論文(査読論文)

# Garden Variety Double Binds: The Paradoxical Challenges of Oral Language Education for IT Students in Japan

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Abstract: Gregory Bateson used the term "double bind" to refer to a paradoxical dilemma in a communication context where an invested member must choose to obey one order only to violate another - and vice versa. The context makes either response wrong; there is no exit; and no way to discuss it. Gregory Bateson demonstrated in his work with creativity, play, and learning that double binds also provide positive inducement to improvise and adapt. With the increasing technical complexity of life support infrastructure systems, IT students need improvisation and adaptation. Because of its international utility, a basic competence in the English language is also required. English conversation is a premiere context for improvisation. While Bateson's primary work with double bind concerned schizophrenia, "garden variety", or daily-life, double binds occur everywhere. Improvisation in the language class is structurally the same as improvisation in an emergency, but less dangerous. In this study we probe pressure points in communicative contexts where double binds might have positive rather than negative consequences, enabling students to use daily life situations to prepare for more active roles when they join the work force.

Keywords: double bind, IT English, analog information

# 1 Introduction

# 1.1 My Own Experience of The Double Bind

After twenty-five years of teaching English<sup>1</sup> in Japan I have finally accepted that the dialectic tension between the real and the ideal is inevitable and necessary. I've experienced my own double binds in a paradox-generating environment where cultural norms, institutional norms, and educational ideals compete within the individual subject, i.e. me. Here is an example from the United States of a double bind in the

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academy: for the teacher, students are most important. For the researcher, the research is most important. A university teacher has just this double role, such that one honors the demands of the one duty only at the expense of the other. The total ethical and political situation complicates the institutional game. A good player gets points by knowing how to play; others get locked in double binds. Here is another wellknown American paradox: "Publish or perish"! If you publish, you will be rewarded with fewer classes. If you do not publish, you must teach more classes, so that you have less time to publish. Double binds generated in the Japanese academy show marked differences in dynamic and there are different power markers, but the types of double binds generated are similar in their force.

The relevant point is that double binds are necessarily generated in any communicative context whatsoever. Double binds are generated when stakeholders invested in a system face conflicts which emerge in relationships with those whose power enables them to frame the situation. According to Gregory Bateson, the real question is whether we will be able to discuss the double binds or not. On the bright side, there is real inducement to resolve double binds. Higher order learning and personal paradigm shifts await on the other side of the meta-communicative act of discussing double binds.

## 1.2 IT and English

This paper begins with the practical ideal of the English education of students in Informatics and Engineering. We suggest that our students will take their place in a constantly evolving professional world. This is also a world in which huge infrastructure catastrophes are possible. Because many of our students will join transnational corporations and work with international teams, they will need English, "people skills", and intercultural competence. An international standard of English and practice is required.

We will then look at the actual situation "on the ground" in the language classroom. We are not there yet; the students are not ready to take their place in international settings where they must first be productive, but may also be called upon to make urgent decisions. The gap between where we are and where we want to be creates double binds for both students and teachers, even in a routine language class.

We will use Bateson et al.'s<sup>2</sup> basic concept of double bind as an organizing principle to discuss how the language class itself can be used to create a context for improvisation and adaptation. As students become aware of the paradoxes generated in communicative contexts, rudimentary and provisional techniques appear which may help students navigate awkward situations. They may even achieve a personal paradigm shift, and so be better prepared to enter adulthood.

The challenge is: How can we get from garden variety double binds in ordinary English classes for students of technology trying to improvise a simple English conversation, to the global problems facing all persons working with IT in the post-industrial technological world? Bateson would suggest that we begin by talking about and describing the problems. For the purpose of this paper, we shall reverse the process. Starting with the global, we will move to the local.

Change is huge and inevitable, as is the magnitude of crises possible in a world whose populations greatly rely on the technological infrastructure for water, energy, and light. Trained, versatile IT personnel must be prepared for the unexpected. This means that they must be able to perform beyond the duty of simply doing as they are told to grasping what the situation requires.

Japan will continue to provide players on technical stages, both at home and abroad, as long as it retains a leadership role in the development of technology. Many students of Engineering and Informatics will regularly use documentation in English and work with international persons as a matter of course. The English classes geared for these students could move students beyond routine situations and readings and provide challenges and a conceptual framework which would give them both an eye to assess a total situation and a practical grounding in the general language of procedure, structure, and system dynamics, i.e. tools for use in a world requiring flexibility.

