

A RELATIONAL VIEW OF LEARNING AN ADDITIONAL
LANGUAGE: AN ANALYSIS OF CLASSROOM TALK

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Abstract

To date, most research in Second Language Acquisition (SLA) has proceeded from either a predominantly social or a cognitive point of view. Most researchers who subscribe to a social view rely on the tenets of Vygotsky and on a sociocultural approach. Broadly speaking, any social perspective leads to a focus on language use, that is, on the ways learners jointly construct meanings. Cognitive researchers, on the other hand, tend to concentrate on the way language is internalized and individual cognition restructured. Although there is a growing awareness of, and interest in, the interplay of the social and cognitive domains, no theorists proceed from Piaget's idea that both domains share the same structure and organization and are thus, in effect, indivisible. Taking this Piagetian view, I argue that his idea of equilibration—usually viewed by cognitivists as an individual internal process having to do with cognitive restructuring—is in fact a social process observable in classroom talk. I contend that equilibration is observable when students are given opportunities to engage in perspective taking and to work towards resolving perturbations or problems in meaning within cooperative interactions.

In order to view these opportunities and the resultant processes, four levels of ESL classes (i.e., Beginner, Intermediate, High Intermediate, and TOEFL) were observed twice a week for ten months. Classroom talk was recorded, transcribed, and analysed according to a modified form of Conversation Analysis. The results of the study suggest that: 1) equilibration can be observed in talk; 2) perspective taking is central to the equilibration process; and 3) the complexity and range of perturbations increase as students develop their pragmatic language skills.

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Chapter 1

Introduction

Learning an additional language, typically referred to as ‘second language acquisition’ or SLA, is a complex and dynamic process, one that usually takes a non-linear, often U-shaped pathway (Larsen-Freeman, 1997; Dewaele, 2005). Dewaele (2005, p. 371) states that some language researchers resist or fail to address this complexity, and that “when concepts from contiguous research areas are introduced in SLA, they are often viewed with suspicion or plainly misunderstood . . . [T]here is often insufficient tolerance for or interest in other approaches imported from other equally legitimate outside fields and schools.” Commenting on internal tensions, Watson-Gegeo (2004, p. 331) writes that “for some time now second language acquisition (SLA) research has been hampered by unhelpful debates between the ‘cognitivist’ and ‘sociocultural’ camps that have generated more acrimony than useful theory.” This debate also addresses the types of research thought appropriate to the field (Thorne, 2000).

Two opposing views are paramount in the diversity debate. On the one hand, there are cognitive theorists such as Long (1993) who argues in favour of theory culling and, on the other, socially oriented theorists such as Block (1996) who supports broadening the field. Cognitive and social schools of thought differ significantly in their ontological and epistemological perspectives, as well as in their approaches to mind, learning, and language (Watson-Gegeo, 2004). For example, Beretta (1991), a cognitive oriented theorist, suggests that without underlying universal principles the field of second language acquisition (hereafter, SLA) fails to meet the necessary criteria to be a science.

On the other hand, scholars favouring diversity argue that social approaches to SLA are consistent with new insights in neuroscience pointing to a shift towards integration, interaction, and relativism, and away from the dichotomous and the universal (Block, 1996; Watson-Gegeo, 2004). Social theorists reject the mainstream cognitive view that mind, a container into which knowledge is poured, is separate from our experience of the world.

As the genealogy of SLA has its roots in Chomskian linguistics, many theorists still proceed from the assumption that the study of language should focus on competence (i.e., language seen as an innate endowment and information processing system) rather than on performance. According to this line of thought, talk or language is of interest only to the degree to which it reveals cognitive processes (Turnbull, 2003). During the 1960's and 1970's Chomskian linguistics was *the* de facto view and was consistent with the cognitive revolution occurring in psychology. Those who studied SLA followed the dominant view by examining the appearance and accumulation of discrete and decontextualized linguistic units (i.e., the overt performance of underlying competence). As Larsen-Freeman (2007, p. 774) notes, most SLA researchers did not utilize Universal Grammar *per se* but still “chose to conceive the progress of SLA as the accumulation of ever more complex linguistic structures and the increasing fluency of their use.” Addressing method, Markee (1994, p. 89) states that “most SLA researchers subscribe to a nomothetic epistemology that has . . . prematurely achieved the status of a dominant orthodoxy.” Today this legacy still dominates the field, with for example Doughty and Long (2003, p. 4) foreseeing the future of SLA “as a branch of cognitive science.”

Although social approaches vary widely, they generally agree that language involves social factors at every level of analysis. Social approaches generally reject the cognitivist preoccupation with language acquisition and instead focus on language use; that is, the focus is on language as it is embedded in interactions between learners and their social world (see Lantolf, 2000; Celce-Murcia, 2001). SLA theorists such as Block (1996), Hall (1997), Lantolf, and Frawley (1985), van Lier (1994), and Firth and Wagner (1997, 1998) were early critics of the cognitivist characterization of learners as error prone individuals whose language use had little to do with how they acquired that language. Thus, these social theorists can be seen to be rejecting the separation of acquisition and use. In agreement with Hall (1997), Firth and Wagner rejected the Chomskian notion of an ideal native-speaker by arguing that so-called performance disfluencies are ubiquitous in naturally occurring speech. Although cognitivists such as Gass (1998) argued that acquisition was independent from use, and that SLA should rightly focus on the former, Firth, and Wagner (1997, 1998) argued that there was no clear distinction between acquisition and use. Moreover, they claimed that data should be derived from naturally occurring conversation. Finally, Firth and Wagner pointed to their own workplace studies demonstrating that speakers with only rudimentary levels of a shared language could nonetheless successfully carry out transactions on a daily basis (Firth & Wagner, 1998, 2007). This position was significant because it began a shift in theoretical perspectives towards a view of language as pragmatic action rather than as mental processing. From a social view, language use makes acquisition possible in that speakers and addressees successfully interpret one another by using whatever resources and actions they have at their disposal.

The way theorists refer to their discipline is arguably one of the more explicit signs of tension within the field of language learning. Generally, theorists taking a cognitive approach (e.g., Beretta, 1991; Crookes, 1992; Gregg, 1993) retain the notion of a Chomskian competence-performance distinction in their use of the term “acquisition” in SLA. Although this term has also been used by some social theorists for continuity across the field, the terms “English as an Additional Language” (EAL) and “English for Speakers of Other Languages” (ESOL)—terms used in the United Kingdom—are becoming more popular amongst supporters of sociocultural and related approaches (e.g., Haneda & Wells, 2008). Not only do these latter terms better reflect the idea that English may be just one of several languages already spoken by the learner, but they also avoid a cognitive theoretical bias.

Thus far, I have offered only a small window into the tensions within the field of SLA. To get a more detailed view, we need to look further into how the field has developed over the last 30 years. As Atkinson (2002, p. 526) notes, “studying SLA without first defining the substance and scope of the *L* and the *A* is a haphazard endeavour.” With this in mind, I now turn to a brief overview of the field.¹

Second Language Acquisition

Second language acquisition studies have a genealogy dating back to the late 1940’s and early 1950’s, beginning with the publication of texts that offered a theory of language (namely, structural linguistics) and a theory of learning (behavioural psychology) (Larsen-Freeman, 2007). Applied linguistics itself began as a branch of

¹ Since alternating amongst the acronyms ‘SLA’, ‘EAL’, and ‘ESOL’ can be cumbersome, I have chosen to use ‘SLA’ throughout the dissertation. However, I do use the descriptive phrase ‘learning an additional language’ when referring to actual classroom activities.

linguistics and the field of SLA has now become synonymous with applied linguistics (Widdowson, 2006). In the early 1970's SLA attracted applied linguists educated in Chomsky's (1968) Universal Grammar (UG). Given the centrality of genetically transmitted knowledge of language in UG, the focus of research was cognition and innate competencies—in particular, on the individual mechanisms underlying the acquisition of grammatical forms rather than on performance or the pragmatic use of language in the social world. Subsequent studies in linguistics and psychology developed from a computational metaphor and focussed on internal mechanisms of information processing, memory, and attention. Such studies used a commensurate vocabulary with terms such as input, output, uptake, and acquisition.

