovation and commitment to use it because, as one developer noted, involvement improves acceptance" (p. 49). In addition, this paper evaluates technology transfer by comparing source and receiver perceptions of utility. This evaluation is likely to be more favorable when the user/receiver is involved in the design of the technology.

**Dyad Two: Change Agent to Foreign TAs**

Foreign TAs come from a variety of countries, each with their own values and lifestyles. Thus, for maximum communication effectiveness, one or two foreign TAs from each ethnic group are chosen as change agents. Only foreign TAs who have had positive experiences with their classes should be chosen. In this way, the change agents and foreign TAs are similar on all aspects except the area of technical competence, that teaching undergraduates can be both an enjoyable and enriching experience. Messages from the change agents to the foreign TAs will focus on how to optimize the teaching experience. Change agents could recommend useful classroom techniques to improve interactions with undergraduates. For example, when foreign TAs are open, flexible, and ready to accept their own mistakes, undergraduates are more willing to
help improve the classroom experience (Rittenberg, 1992).

One key problem in this dyad is the lack of primary research on foreign TAs' views and attitudes toward the Oh No! syndrome. It would be useful to analyze their levels of dogmatism, authoritarianism, and communal orientation to understand their contribution to this issue. Knowledge of teacher-student relationships in their respective countries would also be useful in understanding their expectations of American students in the classroom. In addition, there must be a continuous monitoring of all foreign TAs by either the English language center and/or individual departments to further encourage improved English proficiency.

Another key problem is the difficulty in finding foreign TAs who can act as change agents. For countries that are well-represented (e.g. China, Taiwan, India, etc.), this may not be a problem. However, for countries that are not well-represented (e.g. Singapore, Malaysia, etc.), it may be difficult to find foreign TAs who can act as change agents. As the number of foreign TAs from these countries are small, it may be worthwhile to group foreign TAs from a few countries into a larger manageable group, assuring compatibility.

Dyad Three: Undergraduates and Foreign TAs This is the interactional dyad where the Oh No! needs to change to an Oh Yes! While the first two dyads aim to reach the undergraduates and foreign TAs separately, this dyadic strategy attempts to reach
them simultaneously and importantly, relationally. Since the negative reactions from undergraduates occur within the classroom, intervention strategies in this dyad are aimed outside the classroom. As undergraduates and foreign TAs rarely get a chance to interact outside of the classroom, this strategy attempts to induce them to learn about each other's cultures in non-academic informal settings. Cialdini (1988) illustrates the persuasive powers of "liking." Cialdini notes that it is more difficult to say "no" to someone we like. From Tupperware parties ("my friend asked me to come") to encyclopedia salesmen ("your friend John suggested your name"), liking has been effectively used. Thus, while learning about each other’s cultures, undergraduates and foreign TAs can get to know each other informally, and this increased self-disclosure may increase fondness for one another. This increased liking for each other, in turn, is one way to improve relationships within the classroom. For example, the development of affect may lead undergraduates to be more tolerant of foreign TAs, and give foreign TAs a chance to improve their language and teaching skills.

For this dyad, the change agent is more a catalyst, providing the environment within which undergraduates and foreign TAs interact informally. Thus, programs like Internationalizing Student Life and Strategies to Advance the Internationalization of Learning on Michigan State University campus are excellent.
avenues to act as change agents. These associations are made up of students from about 40 different countries, and a comparable number of students from the United States. For example, a Global Awareness Day was held recently where many countries had stalls displaying artifacts from their own countries, and a number of dance and music programs were held. In the same vein, programs like "Adopt a foreign TA" in various residence halls is being considered seriously for implementation on Michigan State University campus. The foreign TA gets to spend a week in one of the residence halls for a week. The undergraduates learn about the foreign TA’s culture, and see him as an individual like themselves. In turn, foreign TAs learn how undergraduates live, and some of their views. These strategies aim to increase empathy and liking for each other.