## 1.3 The True Test: Catastrophe

Preparedness is put to the test when something unexpected happens; that is when we find out, for example, how good our earthquake preparations are. A small fire in the kitchen can turn into a blaze. A sequence of connected system failures can cause a nuclear power station to go ballistic. Readiness at the present and domestic level and spontaneous appropriate response at home might make all the difference to the same person faced with a crisis at work. So let us talk about problems of system breakdown and failure of the human element in technical systems in the English language class. If you need to talk about it in Japanese, you may also need to talk (and think) about it in English, possibly in conditions not propitious to calm rational thought. You might find yourself in an emergency situation.

#### **Example 1: The Unforeseen Contingency**

Consider the following scenario: an engineering student in electronics has trained well, gotten good grades, and submitted a good graduation project. He has gotten a good job and been trained for it. He might then feel that he can now go into a relatively homeostatic loop, doing his job, establishing routines, and learning enough to move to a position of more responsibility. Then one day, a sequence of interconnected system failures creates a crisis - and he is in charge on the day that it happens. He believed that his training and his general knowledge of the system qualified him for his job, but an unforeseen situation puts this facile belief to the test. There is no time, however, to worry about that. What does he do?

Nearly a hundred years ago John Dewey wrote the following words:

"But even the most reliable beliefs of this type fail when they confront the novel. Since they rest upon past uniformities, they are useless when further experience departs in any considerable measure from ancient incident and wonted precedent. (Dewey 1910, 148.)

John Dewey's words are as true now, at this moment in the history of human reliance on energy technology, as they were nearly a hundred years ago. We have detailed real life, multi-layered narratives to study which show the truth of Dewey's words. Notable examples of novel situations include such near disasters as Apollo 13 (4.11.1970), the Three Mile Island "accident" (3.28.1979), and totally unexpected disasters such as the Great Hanshin Earthquake (1.17.1995). Such accidents have engendered the world of Emergency Response Preparedness (ERP), a vast trans-disciplinary academic and professional world which documents and analyzes these disasters promptly and in detail. For example, in the US, a Presidential Commission is appointed for each incident. Engineers, sociologists, operations analysts, and many other experts examine what can be reconstructed from accounts of participants, records, and detailed on-site detective work. Larry Hirschhorn, Wharton Center for Applied Research, was a researcher involved in the Commission's analysis of the near nuclear melt-down at Three Mile Island. With a cybernetic twist, his words mime the words of John Dewey, cited above<sup>3</sup>:

One clear conclusion from the accident is that "insufficient rote training produced workers who could not adapt to the demands of an emergency which the system did not anticipate" (Hirschhorn 1984, 44).

"(...) workers in cybernated systems cannot function as passive machine tenders, looking to instruction manuals for the appropriate response. This suggests an entirely new definition of work in a post-industrial setting. Skills can no longer be defined in terms of a particular set of actions, but as a general ability to understand how a system functions and to think flexibly in trying to solve problems. (Hirschhorn 1984, 45)

The world<sup>4</sup> is complex and getting more complex. To respond flexibly to various demands requires an inner capacity, an eye for essentials, and an intuitive grasp of the requirements of the moment. These abilities can be acquired by exposure to situations that call them into play. Interestingly play, as in games and sports, as well as the school buildings and grounds at the university, provide spaces where these abilities can really be developed. It is obviously preferable to get some basic grounding in ERP at school under the rubric of Event Planning or Project Management, in a quasi-safe academic environment, and thereby internalize some kind of experiential template that recognizes a situation that requires prompt improvisation and accommodates response to that situation.

## 1.3.a The Crises of Daily Life

Interestingly, as managers, mothers, planners, elementary school teachers, and ordinary citizens on the street all know, daily life is filled with garden-variety crises. Things get lost or perhaps break down at the wrong time; there are no batteries; there is an unexpected object on the railroad tracks, delaying all trains; the child has a high fever but the mother has to go to work. Even in the best-regulated society, sudden gaps appear, requiring decisive intervention.

#### **Example 2: The Communication Failure**

Here is a local example from the 2005 Summer Communication Project5. The staff manager believed that the Reception post had been filled. The executive manager knew that it had not. Someone had volunteered to be a "greeter", to stand at the door and say, "Welcome". The executive manager knew that she had properly transferred the information about the extra volunteer. The staff manager, however, understood that there would be someone at reception, and so he took it off his "still to find" list. On the day of the event, there was no reception at all. The first guest was enrolled to do the job. Within this small and even ordinary misunderstanding (two people operating from two frames) is a perfect diagram of the makings of a disaster. [To avoid this error, a written list of jobs, filled or vacant, should be in the hands of concerned managers, and continually updated.]