One of the most divisive issues between cognitive and social researchers has been whether language ability can be explained by Universal Grammar and modules, that is, by an innate or mental grammar necessitating some form of cognitive housing, or whether such abilities occur under general cognitive processing skills in much the same way as other competencies are developed. Although mainstream scholars took the former view, social theorists took the position that “linguistic concepts, like all other cognitive processes, arise from the embodied nature of human existence and through experience” (Watson-Gegeo, 2004, p. 333). This implied that language was not a context-free, asocial enterprise as Chomskian linguistics suggested. Concomitant with his persistent focus on syntax over semantics, Chomsky rejected the view that the nature of language entailed a communicative purpose. According to Chomsky, language is an innate abstract mental construct. The counter-intuitive notion of language as a mental

construct not necessarily serving a communicative social purpose was, perhaps, yet another reason why social views slowly started to gain ground.

Tomasello (1999) argued that by opposing syntax and semantics, Chomsky treated natural language as a formal language and in so doing, failed to see that humans developed symbol use to organise and share their experiences, actions that fall under general processing. Furthermore, Turnbull (2003) states that Chomskian linguistics, with its basis in fixed meanings, cannot account for the interpretive nature of language in use. Atkinson (2002) offers an apt description of the important but reductive nature of Chomsky's theory:

In the defining moment of 20th-century linguistics, Chomsky took structuralism to its logical extreme, completely abstracting language from its social setting and declaring its ontological (or at least methodological) self-sufficiency. By reducing the social out of language he was able to produce an idealized pseudolanguage about which some “facts” could be explained using the tools of logic and calculus. Yes, speakers of English certainly do use question transformations—and arguably quite often do not, generally speaking, in oral discourse—but to base a whole linguistic theory on a handful of such phenomena belies the reductiveness and abstractness of Chomsky's model of language (p. 526).

Basic tenets of Chomsky's cognitive views, particularly the competence-performance distinction, continue to permeate the language sciences. Thus, psycholinguists are interested in interaction and negotiation only as a window into underlying linguistic competence. In order to examine underlying cognitive processes without interference, contextual and social factors are removed or experimentally controlled. Most psycholinguistic approaches are not interested in language use, but rather in the mental processes involved in turning input into mental representations that are prior to manifest

behaviour, which is the verbal expression of linguistic units (Mitchell & Myles, 2004). On this view, spoken language is only interesting as an overt display of mental processes.

Input and interaction models of language, widely subscribed to by cognitivists conceiving of interaction through a computational lens (e.g., Gass & Varonis, 1994; Long, 1996; Long & Doughty, 2003), focus on how input from environmental sources modifies output to the environment. According to such views, input and output explain how a learner's cognitive and inter-language system is restructured; that is, they explain how an emerging second language (L2) retains features of the native language (L1).

Initial work on input models began in response to Krashen's (1982, 1985) input hypothesis which posited that exposure to comprehensible input at $i + 1$ level is necessary and sufficient for acquisition. Researchers extending the input hypothesis (e.g., Long, 1981) examined the ways in which input can be modified to increase comprehensibility. Long's interaction hypothesis proposed that conversational structures such as repetition, confirmation checks, recasts, and repair are used in the negotiation of meaning, which is necessary in order that input can be tailored to meet the current needs of learners and serve as negative evidence (i.e., error indicators). Intrapersonal factors such as selective attention and processing skills work alongside these negotiations.

Elsewhere, Swain (1985) suggested that learning a new language requires opportunities to speak so that the learner can reflect on correct or incorrect linguistic choices (the output hypothesis). According to both the interaction and output hypotheses, interaction, speaking, and conversational structures are only of interest as far as they are sources of input, rather than pragmatic actions in talk taken in an effort to carry out our everyday lives. Input and so-called interaction models follow from the idea that the

linguistic structures observed (i.e., speech) are objects through which mental processes can be observed. The structure of conversation and the co-construction of meaning are relevant only insofar as they impede or facilitate such internal processes (Myles & Mitchell, 2004).

Overall, this received or mainstream view of language is a code model according to which communication between an ideal speaker and addressee is carried out as follows: Speaker A wants to communicate something to B. These thoughts are held in A's head, most likely as mental representations. Thus A's head is a container for his thoughts/representations. A's thoughts are transformed into words by various biological mechanisms. Metaphorically, A is putting his thoughts into words as he utters sentences that convey his thoughts. A's utterance is heard and decoded by B who now knows what A was thinking. What is of interest are the thoughts and internal processes. What is required for correct decoding is a one-to-one literal match between A's utterance and B's decoded meaning. However, individuals are not ideal speaker-hearers, nor do they 'language' with one another; rather they talk to one another by interpreting and inferring meaning based on context and inclusive of metaphor, colloquialisms, errors, partial utterances, and so forth (Lantolf, 1996; Turnbull, 2003). Yet as Lantolf (1996) and Watson-Gegeo (2004) state, rejection of the code model is still a radical proposal in some SLA circles.

By the early 1990's a movement was afoot by those who rejected both Chomsky's Universal Grammar and models that characterised language as a code to be deciphered. Theorists like Firth and Wagner (1997) took the position that language involves social, interpretive, contextual, and cultural factors, that there was more to language than

discrete linguistic units, and that there was more to learning than accumulating these units in order to have the same mental constructs as native-speakers. They and others argued that the inferential and contextual nature of meaning making and sharing is not properly represented by a computational metaphor, but rather by a metaphor based on natural living systems (Atkinson, 2002; Lantolf, 1996).

Although more socially oriented perspectives were beginning to gain momentum, there was no clear consensus on the best way to conceptualise language, language use, teaching, or learning processes, nor had cognitive models been put aside. By the early 1990's, Larsen-Freeman and Long (1991, p. 227) counted at least forty theories of SLA. Although numerous studies were taking a social approach (for example, language socialization, interactional sociolinguistics, discourse analysis, sociocultural or ecological approaches, Conversation Analysis, and ethnographic approaches, to name a few), they were still considered on the margins as compared to studies based on cognitive processing models. It was not until Firth and Wagner's (1997) watershed paper calling for a "reconceptualization of SLA theories, concepts, and methods" and liberation from the entrenched "myopia" of the dominant psycholinguistic view that the field began to openly debate competing viewpoints (Firth & Wagner, 2007, pp. 800-803). Firth and Wagner (2007, p. 800) retrospectively refer to their 1997 paper as one that "touched a proverbial raw nerve within as well as around the periphery of the second language acquisition (SLA) community."