This section suggested three dyads to change the Oh No! Syndrome to an Oh Yes! Situation. A logical step after this is to use a relevant set of criteria to design and evaluate the intervention strategies. The strategies suggested here are adapted from the attributes of innovations identified by Rogers (1983). Other relevant criteria are also considered.

Criteria to Design and Evaluate Intervention Strategies

Rogers (1983) notes that most diffusion researchers have spent a lot of effort in identifying the characteristics of different adopters. As he stresses, it is equally important to understand the attributes of the innovation itself. However, it
is fairly common for researchers to study the source's perception of the attributes of an innovation, and ignore the user's perception of the same. Given the definition of technology transfer used in this study, the attributes suggested in this section are to be judged by comparing the source and receiver's perception of the innovation. The innovation in this case is the use of specific strategies to the three dyads to move from an Oh No! to an Oh Yes! reaction to foreign TAs.

Relative Advantage

Rogers (1983) defines relative advantage as the "degree to which an innovation is better than the idea it supersedes" (p. 213). The final relative advantage aimed for is to make the reactions of the undergraduates towards foreign TAs more positive, or to make the interactions between these parties more positive. To achieve this, it would be important to stress the relative advantage of foreign TA-undergrad interactions over other forms of interactions, viz., American TA-undergraduate interaction, American professor-undergrad interactions, and the option of not taking the class at all. The three dyads identified in this paper try to achieve this objective by indicating the benefits of having foreign TAs as instructors in a class room. For example, a foreign TA instructor has the ability to improve global awareness by offering examples from her/his own culture.
Compatibility

Rogers (1983) defines compatibility as the "degree to which an innovation is perceived as consistent with the existing values, past experiences, and needs of potential adopters" (p. 223). This may be the most difficult criteria to satisfy for undergraduates, and a little less difficult for foreign TAs. For undergraduates, with strong capitalistic beliefs based on individualism, consumerism, and parochialism, they would expect the foreign TAs to make all the changes. The foreign TAs, on the other hand, by deciding to come to the U.S., open themselves to absorbing some of the U.S. culture. However, this does not suggest that all foreign TAs get completely "Americanized." Depending on the foreign TAs cultural background, and other personality characteristics like dogmatism and communal orientation, they accept the American values and beliefs with some variance. For this criteria to be satisfied, it is clear that both foreign TAs and undergraduates have to give up a part of their values to reach a compatible middle ground.

Complexity

Complexity is the "degree to which an innovation is perceived as relatively difficult to understand and use" (Rogers, 1983, p. 230). This criteria is fairly easy to satisfy for foreign TAs who see the relative advantages of multiculturalism more clearly than undergraduates. The undergraduates, on the other hand, see the advantages of multiculturalism less directly,
and find it more difficult to accept. Therefore, it would be necessary to promote the innovation in a manner that is both easy to follow, and where the undergraduates can see the relative advantage.

**Trialability**

Trialability is the "degree to which an innovation may be experimented with on a limited basis" (Rogers, 1983, p. 231). This, along with compatibility, is one of the most important criteria. The strategies for the three dyads are suggested keeping trialability in mind. These are the initial steps to achieve the Oh Yes! reaction in the long run. Thus, at this stage, if this criteria is not satisfied, the strategies for each dyad need to be modified or scrapped, and/or make overall design changes.

In addition, Leonard-Barton's (1988) criteria of modularization appears relevant: "the division of technology into stages or segments, each of which delivers some benefits upon implementation, even if no further segments are adopted" (p. 613). If either foreign TAs and/or undergraduates are not exposed to intervention programs introduced later, exposure to each level provides a certain amount of information and sensitivity to the issue. Thus, even if they drop out, they have a certain information level that is better than nothing.

**Observability**

Observability is the "degree to which the results of an
innovation are visible to others" (Rogers, 1983, p. 232). The strategies discussed in the present paper depend on this criteria being met successfully. With the paucity of economic resources, only a sample of undergraduates and foreign TAs can be reached. These undergraduates and foreign TAs who are exposed to these strategies may become opinion leaders and change agents when they talk to other foreign TAs and undergraduates. Thus, adoption of these strategies depend to some extent on improved observability.