A number of taboos, some academic, preclude regarding the ordinary experiences of one's own life as having structural and informational content of worth. An epiphany awaits students who understand that the problems they have planning, organizing and making a food item in a booth at the Festival are structurally identical to challenges of Project Management, which they will meet on the job. Is this something that we can talk about in class?

## 1.4 How Disciplines are Connected

I offer one last take on the global problem before we move on to double bind situations in the classroom. The fact is that the aforementioned specialists have to be able to talk to each other and cooperate. The Presidential Commission and the ERP mentioned previously are cases in point, for they are composed of highly ranked politicians, members of the American Red Cross, the national board of engineers, and the National Guard among others. Projects and initiatives in the UN, UNESCO, or the WHO may also involve biologists, doctors, urban developers, GST specialists, etc., who must cooperate to make effective decisions.

Let us turn from the horrendous for a moment to the world of Sports! Here is a brief word from Gottfried J. Mayer-Kress, a kinesiologist from Pennsylvania State University:

"I am certainly not an expert in sports coaching but it seems to me that different scientific disciplines contribute to specific aspects related to sports coaching science: from physiology and bio-mechanics to psychology and sociology to name just a few." (Mayer-Kress 2001, sec.3)

In his keynote presentation at the 2001 International Sports Coaching Symposium of the Chinese Taipei University Sports Federation, Dr. Mayer-Kress went on to say:

"In the last quarter of the 20th century with the help of increasingly powerful computers, however, it was recognized that there is indeed a solid basis for a scientific approach (sic)[to studying] living, learning, and evolving systems. The key discovery was the existence of "universal properties" of non-linear, complex systems. That means we can observe classes of behavior and transitions between those types of behavior that do not depend on the details of the system that is studied. That has a surprising consequence that the same model equations can be applied to a large number of complex systems that came from diverse disciplines such as marine-biology and economics." (Mayer-Kress 2001, sec.3)

If there were an inaccuracy in Mayer-Kress's speech, it would be to think that this discovery of universal properties happened only in the last quarter of the 20<sup>th</sup> century. Ludwig von Bertalanffy, founder of General System Theory, thought Nicholas of Cusa laid the foundations in the 15<sup>th</sup> c. Bertalanffy was writing about universal principles in

living sciences as early as 1928. A summary of his position from *General System Theory* states:

"Not only are general aspects and viewpoints alike in different sciences; frequently we find formally identical or isomorphic laws in different fields. In many cases, isomorphic laws hold for certain classes or subclasses of "systems", irrespective of the nature of the entities involved. There appear to exist general system laws which apply to any system of a certain type, irrespective of the particular properties of the system and of the elements involved." (Bertalanffy 1968, 37)

Specialists from different fields must cooperate to advance knowledge and to manage human infrastructure needs. The fields of public health and medicine are two outstanding examples, requiring the cooperation of engineers in nanotechnology and computer imaging, sociologists, and physicians or medical experts. So, the question arises: when should we start to teach the interconnectedness of life? Consider the following conversation from *Island* by Aldous Huxley, in which the Principal of the school responds to a question regarding curriculum:

"How early do you start your science teaching?"

"We start it at the same time as we start multiplication and division. First lessons in ecology."

"Ecology? Isn't that a bit complicated?"

"That's precisely the reason why we begin with it. Never give children a chance of imagining that anything exists in isolation. Make it plain from the very first that all living is relationship." (Huxley 1962, 243)

The fundamental concepts are not beyond our reach because "reality" is complete before the special disciplines are employed for various purposes to define and work with it. Problems arise as we create the language to describe a special, narrow slice of nature, from atoms and molecules to populations and continental drift. Specialized foci and language close out non-specialists. More crucially, they also serve to segment thinking about problem-solving. Many double binds are caused by conflicting descriptions from specialists. Obviously, we need the specialized disciplines to advance knowledge. The specialties need another kind of language, however, in order to cooperate. This language is not a "natural" language per se, though it points to natural processes. The language is a brief and functional sequence of terms connected to the structures of systems, their processes, patterns, and procedures. This language could be called "whole system thinking", and it is a meta-language, a language about what is going on.

Unfortunately, it has often been noted that any such system of language promptly becomes too specialized. The academic world is littered with the language of Systems, Complexity, and Inter-disciplinarity. The nobility of the purpose for constructing such language is often thwarted by the extreme time and energy required for learning it.

Meanwhile, ordinary people with ordinary experiences go about the business of learning about the systems of the world without that elevated language, but a more ordinary kind of language - the language of experience. Such language is primarily conceptual, elementary, and interchangeable. There isn't just one right word for a system concept. There is only beginning talk. That is enough to start with.