This paper was criticised by cognitive theorists and by some social ones as well. For example, as late as 2004, Watson-Gegeo (2004, p. 331), who generally supports a social perspective, indirectly criticizes Firth and Wagner as early instigators of "unhelpful

debates.” Reconceptualising mind, learning, and language as a socially constituted practice had already been criticised by mainstreamers (e.g., Baretta, 1991; Crookes, 1992; Gass, 1998; Gregg, 1989, 1993; Long, 1997). This debate instigated by the Firth and Wagner paper intensified, with tersely worded responses by Gass (1998) and Long (1997) and in turn a further reply by Firth and Wagner (1998). Lantolf (1996) and Gregg (1993) have engaged in a similarly themed debate for years. It should be noted that by the time the Firth and Wagner (1997) paper was published researchers such as Lantolf and Frawley (1985) had already been investigating the role played by historical, cultural, and pragmatic factors in theory, method, and practice under a sociocultural approach. Despite this activity, Markee (1994, p. 91) has noted that social oriented theorists “have been voices crying in the applied linguistic wilderness.” Markee also maintains that researchers like Larsen-Freeman, who now embraces diversity, once argued that social approaches and their descriptive methodologies were limited and should, in light of these methods, tend towards the causal and experimental.

In the paper that incited so much debate, Firth and Wagner (1997) argued that approaches that embrace the social nature of language were on the rise and would eventually result in a paradigm shift away from the cognitive perspective. Such a shift was already well underway, they argued, and was being denied and marginalized by those in SLA who subscribed to the dominant view. Upon reflection ten years on, Firth and Wagner (2007, p. 288) suggest that now as then a cognitive hegemony exists, one that views language as an individual, cognitive, and context-free enterprise which “distort[s] descriptions of and views on discourse, communication, and interpersonal meaning.” Firth and Wagner (1997) also criticized the mainstream’s negative depiction

of the learner as someone with linguistic deficits when compared to an idealized native speaker. Against this view, Firth and Wagner (1997, 2007) argue that findings from their workplace studies suggest that despite limited facility with the other's language, participants were successfully able to conduct everyday transactions. And although the speakers were not often grammatically correct or necessarily concise, they were able to interpret meaning by using the available resources, including, for example, gesture, repair, and building on "common knowledge" (Edwards & Mercer, 1987). Cognitivists ignore these resources found in talk because such resources are not considered part of the English language, falling short by definition of the linguistic features traditionally associated with grammatically correct and idealized *written* language (Turnbull, 2003).

Social approaches have expanded the theoretical and methodological approaches in the field. For example, sociolinguists generally examine how social forces shape the experience of learning a new language. According to Mitchell and Myles (2004), sociolinguistic approaches examine variability, socialization, communities of practice, identity, autobiographical narrative, and emotion. Duff (2002), for example, has examined how cultural background influences participation in peer-peer and student-teacher talk in a L2 high school class. Norton's (2000) research typically examines issues of power, identity, and female experience. She uses ethnographic methods including observations, interviews, self-report, audio-visual recordings, and field notes to track experiences and change. Language socialization studies by Ochs (1988, 1992), quantitative approaches to variation by Tarone (1988, 2007), and classroom studies such as Ohta's (2001) can all be described as falling under the purview of sociolinguistics.

The field has also expanded to include other well-considered conceptual, theoretical, and methodological work both inside and outside applied linguistics (see Mitchell & Myles, 2004 for an overview). Presently, SLA research is being carried out in education (Hinkel, 2001), psychology (see Robinson & Ellis, 2008; Lantolf, 2000 for a sociocultural approach), and sociology (see Markee 2000; Mori, 2004; Seedhouse, 2004, 2005 who take a Conversation Analytic (CA) approach which is now one of the fastest growing areas in SLA). Haneda and Wells (2008) take a dialogic orientation, premised on the ideas of Bakhtin (1986) who drew attention to the dynamic and relational nature of language. According to Zuengler and Miller (2006), although cognitive theory continues to dominate, current debates within the field have motivated some mainstream theorists to reconsider their own positions (e.g., Larsen-Freeman, 2007).

Tension within applied linguistics with regard to social versus cognitive views can also be felt within developmental and social psychology, particularly as it concerns language development and discourse studies. For example, Potter and Edwards' (1992) discursive psychology characterizes both social and cognitive factors as legitimate areas for rhetorical analyses of psychological language, whereas Coulter (1999), using an ethnomethodological framework, disagrees, contending instead that cognition should not be referenced when examining the patterns underlying everyday interactions. Within developmental psychology, there are divisions between theorists who see language as a domain specific capacity (e.g., Pinker, 1994) and those who argue against this nativist view and instead see language as emerging from general processing skills and social interaction (e.g., te Modler & Potter, 2005; Müller, Carpendale, Budwig, & Sokol, 2008;

Resnick, Levine, & Teasley, 1991). These latter perspectives generally conceptualize cognition as an individual process as well as a distributed process amongst thinkers.

Common to both SLA and psychology is the sociocultural approach, an approach that informs the majority of socially oriented studies in SLA. This approach is mainly associated with Lantolf (2002) and Lantolf and Appel (1994), early proponents of Vygotsky's (1978) insights on the role historical and social forces play in mediating knowledge development. Although some theorists approach Vygotsky as though his primary concern were language, his main concern was actually how social and cultural forces organized individual cognition (Zuengler & Miller, 2006, p. 38). Vygotsky argued that cognitive development is mediated by cultural tools, one of those tools being language. Participation approaches extending from Vygotsky's ideas include Lave and Wenger's (1991) and Lave's (1991, pp. 65-67) "community of practice" metaphor which conceptualizes learning as "developing an identity as a member of a community" and as "relations among people engaged in activity *in, with, and arising from the socially and culturally structured world.*" Studies based on this view of language learning generally avoid any mention of cognitive restructuring and instead examine which forms of participation best facilitate language development (Hall, 2002). Particularly popular amongst educationalists is Vygotsky's notion of the zone of proximal, the difference between what the child can accomplished on her own and with what the child can accomplish with a competent peer or teacher (see Aljaafreh & Lantolf, 1994; McCormick & Donato, 2000; Ohta, 2000).

Sociocognitive approaches are gaining in recognition, as are dynamic systems approaches (e.g., deBot, Lowie, & Verspoor, 2007). Atkinson (2002) and Atkinson,

Churchill, Nishino, and Okada (2007) use a sociocognitive approach to address the intersection between individual and social cognition. Atkinson (2002), for example, suggests that both individual cognition and social factors are inseparable, in that individuals coordinate their thoughts and actions, thereby giving rise to opportunities for learning. Atkinson's ideas about the role that alignment or coordinated action plays in learning are similar to Piaget's (1977/1995) cooperative perspective taking. (Piaget's ideas are examined in detail later in the Chapter 2 as they form the theoretical basis of the present study).

Debates within psychology and applied linguistics, along with interdisciplinary approaches that invite a co-mingling of ideas, play a central role in addressing the dynamic and complex nature of learning another language (Firth & Wagner, 2007). However, within this milieu, and underlying this abbreviated account of SLA, an ontological sticking point remains: theorists seem to approach reality either from a mechanistic (positivist) or from an nativist (biological) worldview (Overton, 1991). Although Aram (2004) found that theorists *say* they would put aside differences on worldviews in order to address complex issues, differing and often implicit epistemological positions were found to prevent any deep notion of hybridity (Aboelela et al., 2007; Aram, 2004; Colpaert, 2004; Salter & Hearn, 1996). The issues and tensions between perspectives relating to ontology and epistemology, as well as Piaget's social theory, are the focus of Chapter 2.