Concluding Remarks
This paper is an exploratory effort in understanding the negative reactions of undergraduates toward foreign teaching assistants from a technology transfer perspective. This paper suggests that there are many people who contribute to the Oh No! syndrome, and have different perceptions of the problem. Undergraduates, their parents, and some state governments see it primarily as a language proficiency issue where the foreign teaching assistants' improvement in speaking skills will create the Oh Yes! situation. However, as Rubin and Smith (1990), and the present author note, it requires the involvement of all parties who "own" this problem to make the change.

As each of the parties see the problem differently, an interactional approach suggested by Rogers and Bhowmik (1970) is used where three dyads were identified as targets of different intervention strategies. The three dyads were: 1) undergraduate change agents interacting with undergraduates, 2) foreign TAs as
change agents interacting with foreign TAs, and 3) undergraduates and foreign TAs interacting with other foreign TAs and undergraduates. Rationale for strategies suggested were offered for each of the dyads. Finally, a variety of criteria were suggested to design and evaluate these strategies.

There are some specific advantages in using the concept of technology transfer (or knowledge transfer) to tackle this issue. First, it takes into consideration the varying perceptions of the involved parties. Second, strategies are offered at the dyadic level understanding that it is at least a two-way process. By adapting Rogers' (1983) criteria, the source and receivers' perceptions of utility are taken into consideration. While this approach using technology transfer includes all parties who "own" this issue, there are several questions to be answered, offering avenues for future research. Based on the rationale provided in this paper, specific messages and strategies have to be designed and evaluated for each of the three dyads. These messages have to be pre-tested to determine if the specific effects can be achieved.

In all three dyads, the change agents interact with their respective groups outside the classroom. There is an implicit assumption that the messages offered by the change agents will modify the attitudes of undergraduates to like foreign TAs in the classroom. However, O'Keefe (1990) argues that the relationship between attitudes and behaviors is weak, and moderated by the
relevance of attitude to behavior, the manner in which the behavior is formed (experientially or indirectly), and personality variables like self-monitoring and dogmatism. There is therefore a need to identify these moderating variables for the undergraduates, foreign TAs, and university administrators to strengthen the attitude-behavior link.

This paper only gets at the tip of the iceberg in understanding the interaction between undergraduates and foreign TAs. Researchers need to draw on a variety of theoretical perspectives (for example, covering law, systems, interpretive, etc.,) and methodologies (both quantitative and qualitative) to analyze the Oh No! Syndrome, and suggest directions to create an Oh Yes! Syndrome. Given the number of participants involved, and that the problem works at many levels, it requires the arduous effort of scholars from a variety of disciplines.
References


The State News.


Appendix

Michigan Senate Bill No. 518

A bill to provide that certain instructors be orally proficient in the English language; and to prescribe the powers and duties of certain public officials.

THE PEOPLE OF THE STATE OF MICHIGAN ENACT:

(a) "Governing board" means a board of regents, board of trustees, board of governors, board of control, or other governing body of an institution of higher education.

(b) "Institution of higher education" or "Institution" means a college or university listed in section 4 of article VIII of the state constitution of 1963 or a community college or junior college established pursuant to section 7 article VIII of the state constitution of 1963.

(c) "Instructor" means a teaching assistant except those teaching a foreign language who provides classroom instruction to students enrolled full-time or part-time in an institution of higher education. Instructor does not include a visiting scholar to the institution.

Section 2. The governing board of an institution of higher education shall ensure that, not later than the commencement of the 1988-89 academic year, each instructor who is not orally proficient in the English language attains such proficiency before providing classroom instruction to students.
Figure Caption

Figure 1. A conceptual framework using technology transfer (or knowledge transfer) to suggest intervention strategies directed at three different dyads.
Dyad one

Theoretical rationale

Change agents

Dyad three

Foreign TAs

Undergraduates

University officials

Parents

Dyad two