# 1.4.a Systems Theory for Beginners.

In a routine conversation practice in an ordinary oral English class it takes very few exchanges before the two speakers are discussing something for which they certainly know the words in Japanese, but have no idea what English words are required. The refinement process of a chat ensures that the two are actually seeking common ground. That very quest will take them into a special dyadic world quite different from the frame of platitudes where they thought they were safely grounded in the known.

Something quite similar happens with any systems discussion. It gets specialized very quickly. We start

out with a few concepts like levels, perspectives, the whole and components, input, output, and throughput, and the environment. The trouble starts when we start applying these terms to the description (mapping) of some specific system - like the cash registers in a certain grocery store or the set-up of a mechanic's auto repair shop. Within a few short turns we are deeply involved in a fully contextualized world that, in some sense, we don't have any right to be examining with this kind of minute attention. New information brings alteration (iteration) to the map, and we see the relationships between the levels, emergent properties, not only from the system as a whole, but as side-effects of certain level relations. To demonstrate the process, I would have to give an example to show you how it works, like a detailed description of the traffic flow problem around the south exit of the train station.

The problem is that when I do give this detailed description, students no longer understand that we are using traffic "as an example". It is easier to think that the content of the example is the topic; that I am a traffic specialist. The same thing will happen when someone reads this paper and thinks it to be about language education. Language education is one of the ordinary contexts in which double binds may be found. Is it a double bind to categorize an "an example" as content? It is paradoxical, at any rate.

The more detail with which we study the example, the less it is understood to be an example. The more abstractly we present the basic concepts, the less the listener is willing to believe that they can understand them. The relationship between the abstract and the concrete, then, creates a primary double bind.

## 2. Double Bind

Double bind is the description of a life situation, which presents a choice which must be made, to a stakeholder who must choose correctly between alternatives that both appear fatal. The basic structure of the fatal choice was encoded at least as long ago as Homer's Odyssey when *Odysseus* had to navigate his ship between Scylla and Charybdis; veering too close to either would spell disaster. "Between Scylla and Charybdis" became a metaphor for what later became known as the double bind. The dilemma has also been described as "being caught between a rock and a hard place". Gregory Bateson added levels of logical-typing and specificity of context to the description of the paradox. By the way, double binds are included as a subset in the category of paradox.

## 2.1 The Dark Side of Double Bind

Gregory Bateson and a group of Palo Alto researchers presented the double bind theory in the sixties in a seminal article entitled, "Toward a Theory of Schizophrenia" (Bateson 1972). Using the theory of logical types and hierarchical orders of abstraction in the organization of human communication, Bateson and fellow researchers proposed a theory of schizophrenia based on communication context and relationship rather than heredity. Bateson et al.'s theory was building on earlier work involving ambiguities in communication that he had discovered watching animals play. He recorded this in an equally seminal document, "A Theory of Play and Fantasy" (Bateson 1972) which inspired Erving Goffman's Frame Analysis. Animals KNOW when they are in play mode, even though their acts specifically replicate the acts of fighting, defiance, and so on.

In contrast to a play situation, a double bind presents a paradoxical decision point in which at least one of the communicants is faced with two choices that both seem fraught with danger because of irreconcilable stresses in the communication system. There are many modes (or frames) which make it possible for two people to be in precisely the same room with the same information, yet fail to communicate because their frames do not correspond. The one with the greater power can make the other wrong. Gregory Bateson's work with double bind describes a particularly lethal case of this kind of "misunderstanding", an environment which potentially generates schizophrenia. In this environment, a person with a great deal of power in a child's life tangles him in dire and stressful dramas of ambiguity.

Bateson defined this toxic situation as follows:

- 'When the individual is involved in an intense relationship; that is, a relationship in which he feels it is vitally important that he discriminate accurately what sort of message is being communicated so that he may respond appropriately.
- And, the individual is caught in a situation in which the other person in the relationship is expressing two orders of message and one of these denies the other.
- And, the individual is unable to comment on the messages being expressed to correct his discrimination of what order of message to respond to, i.e., he cannot make a meta-communicative statement. (Bateson 1972, 208)

The meta-communicative statement is a lifeline offered by Bateson. If we could make meta-communicative statements, which clarify a context, as well as meta-linguistic statements, which clarify the meaning of utterances, there would be uncertainty reduction in the process of communication. Ambiguities, if not resolved, could at least be recognized and described. One could hope to proceed, not threatened by the imminent collapse of a relationship. As is made clear in Bateson's definition, the existence of a psychically charged relationship is central to the definition.