Dissertation Overview

In this chapter, I have presented a brief review of the competing theories in SLA. In the first section of Chapter 2, I expand on this discussion by examining how these

competing theories view cognition and knowledge. The significance of ontological and epistemological positions and the implications they carry for theory and methods in SLA is also discussed. I contend that the concepts and tenets from Piaget's (1977/1995) social theory have been either ignored or misconstrued. In order to clarify Piaget's ideas a large section of Chapter 2 is devoted to examining his social theory in some detail. As a result, part of my intention in this dissertation is not only to present my own study and analysis but also to introduce a new way of approaching SLA, a way that has yet to be explored. I argue that Piaget's theory is a viable socially oriented alternative to sociocultural theory—the theory that currently dominates social approaches to SLA. I present arguments as to why Piaget offers a more complete account of intellectual development than does Vygotsky.

In Chapter 3, I describe the goals of this study. I also describe the method used to examine equilibration as a social process observable in talk-in-interaction; the equilibration process involves, amongst other things, cooperative perspective taking. The method used is a modified form of Conversation Analysis, based on a simplified transcription system, combined with an analysis of classroom talk.

In Chapters 4 through 7, I present and analyse examples of conversation from Beginner, Intermediate, Intermediate High, and TOEFL classes. These classes were recorded over a ten-month span. Those analyses are followed by a brief discussion in Chapter 8.

Chapter 2

Knowledge and Reality

In the first section of Chapter 2, I discuss the ongoing debate in SLA concerning theoretical unity versus diversity. Nested within this debate are larger epistemological and ontological issues relevant to SLA. To examine these issues I turn to Overton's (1991) analysis of worldviews and the epistemological and ontological foundations within science. I also refer to Larsen-Freeman's (1997) ideas on chaos and complexity theory. As Larsen-Freeman (2007, p. 782) states, "the way out of the acquisition versus use dilemma is to find a larger lens." Given that historical divisions play a pertinent role in present day tensions, the examination of foundational assumptions is one way to understand and reframe current issues.

Although Larsen-Freeman (2007, p. 781) supports a reconciliation between social and cognitive perspectives in SLA, she admits, "having such fundamental ontological and epistemological differences has meant that they [the two sides] have not influenced each other very much." Zuengler and Miller (2006) echo this view by insisting that cognitive and social approaches to SLA exist in parallel worlds. Although debates continue to surface there has been a recent movement towards reconciling, or at least acknowledging, aspects of these competing views. Larsen-Freeman (2007) notes that longitudinal studies using Conversation Analytic methods, along with ecological and sociocognitive approaches, may be forerunners of such a reconciliation (see Atkinson, 2002; Seedhouse, 2004; van Lier, 2004). I contend that Piaget's (1977/1995) relational theory is also a candidate epistemology for this reconciliation, as its basic principles include cooperative perspective taking, action, and knowledge development. Piaget's relational theory

provides a framework for thinking about the process of learning (see also Atwood, Turnbull, & Carpendale, in press). According to Piaget (1977/1995), individual and intrapersonal intelligence stand in relation to one another; in effect, they are one and the same. Individuals learn about the world by acting within and upon it. By observing the effects of our actions in transforming aspects of the world, we as individuals construct knowledge (Müller & Carpendale, 2000). Succinctly put by Chapman (1999, p.32) “reality is not known, not by representing it, but by acting on it.”

Piaget’s seldom cited and often misinterpreted social theory offers a coherent way to unite the cognitive domain with the social. Most conceptual understandings underlying cognitive accounts of SLA are based on either a representational or a biological view; specifically on either empiricism or nativism. Central to the representational view is the assumption that input is mentally represented. This assumption is not only implicit in cognitive approaches to SLA, but is also presupposed by those who support a balanced view between the cognitive and the social (e.g., Larsen-Freeman, 2007). The nativist view neglects social factors and sees certain types of knowledge as hard-wired into cognitive functioning. The rejection of both sets of ideas (i.e., representational as well as biological) provide the theoretical groundwork for an alternative account based on a relational epistemology. As a candidate way to bridge the current divide, a relational approach rejects neither the individual nor the social; rather, it positions each as dependent on the other (Atkinson, 2007; Larsen-Freeman, 1997; Watson-Gegeo, 2004). Piaget’s constructivist account and relational epistemology are currently under-represented in SLA research. The reason for this is in part historical; specifically, since Lantolf, one of the earliest proponents of a social view, put forward

socioculturalism as a viable way to approach language and learning, socioculturalism has become more or less synonymous with social oriented studies. Based on the insights of Vygotsky, sociocultural theorists propose that knowledge is determined by historical and cultural forces (see Lantolf, 2000 for an overview). In contrast, Piaget's work forms the theoretical basis of educational research and studies concerning childhood development. Piaget's (1977/1995) constructivism or relational epistemology (see Müller & Carpendale, 2000) is thus an alternative to mainstream cognitive and social theoretical positions in SLA. Because Piaget's ideas are either not widely known or are misunderstood outside developmental psychology, I discuss his theory in detail and in relation to Vygotsky's theory.

The Problem of Reality: Is Hybridity Tenable?

Theoretical debates persist on how to conceptualize learning an additional language (see Firth & Wagner, 2007; Larsen-Freeman, 1997, 2007; Watson-Gegeo, 2004; Zuengler & Miller, 2006). The cognitive community in SLA studies concerns itself with acquisition and the processes of learning as changes in mental states (Larsen-Freeman, 2007). The social community rejects the distinction between acquisition and use and generally sees learning in terms of increases in forms of participation. The underlying tenets of both positions rest on worldviews or metaphors that organize our ideas on the nature of reality, mind, and knowledge. As Watson-Gegeo (2004) and others have pointed out, the way we approach mind and reality is predictive of the type of research questions asked and the way these questions are addressed. Furthermore, epistemological and ontological issues are often raised in an attempt to clarify and justify positions taken in the contentious cognitive versus social debates (Larsen-Freeman, 1997; Watson-

Gegeo, 2004). Perhaps this is why Zuengler and Miller (2006, p. 46) observe that “during the past 15 years, the SLA field has devoted more attention to metatheoretical and methodological concerns than it had in earlier decades.”

In response to a social turn in language learning, some theorists have initiated debates that reveal the implicit assumptions of the received view. Furthermore, these theorists highlight the need for commensurate ways in which mind and knowledge can and should be considered in social terms (Larsen-Freeman 1997; Watson-Gegeo, 2004). For example, Watson-Gegeo (2004, p. 332) has observed that to date SLA studies have an “exclusive reliance on Cartesian, positivistic assumptions about reality.” The consequence of leaving metatheoretical orientations unstated is theoretical and methodological incommensurability, misinterpretations, and ‘cherry-picking’ (Larsen-Freeman, 1997).

With the shift towards the social a call for a hybrid worldview that includes diverse perspectives is being heard more frequently. Theorists such as Firth and Wagner (1997, 2007), Lantolf, (1996), Block (1996), Larsen-Freeman (1997), and Watson-Gegeo (2004) have written key articles in which they argue for more diversity and multiplicity in theory building, views that have been both commended and condemned for their relativist stance (see Gregg, 1993). In contrast, the positivist view that “science exists to explain the fundamental order underlying nature” is echoed by Beretta (1991), Crookes (1992), and Gregg (1993), all of whom cogently defend theoretical unity on the grounds that SLA as a science should adhere to a set of universal principles from which generalizations can be made (Larsen-Freeman, 1997, p. 141). Achieving credibility as a science is an issue not unfamiliar to scholars in psychology as a whole.