By the way, most Japanese students in my English classes are not comfortable with making meta-communicative statements to clarify the instructor's requests or assignments. They cannot talk back, but many resort to various subterfuges of escape such as going to sleep, giving attention to something else (perhaps homework for another class), or most disturbing, sitting in miserable silence with head hanging.

## 2.2 The Light Side of Double Bind

In the same article, Bateson turns for a moment to Zen Buddhism (208):

"In the Eastern religion, Zen Buddhism, the goal is to achieve enlightenment. The Zen Master attempts to bring about enlightenment in his pupil in various ways. One of the things he does is to hold a stick over the pupil's head and say fiercely, "If you say this stick is real, I will strike you with it. If you say this stick is not real, I will strike you with it. If you don't say anything, I will strike you with it."

The difference between the Zen pupil and the schizophrenic is that the Zen pupil has embraced the quest, chosen the teacher, and invested the relationship with that psychic intensity required. The schizophrenic is rather disoriented and distressed, because he has not chosen the relationship; he was probably born into the vital (and toxic) relationship. Other relationships characterized by a power imbalance can have a similar toxic stress: a teacher, a persistent bully, or someone who holds the victim prisoner.

From Bateson's example of the Zen master it can be seen that double bind may be quite useful and a positive thing in achieving a higher order integration of the self. Indeed, as Yrjö Engeström [1987 Table 3:3] believes, double binds provide the springboards and challenges, which lead the student to new expansive learning. Teachers are among those who might receive authority to urge a student to consider his double binds and, not so much resolve them, as to understand how they have arisen, and use them to navigate a communicative context with mastery rather than bewilderment.

In a story cited by Bateson concerning the training of a dolphin, the trainers were training for creativity, i.e. for new behaviors. To obtain results, they could not reward the dolphin for reproducing past behaviors; the dolphin had to do something new to get a reward. The dolphin became distressed, because when she did not receive a reward, she felt in the wrong. She was experiencing a stressful double bind and was still bewildered. At a certain point, however, she exhibited great excitement in the holding tank and proceeded to demonstrate several new tricks, some never seen before in her species. (Bateson, 1972, 277)

Yrjö Engeström<sup>6</sup>, in "Chapter Three: The Zone of Proximal Development as the Basic Category of Expansive Research" of his book *Learning By Expanding: An Activity - Theoretical Approach to Developmental Research*, used Bateson's dolphin first, then turned to Mark Twain's *Huckleberry Finn* for detailed analysis of positive learning triggered by a double bind situation. Then he asked:

"Can the teacher intentionally activate a double bind? Obviously this is possible, provided that we stick to the concrete-historical, analyzable character of double binds. The prerequisite is that the teacher works his way from the inside of the activity to be developed. This means that the teacher takes as his point of departure the double nature and inner contradictions of the leading activity of his pupils. He works out the zone of proximal development of this activity, first analytically and historically, then as a hypothesis, and finally in the form of practical tasks. The teacher acts as the devil's advocate, confronting the learners with the contradictions of their own vital activity in a bare form." (Engeström, 1987, 140)

Engeström manages to make the process sound like a matter of course. I have to pass over lightly the fact that few of my students enjoy confrontation, even of the mild conversational sort. He also does not quite provide a syllabus, or even a specific method, for making use of the many, many double binds that occur in any of my English language classes on any day, most particularly in the section I term "conversation practice", since one of the crucial features of conversation is improvisation. Therefore, let us move on to the garden-variety occurrences of double bind and see where that takes us.

### 2.1 Garden Variety Double Bind

Films can give choice examples of communication dilemmas, which is one reason why many communication teachers use film clips to illustrate communication situations. In two "tour de force" performances, Joan Allen in *The Upside of Anger* (2005 dir. Mike Binder) and Mel Gibson in *Signs* (2002 dir. M. Night Shyamalan) demonstrated the inner feelings of a person caught in a double bind. In both situations, although not one word was spoken, each actor showed variously anger, self-discipline, remorse, concession, and a resolution of sorts. The mother had found her daughter in bed at home with an unattractive older man (*Anger*); the widower struggled to say something to the man responsible for his wife's death (*Signs*).

All of the double binds generated by such moments are connected to the presentation of the self. What kind of person do I want to be, or at least appear to be, as opposed to what I really feel? The authority of the self-conception is one relationship very difficult to be questioned or even acknowledged as a force, yet it is responsible for the generation of a continual stream of double binds.