These competing positions can perhaps best be understood in terms of Overton's (1991) ontological and epistemological descriptions. Overton (1991) describes two competing worldviews and their associated epistemologies. First, Overton (1991) refers to the 'mechanistic' worldview which he associates with an epistemology of empiricism-realism. Second, Overton presents the 'organismic' worldview associated with rationalism-constructivism. (The terms 'mechanistic' and 'organismic' used by Overton are those used by Pepper (1942).

The mechanistic empiricist-realist position is premised on the idea that knowledge of the real or true is indirectly obtained through the senses (i.e., five senses or through sensation). Sense experience is what connects human beings to the external world. Empiricism-realism is a representational view; that is, input that is received through the senses is re-presented in the mind as image, idea, or feeling. A person knows reality if and only if his/her representations match or correspond with reality. Learning thus involves processes by which a person changes old or develops new representations that do match with reality. Since representations are privately held, knowing oneself involves introspection. However, to know another's mind, another's private representations, requires making inferences based on observed behaviour.

There are many criticisms that severely challenge the mechanistic and representational worldview, two of which stand out. Given the claim that one knows reality by representing it, the issue arises as to how one knows those representations do correspond with reality (Chapman, 1999). The problem here is that to confirm what one believes to be the case, a representation cannot be compared to reality but only to another representation, another belief about what is true. Representing reality is thus fraught with

an infinite regress of representations of ostensibly objective reality. Further, since persons can only compare one representation against another, persons can never know reality directly; that is, perceivers or knowers can never be sure of representational accuracy (Overton, 1991; Bibok, Carpendale, & Lewis, 2008). Although in the course of everyday life we blur the distinction between our representations and access to reality by acting *as if* we have direct access, we do not in fact have such access, as the mind has a representational nature.

Unlike the mechanistic view underlying empiricism, the organismic worldview subscribes to idealism or rationalism as an epistemology. It should be noted that whereas rationalism contrasts with empiricism, rationalism is also a representational view (Bibok, Carpendale, & Lewis, 2008). Briefly, rationalism gets around the problem of validity by positing that knowledge, or the rightness of a representation, is at least partially apprehended in one of three ways: that is, by initial intuition and deduction, by innate ideas that are an inherent part of our natures, or by innate concepts that are abstract in nature. All three claims privilege innateness over experience since the latter is based on particular instances rather than on necessary truths. Although experience can trigger such processes in the mind, experience does not form the content of knowledge itself, as such content is innate. Thus, although sense experience and observation are necessary, they are not sufficient to explain how we come to know. Since knowledge derived from innate process is prior to knowledge derived from the senses, it is superior to and privileged over knowledge derived from experience. On the innate concept view, concepts organizes thinking and thus experience. This organization is governed by rules that are said to relate to normativity. Scientific research involves making increasingly

better propositions about underlying organization/patterns/rules, as they pertain to any phenomena and as they occur over time.

There are several problems with the three claims underlying rationalism. Overall, the idea that knowledge requires certainty negates individual knowledge derived from experience. Intuition (and the scepticism that validates it) is not a reliable source of certainty since an individual can still be deceived by a false proposition. Moreover, the idea that we have internal knowledge or intuitions about the external world that supersedes knowledge gained by acting in the world seems counterintuitive (Markie, 2008). The innate knowledge claim is also problematic. The environment may trigger some innate knowledge; however, it remains unclear how such knowledge can be justified, given that it cannot be warranted by the experience that caused the innate knowledge to occur. Furthermore, on close inspection some claims about innate knowledge actually refer to an innate *capacity* for knowledge, which is recognized in most lines of argument and is therefore unremarkable. For example, Chomsky takes a rationalist innate knowledge position when he argued that experience alone cannot account for knowledge of a language. Hence, learners must have an innate knowledge of the deep structures of language (i.e., Universal Grammar). However, Chomsky's theory does not fit with the innate knowledge claim as philosophers recognize it. This is because Chomsky does not propose that language learners have innate propositions about Universal Grammar; rather, what he proposes is that they have a set of innate capacities capable of making such propositions (the focus being on cognitive structure) (Markie, 2008). As Cottingham (1984, p. 124) notes, "Chomsky's principles . . . are innate neither in the sense that we are explicitly aware of them, nor in the sense that we have a

disposition to recognize their truth as obvious under appropriate circumstances. And hence it is by no means clear that Chomsky is correct in seeing his theory as following the traditional rationalist account of the acquisition of knowledge".

The innate concept claim is problematic on the following grounds. Innate concepts entail content that should be, but may not be, conceptualized by all persons. Furthermore, one does not require innate concepts if experience can provide the content of our ideas (Markie, 2008).

Perhaps the underlying empiricist line of criticism amounts to this: If rationalism claims that knowledge, whether in propositional or some other form, is 'in the mind', the claim is false. As an early modern empiricist, Locke, stated: "No proposition can be said to be in the mind, which it never yet knew, which it never yet was conscious of" (Locke, 1690, p. 61). If, on the other hand, the rationalist is merely calling knowledge innate because all normal humans are alleged to have the capacity to achieve such knowledge, such a claim, while possibly true, is of little significance. In other words, the claim is "only an improper way of speaking; which whilst it pretend to assert the contrary, says nothing different from those, who deny innate principles" (Locke 1690, p. 61). To the empiricist, then, the rationalist position, even if accepted, changes nothing in the empiricist's basic approach to the study of knowledge acquisition.

Overton (1991, p. 288) states that the mechanistic and organismic worldviews and their respective cognates are "incompatible and irreconcilable." His argument against

eclecticism is contingent on the function of a worldview.² Worldviews are models that bracket proceeding levels of meaning (i.e., epistemology, theory, method, analysis, and definitions) in order to produce a “systematic body of knowledge” (p. 288). The criteria of consistency and coherence do not lend themselves to eclecticism and any new metaphors seeking status as a worldview without these qualities would result in conceptual and theoretical confusion. Although Overton states new worldviews *are* possible as they are but metaphors for how knowledge is organized, new worldviews must undergo the same scrutiny for consistency, precision, and scope that current models have undergone. This position is echoed by Long (1993) who argues that instead of multiplicity, SLA requires theory culling. Long makes the point that the more legitimate findings could be unified under one general theory (i.e., based on the cognitive model). Incommensurable positions foisted together should be avoided (Long, 1993); so too should the relativist view that underwrites them (Beretta, 1991; Crookes, 1992).

Lantolf (1996) and others charge that the cognitive culprits so mentioned subscribe to either a realist or rationalist epistemology whereby “reason, rationality, the universal, idealism, objectivity, and the search for the truth” pave the way for knowing the reality or truth about SLA (Lantolf, 1996, p. 715). Watson-Gegeo (2004, p. 332) and Lantolf argue that implicit in theory culling is the cognitivists’ “common fear of the dreaded ‘relativism.’” The cognitivists, Lantolf (1996, p. 730) states, suffer from a contagion called “relativaphobia” whose chief symptom is a belief that Chomsky’s UG is still the *only* credible theory for SLA (e.g., Gregg, 1993). Lantolf (1996, pp. 731-732)

²Hybridity or eclecticism as a meta-theory should be distinguished from a principled eclecticism as a language teaching methodology (i.e., a methodology involving the use of a variety of learning activities based on different theoretical perspectives). Mellow (2002, 2004) states that western communicative approaches are eclectic in the sense that a teacher may use a grammar translation activity in the morning (i.e., focus on form) and an information-gap activity (i.e., focus on use) later that day.