On a lighter note, in 2007 in his regular act on "Entaa no Kamisama", Inui Hiroshi entertained us with his reflections on the choices between, say, answering the cell-phone or not answering the cell-phone. He concluded his simple song with guitar accompaniment singing "Freedom! Cell phone is freedom". The comedian spoke truth. The source of his insight was darker; the satiric vein showed how little freedom there was to be found in ordinary life. However, his songs show a path through. If those double binds are noticed and enjoyed, they may provide the springboard to a higher integration.

## 2.1.a. A Categorization Schema of Garden Variety Double Binds

I have made a provisional scale of garden variety double bind situations which have a similar structure to Bateson's psychotic form of double bind, lacking the psychic intensity of the central toxic relationship, while still causing the snared one to pass that which might be spoken in silence.

Initial Responses	Rationale
•"Let it pass."	It happens quickly, too quickly to comment.
•"It's not worth it" to comment."	If you comment, the attempt to explain complicates
	the situation.
TO GO TO A NEW LEVEL	You recognize that if you don't make it clear, the
• After 2 or 3 experiences, stop everything and com-	problem will keep coming back.
ment. "It's worth it!"	

#### I. When a Simple Ambiguity Occurs

II. When a Moderately Complex Situational Ambiguity Occurs

Initial Response	Rationale
•It feels like bad manners to say something.	"Maybe it will be resolved by itself"
TO GO TO A NEW LEVEL	"Better say something!" or things will get worse
• Even though it feels awkward and rude, say some-	and more complex.
thing.	

## III. In an Institutional/Intercultural Paradoxical Situation

Initial Responses	Rationale
•Cannot comment.	Protocol forbids.
•Fear that the worst will happen and fear unknown	Decide to let it go, because it cannot be fixed.
consequences.	
• Tell yourself 'do nothing; say nothing'. Feel para-	Make an inner story as a victim of circumstance,
noid, powerless.	race, gender, rank.
TO GO TO A NEW LEVEL	Do something now or later, such as talk to some-
•Decide to reframe the situation one way or another.	one in charge in the situation.

I have outlined a simple schema at three levels of complexity. The first level occurs when two people misunderstand one another with good will, but the communication gap, if unnoticed, may cause a large gap later; then again, it may not. This is at the speech act level. The second level occurs when a sequence is initiated by a misunderstanding, such as assumptions being made about someone's involvement in a plan. Unless it is cleared up, plans will be made and someone will be inconvenienced. Even though the snared one plainly sees that trouble will come of not speaking, she cannot speak. The largest level is on a stage or in a public place, where something causing a misunderstanding has been said or done, but for entirely the same reasons of shyness, fear, lack of self-image, the snared one cannot take a stand. These types of double bind situation are located at three levels of organizational complexity, but cannot replicate the vast range of double bind situations.



Chart One

# The Situation in an English Classroom

Actually, the classroom I speak of here is not just any old English classroom. In English classrooms for literature or education majors there is a great likelihood that many students who want to study English are present. The class that I speak of here is composed entirely of students of technology. Our students come from both from Engineering and Informatics. According to the design of the curriculum, this English class is located among the Arts and Sciences core requirements for General Education and as such provides a precious opportunity where one might read interesting and provocative views. One can practice likely scenarios for the would-be traveler. Perhaps a teacher can provide an index of a few core trans-disciplinary concepts in English for individuals who will be working with technology, quite possibly with international staff members or in other countries.

The way things are set up, however, it is difficult to do much beyond running students through a text-book. The number of students is between 25 to 50 persons, far more than recommended for practical language classes. Moreover, we meet once a week for 90 minutes, fifteen times during the semester. Anyone would admit that is quite enough time to transmit certain kinds of knowledge; it is not ideal for language learning, particularly conversation - that delicate art of improvisation.

This is not a complaint about the set up. Institutions set things up in the best way that they can within the various constraints placed upon them. That is from the top-down perspective. From the bottom-up, it must be said that students are the ones tasked to get their own education. The classes and teachers are merely tools and facilitators, available to guide to new areas, regions, or even to map new worlds. It is the student who must choose to integrate the items of learning into an individuated synthesis of his or her own self.

# 4.1 Generating Double-binds in Free Conversation Practice

The case is far from futile. As we have already suggested in passing, the generation of paradox under whatever name is coeval with language use. If there is a desired state and a real state, there is double bind. If there are classes of items and individual items, there is double bind. Any of the classic dialectics generate double bind. The important addition that Gregory Bateson made to the on-going discussion in time is a concise description of the relationship of the cognitive structures at different levels of abstraction and complexity that generate schizophrenia-generating double bind.