observes that at the root of this condition is fear that “differences and heterogeneity are impediments to the mastery of the truth.” More danger “arises when scientists adopt an absolutist posture and accordingly assume that theirs is the true theory corresponding to a presumed single reality.” Thus, Lantolf and others disagree with the claim that worldviews cannot be eclectically mixed. Amongst other reasons, Watson-Gegeo (2004) argues that a third way to see the world, a hybrid worldview, responds to issues heretofore ignored by the myopic and tired arguments derived from the male experience of the world. She notes that feminist, political, and cultural perspectives should be considered valid local epistemologies. The notion that traditional foundations can knit together an array of perspectives is an illusion, as many of the assumptions and ideas generated from old dichotomies have proven false. She bases this statement on findings from neuroscience that have overturned the idea of dichotomies such as nature-nurture. On this view, polar positions are ghosts from the past replaced by a new synthesis. Watson-Gegeo (2004, p. 332) also suggests that approaches that claim “cognition originates in social interaction” address diversity and are the *only* ones which can effectively do so. However, she admits that “the diverse lines of research and thinking that converge on a set of general principles for cognitive development and social practice . . . are still to be understood in full” (p. 332). In other words, this hybrid/social worldview has yet to be fully articulated and it remains unclear how conceptual fences are to be mended. Larsen-Freeman (2007) on the other hand, cautions against hegemony of the social, and therefore supports a balanced view between the two positions.

Although it may be that one person’s hegemony is another’s organizing principle, there is a deep divide over the issues of worldviews and diversity. If a worldview

functions to organize thinking inclusive of an epistemology, then feminist, political, and cultural perspectives would function as levels of analysis within epistemologies rather than as un-tethered epistemologies themselves. There is agreement amongst all concerned that to have a perspective implies having some overarching organizing principle and method of verification. When decisions are made about where ideas fit in relation to other ideas and which ideas are better (e.g., more adaptive or useful) than others, it seems that relativism in the strong sense, having implicitly accepted at least some constraints on the relative merits of ideas, breaks down. However, a strong relativist stance rejects *any* form of constraint (Overton, 1994). As Hallpike (2008, p. 226) argues “everywhere in the world, social life has certain fundamental constraints that are inescapable and universal. . . . notions of respect, and of insult and joke, truth, and lie, of property and theft, of gift and reciprocity . . . with such basic issues as what sorts of actions are approved and disapproved (moral rules); and what aspects of character are admired and despised (virtues and vices).” A local epistemology must then either function as a local practice or customary way that individual groups address universal concerns (i.e., level of analysis) or as something that operates as a set of unifying principles (i.e., a worldview). The problem with the local custom explanation is that if knowledge is transmitted or passed down from one generation to the next, then it is unclear how new knowledge is either formed or verified. Without a mode of validation, it remains unclear how to distinguish knowledge based on opinion, lore, and cultural coercion from knowledge based on reason, principle, consensus, and cooperation. In other words, it remains unclear how to distinguish knowledge based on relativity and subjectivity from knowledge based on objectivity and inter-subjectivity (Piaget,

1977/1995). Without a general organizing principle, a hybrid worldview seems unable to avoid falling into a complex of individual, potentially inconsistent, theories about specific content (Thelen & Bates, 2003).

On the other hand, a unified theory or absolutism conjures up authority, one-sided constraint, intolerance, and lack of autonomy (Lantolf, 1996). Piaget (1977/1995) in his *Sociological Studies* expressed these very concerns. Working towards uncovering a single reality undoubtedly raises the question of whose representation of reality actually applies (Potter, 1996). However, it is difficult to see how Watson-Gegeo's strong deterministic social view differs from the cognitivist hegemony. A similar critique has been levelled at the sociocultural theorists' persistent reference to individual versus culture (Overton, 1994—exception Cole & Wertsch, 1996). Some modernists, suggests Lantolf (1996, p. 733), propose a moderate relativism which “supports a single, but only partially knowable, reality—partially knowable because our observations are always and everywhere mediated by society, objects, and above all, language.” The problem with this view, however, is that it goes back to a representational view of mind entailing transmission rather than transformation.

According to Lantolf (1996, p. 733), one route around this difficult pathway is “an antirepresentational constructivist position.” Although Lantolf (2000) subscribes to a sociocultural perspective rooted in Vygotskian theory—an approach that is widely subscribed to in SLA circles—one alternative is Piaget's (1977/1995) social cognitive theory. Piaget (1977/1995) brings together the idea of diverse views with a way to evaluate those views, thereby avoiding the pitfalls of unrestrained relativism. Although Piaget acknowledged the dialogic and cultural aspect of knowledge, he also stressed that

autonomous persons must reconfigure knowledge for themselves (i.e., come to their own conclusions). I will examine these ideas further in the next section.

From Rationalism to Constructivism

Rationalism and constructivism have some underlying similarities in that both address organization and reasoning. However, there are also sharp differences. Under rationalism, underlying organization is a consequence of biology and of logical (deductive) propositions about the rules which impose structure on that organization. For example, Chomsky asserted that humans are born with both a language acquisition device (LAD), residing in a module in the brain, and with innate knowledge of a Universal Grammar (UG); this explains why children are able to learn language quickly and creatively notwithstanding their relative lack of prior exposure. Chomsky came to this conclusion by first examining English sentences and by making inferences about rules that he then applied to the nature of language and to children's cognition. By contrast, Piaget rejected the idea that children were born with language modules or with an innate abstract grammar. He considered language acquisition to be one developmental process amongst others, occurring under general cognitive functioning (Turnbull, 2003; Turnbull & Carpendale, 1999a).

A constructivist stance also rejects a representational view of mind and knowledge (Lantolf, 1996; Bibok, Carpendale, & Lewis, 2008). This position holds that "we know the world directly in terms of the actions by which we transform our environment . . . knowledge is the unmediated, embodied ability to interact directly *in* and *with* our environment" (Bibok, Carpendale & Lewis, 2008, p. 150). In characterizing constructivism as a middle way, Chapman (1988) observes that Piaget,

In agreement with nominalism, acknowledged that the mind has a certain latitude in conceptualizing the world. In agreement with realism, he also recognized that these conceptualizations are not purely arbitrary or conventional. Reality provides certain constraints on the mind's constructions, but within these constraints a certain range of alternative possibilities remains. . . . Knowledge and experience arise from the interaction between subject and object—or what amounts in his case to the same thing, from the interaction between the structures of the mind and the structures of reality (p. 413).

Thus, rather than knowing the world primarily through sense experience and representation (positivism/empiricism) or via pure reason (rationalism), constructivism sees knowledge as built up over time through observing the effects of our actions. Actions are embodied in the sense that they constitute our biological, neurological, and social systems. Our biology is an action-life system (i.e., organismic) and even prior to birth this system engenders other action systems (i.e., thumb sucking and kicking) as well as our social and practical skills. Piaget believed that the same principles of organization found in embodied action systems operate across biological and intellectual domains. He describes development as a generative process in that less adaptive forms of thinking/behaviour are replaced by, or are integrated into, more adaptive forms. However, as part of a developmental process, remnants of simpler forms may remain and may appear to constitute a regression (Müller & Carpendale, 2000). Larsen-Freeman (1997, p. 151) follows a similar line of thought when she states that learning another language is a non-linear development “filled with peaks and valleys, progress and backsliding.” Furthermore, a complex system is said to be emergent when the parts within that system interact or when contact with other systems produce novel properties

or structures (Bibok, Carpendale, & Lewis, 2008; Larsen-Freeman, 1997). In contrast to enculturation or participation models of development wherein knowledge is transmitted via culture or custom, in Piaget's relational model, friction ensuing from the airing of diverse perspectives transforms existing understandings. Development entails the transformation of individual and social cognitive organizations, thereby allowing individuals to engage with and produce novel ideas.