In other words, pushed into the paradoxical trap, even a healthy person may become psychotic. This is seen in accounts of prisoners of war, torture, and brainwashing.

But, as Bateson also showed, there is a pipe to a more stable order or a thread to a more relaxed situation. That lifeline or pipe is simply to be able to talk about it. To be able to make meta-communicative statements about the Gordian knot and the "lose-lose" situation relieves the situation. Talking about Conversation Class is one place where this small but pithy safety valve can be added to the "student-becomingadult" educational system.

Let's take a look at conversation practice in the General English class. The task is to speak in English, and only in English, for one to three minutes. This practice relies on a basic store of routine English phrases and daily-life vocabulary. The instructor patterns the first exchanges:

#### Examples

How are you? Did you have a nice weekend? Do you have any plans for the vacation? Do you have a part-time job?

Then the students continue with a brief, improvised

conversation. The laws and orders of complexity can easily be used to show that three minutes is too long.

# 4.1.a The First Order of Complexity

The most basic dynamic of complexity is something like this: When the path forks, there are two choices, and if those paths fork again, there are four, then eight. The exponential multiplication of possibilities ensures that students will encounter a novel vocabulary word or unknown topic within the first three or four exchanges. The danger lies in the "follow-up" question, if your interlocutor happens to mention an interest in soccer, for example. At this level, the Englishonly rule might be broken with a quick translation of a term or concept from Japanese.

#### Comment

You may have failed at the English Game, but you have succeeded at the Communication Game, which technically you are not supposed to play. What do you do? Discount the class, discount the valued communication, or notice nothing? But what if the teacher talks about it?

# 4.1.b The Second Order of Complexity

A second order of complexity is related to specialization and articulation. These two seem like quite different concepts, but conversationally speaking, the same thing happens with both; in the process of discussion, distinctions are drawn, priorities set, opinions voiced. Whether there is agreement or disagreement, the conversation will have become an articulated, dyadic world in a few short exchanges. At this level, the English-only rule might be frankly abandoned for an eager discussion, with furtive glances to see if the instructor is coming close.

#### Comment

You have not only failed at the English Game; you have decided that it is not nearly as important as this conversation, which under usual circumstances you could only have outside of class. What do you do? Discount the value of the English class, feel like you are getting away with something, or realize that like so much else in institutional life, form and content do not always co-inhere.

# 4.1.c The Third Order of Complexity

A third order of complexity involves the meeting of complex worlds. If you put two students face to face for a few minutes of improvised chatting, immense realms of family background, gender, and personality type inform the brief meeting. Not the least of the problems for Japanese students is a sense of "face". The dignified presentation of self can take a tumble in the rough and ready mix of short conversations. Young ladies attempt to be polite; young men become blank and the conversation languishes; some students refuse to accept the English only rule in the first place. Some perception of the vastness of difference makes meeting impossible. For the silent students, three minutes is a very long time indeed.

#### Comment

For the intensively introverted student, the short three minutes provides a classic case of double bind at toxic intensity. It is particularly difficult to talk it away. What do you do? Say you hate it and forget it? Try to speak, knowing you will inevitably fail to impress or connect? Relax and try to enjoy it? (Many students cannot do this.)

Three minutes may be too long for an improvised English conversation but not too long for something else. There is a by-product of the short exchanges. The energetic level of the group as a whole rises. One must attend to the "buzz". It rises and then peaks. That is the moment to change partners. Do not let the energy fall and dissipate. This is something that can be talked about.

English conversation practice has formed a regular portion of my English classes for many years. It is good for group dynamics. The students mostly relax and enjoy. They cannot be said to be learning English, however. Here we can enter the double bind situation, ensnarling the instructor. It seems that to the exact extent that I can get students to relax and talk, I fail to convince them that I am teaching them anything at all. I cannot get their authorization to be their teacher because I don't give the right cues. If I gave the right cues as a teacher, they would not be able to relax.

To conclude, English conversation practice, which is characterized by improvisation and adaptation, is a place with good potential for students to develop awareness and meta-communicative freedom, if the teacher and the students use the opportunity to cultivate it.

## 4.2 Content-based English instruction

Having finished the conversation practice portion of the class, we are ready to move to the main course, the topic or on-going discussion of the class. Perhaps we are reading an essay or watching clips from a movie. The goal is to read or watch in English and discuss in English. However, most of the students are not conceptualizing in English, so they want the contents translated into Japanese so that they can grasp it. When they discuss a question, theme, or problem in the work, they can only do it in Japanese. The collective ethic prevents good speakers from revealing their ability; it is bad manners, for one thing. This also thwarts participation by students of lesser ability. The cooperative rule trumps the English rule. These also are double binds.

Now it may be that the contents to be studied have value in themselves. It may be that I may be forgiven for permitting students in an oral English class to talk to each other in Japanese about the contents. The point, however, is that every concession I make weakens the educational force. Yet severity and "standards" produce wide-scale failure to do homework, appear in class, or get credit for the required course. This, of course, involves us in the institutional double bind of insisting on real standards at the same time as guaranteeing that the students will get through this. If we misjudge the "bar" of the standards, we end up with scores of students back for a second try with less motivation than ever.

But there is a pipe available. Students can write English for the teacher that comments on various aspects of the content or the class. The written communication of students can provide the fabric of self-realization and the bridge to higher integration. This level of communication is one that a teacher may activate for students.

# Conclusion

What is the relationship between English Conversation Class and a major accident or disaster? Although the two situations differ vastly in environmental impact, they are structurally the same: they both offer opportunities for improvisation and adaptation. The double bind as described by Gregory Bateson happens all the time in every communicative context. An IT student can manage the challenge of acquiring skills of improvisation and adaptation in an English speaking context which will also stand one in good stead in an international cybernetic world. The culture of the institution is also important since it provides an epistemic culture beyond the grounds, buildings and equipment prepared for student use; the institution also provides grounding and standards. The grounding is in the student's perception of himself as a member of a good institution with good aspirations. The standards are provided through contact with persons, such as graduates who have attained something they desire. Students can also come in contact with scholars of merit, and international personalities of high attainment. If students can meet such people, they will internalize higher standards than can possibly be provided by a list of requirements or a score on a standardized test. Every teacher may provide a sense of that wide world of scholarship and high standards as

well.

The task of preparing students for adult life is far from hopeless, nor are the problems new. Something, however, that has clearly changed is the international level of complexity requiring flexible experts. Something that has not changed is the total structure of human learning, the natural and contextual coordinated with various types of institutional learning. The classroom is a perennial space where the global might meet the personal and local, in the form of garden variety double binds, and a higher integration may be effected.

<sup>1</sup> It's the song, and not the singer, in an educational world of lofty ideals and pragmatic goals. Valerie Wilkinson is an educator who has been teaching in Japan since 1982, beginning at a junior college in Nagasaki, proceeding to a well-known private university in Tokyo, with a part-time lectureship at a well-known public university. A five-year stint at the Faculty of General Education at Okayama University and, for historical reasons, the Faculty of Pharmacy, exposed her to the full range of 10 faculties, including the general profile of the students of each. Since 1995 she has held a post at the Faculty of Informatics of Shizuoka University. Duties include core General Education required classes for students of the Faculty of Engineering. Something about the "job" during these 25 years convinced her that context, relevance, and relationship are essential for language learning, and this article is another go at making articulate the goals, problems, and possible avenues for amelioration in a constantly changing institutional environment in a constantly changing world.

- <sup>2</sup> Bateson's colleagues included Don D. Jackson, Jay Haley and John H. Weakland.
- <sup>3</sup> I am indebted to Yrjö Engeströ m (1987 ch.2) for the citations concerning the Three Mile Island acci-

dent. It is difficult to resist a quotation so apposite to the case I am trying to make.

- <sup>4</sup> "World" is a term of great versatility. As used in this context it points to vast areas of technology unknown and un-guessed by ordinary people on the receiving end of services from the "infrastructure", also a term of great versatility pointing in this context as much to the scientific research and resources involved in developing new support systems as to the systems themselves.
- <sup>5</sup> "The Communication Project" is the on-going extracurricular organizational communication project sponsored by Wilkinson's Laboratory, founded in 2000. This is an event held twice at year which involves students from Communications Skills One and Communication Skills Two. A number of clubs have voluntarily joined, some for between 6 and 8 years. Some of the aims of this multi-purpose educational environment are to 1) give some persons an experience of coordinating a complex mid-size (200 participants) event, 2) provide a preliminary model for management training for second year students, 3) provide an environment in which first year students can do teamwork, teambuilding, and cooperation 4) afford an interested person a view of a whole system, its integrated parts, pattern-in-time, and context. Indeed, Bateson was the chief inspiration for "The Communication Project".
- <sup>6</sup> The excellent work by the learned practical researcher and theorist from Finland was pivotal in the framing of the central argument in this essay, that double binds hold a key to a higher order of learning. Engeströ m provided heady confirmation of many of my theories. The "zone of proximal development" as a term for the framing of an educational goal is powerful and generative. It leads one to think in terms of framing educational activities in a productive way.

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