Rational understandings are constructed and verified in very different ways under rationalism and constructivism. Piaget (1977/1995, p. 25, 243) examined the disconnection between a rationality that leads to the understanding of the Pythagorean Theorem and one that leads to adopting the dogmas of the Hitler Youth. At issue is how we define knowledge. Following a traditional sociological definition, knowledge is ostensibly anything the group believes, and social beliefs and values are responsible for individual behaviour. Thus, if a social group believes in the values of the Hitler Youth, then the story of the decision to join is a relatively short one; that is, what caused the youth's decision was the pressure that arose from collective knowledge, internalized to become the youth's own belief (Kitchener, 2004). As Döbert (2004, p. 143) states, "delusional consensus is not a rare historical phenomenon." In sociological theory, the whole cannot be reduced to its constituent parts as the nature of that society differs from or transcends the individuals comprising the whole. Hence, the *ought* that compelled the youth to join was based on a transcendent moral order of obligation, conformity, and constraint generated from a monolithic society.

In contrast, knowledge can also be defined as a type of belief which is regulated by a normative organization--an *ought* or *should* component underlying a belief. This

ought component is determined by the way in which a belief is (or is not) transformed into a warranted, reasonable, and justified belief. As Kitchener (2004, p. 46) states, “not just a belief of any type [counts as knowledge], but rather one that [is] warranted, reasonable, justified, backed by adequate evidence.” Addressing moral and social dilemmas using a symbolic system that contains no social meaning or complexity may define a rule and a truth-value, but it “does not enable one to make out which legal and moral rules to acknowledge” (Döbert, 2004, pp. 138-139). Moreover, these formulations do not capture the nature of development since development is contingent upon replacing existing ideas or laws with better ones (Döbert, 2004).

In light of these problems, Piaget (1977/1995) determined that veracity was in part contingent upon the nature of relationships underlying any form of justification or action. Müller and Carpendale (2000, p. 143) state that according to Piaget “cooperation leads to the transcendence of egocentrism as well as cultural relativism because cooperative interaction has a universal structure to which all actual relations tend.” The more perspectives that are coordinated or taken into account the better or more valid the knowledge. Reification (i.e., social facts) and transcendent moral orders are highly suspect sources of verification, especially so if the nature of the relationships that engender them is one of constraint. Thus, in contrast to mere opinion or ideology, objective beliefs are those that have been transformed through the coordination of perspectives (i.e., reasoning), which coordination engenders normative and evaluative conditions. This relational or social aspect leads to an extended definition of rationality. Chapman (1993, p. 111) states that rational thinking is a “considerably broader concept than logic. It includes all forms of decision-making based on the deliberative weighing

of reasons. Everyday thinking sometimes may be illogical in the sense that it is based on principles that differ from formal logic, but it is not irrational on this account.” Thus to verify beliefs one must weigh evidence, consider all salient positions, and often make inferences without a full set of information, a process that is accomplished through “everyday reasoning.” Chapman goes on to state that the “structure of everyday reasoning more closely resembles the pragmatic structure of conversation than formal logic” (p. 109). In this sense, Piaget’s relational approach encompasses both the social and the individual (Kitchener, 2004).

Complex and Relational Systems

Thus far, I have discussed the ideas of a hybrid worldview, of empiricism, of rationalism, and of relationalism, each as possible ways of approaching the concepts of mind, knowledge, and reality. In this section, I will examine Larsen-Freeman’s (1997) general characterization of complex systems, ideas that she relates specifically to learning an additional language. I will also discuss some of the ideas underlying epistemological emergentism as it applies to current research in applied linguistics (Mellow, 2008, 2010). An emergentist position avoids some of the ontological and epistemological conflicts observed in hybrid views. Certain forms of emergentism are consistent with metatheoretical assumptions underlying relationism and with Piaget’s constructivist epistemology. I take the position that emergentism is a bridge to a relational approach as explicated in Piaget’s constructivist epistemology.

To begin with, several SLA theorists (e.g., Firth & Wagner, 1997; Lantolf, 1996; Larsen-Freeman, 1997; Watson-Gegeo, 2004, amongst others) and developmental psychologists (e.g., Overton, 1991, 1994) have noted that a paradigm shift towards

relationships within non-linear complex systems requires a commensurate metaphor by which to organize conceptual and theoretical understandings. Larsen-Freeman (1997, pp. 156-157) has observed that even today linguists align themselves with one side of a dichotomous pair: *langue/parole*, competence/performance, synchronic/diachronic, innatism/constructivism, and so forth. Similarly, Overton (1994) points out that psychologists tend to describe dichotomous relations with opposing terms such as, for example, subject/object, atomistic/organic, individual/social, and rationalism/empiricism. Overton and Larsen-Freeman agree that a shift from the mechanistic involves adopting metaphors of becoming rather than of being. For Overton, mixing metaphors will not do. Both theorists see that a move away from reductionism begins with new metaphors about the organizing principles of systems. Larsen-Freeman (1997) uses the image of a tree to describe complex living systems while Overton (1991, 1994) uses the image of a plant, as well as terms such as organismic and organic. Overton (1994, p. 230) notes that “the metaphor of the organic is increasingly functioning as the conceptual lens for a widening variety of knowledge disciplines.” The organic implies an organization, matrix, unity, system, or whole in which the interrelationships between elements (antagonistic and otherwise) and between systems are treated as complementary.

Larsen-Freeman (1997) and Boom (2009) describe a non-linear complex system as one whose activity arises from self-organization. Self-organization refers to those actions in a system that retain stability in light of self-modifications (Boom, 2009). The initial state of the system is one of undifferentiated part-whole relationships, whereby the parts sit in relation to each other (and to other part-whole relations) so as to form a larger whole: “The behaviour of complex systems emerges from the interactions of its

components; it is not built into any one component” (Boom, 2009, p. 143). The reduction of an element from a part-whole relationship for the purpose of negating its opposite (its antagonistic partner) is required to procure a cause and effect relationship. In contrast, development occurs as these undifferentiated states move toward differentiation. To make this idea more concrete, consider hearing an expert speak on his or her topic of expertise. A novice hears the complex contents as a continuous blending and has trouble discerning topics and shifts to subtopics. As the novice becomes more expert, he or she can differentiate between these levels of explanation.

Two phenomena can be used to explain the processes of a self-organized system. The first is adaptation, occurring in light of internal and external relations. The second is restructuring, which is seen to “counter the forces of entropy and create new regimes of order and structure” (Larsen-Freeman, 1997, p. 144). These regimes are new in the sense that they “may have properties different from those of the original . . . are not predictable from the original states, [and] can exhibit high degrees of organization” (Overton, 1994, p. 229). The meta-theory behind these statements is referred to in philosophy as emergence (Chalmers, 2006; Mellow, 2008). Emergence and relational approaches share the meta-theoretical assumption that new properties can arise from interaction amongst components parts (referred to as weak emergence), and/or that interaction can produce novel characteristics that are not reducible to that system’s component parts (referred to as strong emergence) (Chalmers, 2006). Corning (2002) states that these two positions are reconcilable: they can work together to address questions of *how* (via weak emergence) and *why* (via strong emergence). Constructivism uses these ideas as a way to address the development of knowledge. From a Piagetian perspective, the way these new

regimes arise can be described in terms of the equilibration process, that is, in terms of assimilation and accommodation. In the open system, the entropy occurring in a closed system moving towards equilibrium is avoided by the exchange of matter and energy. This infusion leads to widespread instability and restructuring which propels the system toward order or more complex states. Thus, change is directional rather than random (Larsen-Freeman, 1997).³

Larsen-Freeman conceptualizes language as a complex adaptive system. As such, language, metaphorically an organism, grows and changes in a non-linear, restructuring fashion in response to new forms and in response to its own internal self-organizational properties. Using language changes the language itself such that “rather than using rules to shape discourse, the rules themselves are shaped by the discourse . . . changes in the system of English are emergent” (p. 148). The idea that language structures emerge from everyday use follows from the adaptive nature of language. In agreement with Larsen-Freeman (1997), Beckner et al. (2009, p. 2) also view language as a “complex adaptive system” where the “processes of language acquisition, use, and change are not independent of one another but are facets of the same system.” Systemic or emergent approaches can best address the issue of diversity amongst languages since linguistic form is linked to usage by particular cultures. In contrast, innate approaches such as Universal Grammar (UG) fail to explain the developmental nature of language and the diversity within linguistic forms; UG denies the role that culture and use play in the acquisition of language (Mellow, 2010).

³ Dynamic systems theory has been cited as one possible new window through which to “arrive at a new synthesis” (van Geert, 1998, pp. 634, 2000). Boom (2004) cites dynamic systems theory as a way to “supplement” Piagetian theory in this regard. However, van Geert’s (2002) model seems to depend on a view of discrete stages which is disputed by various theorists (e.g., Chapman, 1988).

Larsen-Freeman (1997) and Beckner et al. (2009) also relate complex adaptive systems directly to learning a language. Learning is developmental because basic forms are transformed into more complex forms through activity. Moreover, learning a language is not accomplished by the aggregation of items or in discrete steps, but rather is a non-linear yet directed process. Learners typically appear to regress before more complex or undifferentiated forms move toward a stable organization. Stability (i.e., equilibrium) is, at best, merely a momentary or idealized state. In contrast, the processes that constitute equilibrium—Piaget refers to them as equilibration—are ongoing. According to Larsen-Freeman (1997, p. 156) this instability is partly due to the fact that English itself is relatively unstable due to users’ “spontaneous innovations,” innovations that result in novel forms. In a complex adaptive system, learners who begin with the same skills can have large differences in success, and these differences may occur because of small details in an interaction. Thus, complexity emerges within relations; it does not pre-exist in either the individual or the environment. From a relational or Piagetian perspective, within interaction more differentiated forms develop from less differentiated forms.

The notion that differentiated forms emerge from interaction is nicely illustrated in a conversation between twenty-five month old Sylvia and her mother (Mellow, 2010). In one exchange, Sylvia, who is learning to speak the First Nations language Anihshininiimowin, directs her mother’s attention to a pair of pants that Sylvia wants to wear. Sylvia begins her request by using the Anihshininiimowin word “kotak” (i.e., “other”); her mother responds, asking for clarification. In reply, Sylvia produces an effective two-word utterance “kotak taac” (i.e., “other pants”). The fact that Sylvia

expands on her single word utterance, in response to a request from her mother for more context, suggests an interrelationship between interaction, form, and pragmatics.

Given that emergentist and relational approaches view the learning process in terms of a change in complexity over time, longitudinal studies are often used. For example, Mellow (2008) examined the conversations and written work of 12-year-old Ana whose native language was Spanish. Over the 201-day study, Ana discussed 15 different wordless picture books with her mother; subsequent to these discussions (i.e., within a few days) she wrote a narrative to explain each story. The results revealed that Ana's written verb constructions increased, both in frequency and complexity. These findings support the emergentist perspective that acquisition proceeds by the gradual accumulation of item-based constructions that increase in syntactic complexity. These findings also support the idea that language acquisition occurs under general cognitive processes, rather than under language specific processes (i.e., modules or UG). These ideas about complex systems and emergence share features with Piaget's epistemology; some of these commonalities have been referred to in my previous discussion of relativism and will be further explicated in the next section.

Piaget's Relational Epistemology

Larsen-Freeman's characterization of holism and complex systems brings to mind a minor but nonetheless interesting internal debate in developmental psychology as to whether Piaget can be considered a holist. Kitchener (1985) contends that Overton (1991, 1994) mistakenly deems Piaget a holist. Kitchener rejects this characterization and instead contends that Piaget supported neither holism nor elementarism, but rather relationism which is described as an alternative third position. (It is clear from Overton's

(2004, 2006) more recent work that he interprets Piaget's theory from a relational standpoint). In Kitchener's view, relationism is an approach that does not reject holism (greater than the sum) or elementarism (reducible to parts), but rather that these two positions are secondary to the relations that take place within and between them. From a distance, it is difficult to see how this view is different from Overton's (1994, p. 225) given that Overton describes Piaget's position as follows: "in the single unit of thesis, there is the implicit or virtual relation of thesis-antithesis . . . as the tension . . . moves toward differentiation, a potential space is generated, and this becomes the ground for a new unity or integration (synthesis)." This characterization is similar to Chapman's (1988, p. 413) description of Piaget's theory as "hang[ing] in the space between monism and dualism (or pluralism) without committing itself to either one." Perhaps the clearest view comes from Lapsley (1996, p. 4), who simply states that "Piaget extends the basic notion of holism by stressing the dynamic relationship that exists between parts and whole, a view that has been called 'relational holism' . . . what is primary . . . is the part-whole *relationship*, or rather, the relationship among the elements."

The relational approach contrasts with mechanistic model whose elemental parts are discrete. Larsen-Freeman, Overton, and others such as Atkinson (2002) agree that a move towards a relational approach is afoot, a framework that focuses on complementariness rather than on antinomies. A relational view has implications for learning—the notion of learning not only concerns what we know but how we come to know. Those who hold a relational view reject the idea that either the self or the other has priority or precedence. Rather, it is within social interaction that the notion of self and other come to be realized (Müller & Carpendale, 2004, p. 219). The primacy of

interaction also applies to individual and social cognition. From an individual standpoint, cognizers apply what they have learnt to content or make predictions about the behaviours of others based on knowledge of the self. From most socially oriented perspectives, knowledge constructed by the group is individually internalized and processed. Whether the individual or the group is given executive status makes little difference, given that in each respective domain a distinct process is said to occur, a process that divides them. Thus, the social and cognitive domains can be said to operate out of two stances, stances that are dichotomized not only by their respective adherents but also by theorists who argue in favour of hybrid views (e.g., who look to bring two distinct processes together). For Piaget (1977/1995, p. 307), individual cognition and social interaction involve the same process of equilibration: “The internal operations of the individual and the interpersonal coordination of points of view constitute the same reality, at once intellectual and social.”

Akin to Larsen-Freeman’s complex systems, Piaget’s theory is based on an open self-organizing system that can be thought of as a spiral rather than as closed, cyclical, or teleological with a fixed endpoint (DeVries, 1997; Overton, 1994). If development were a closed or teleological system, there could be no advancement past the ready-made goal or endpoint. Within a cyclical system, some endpoint must be reached in order that the cycle begin again. In a spiral, development follows a trajectory but is in a sense infinite. Within a spiral, organization is comprised of part-whole relationships. According to Piaget (1977/1995), this spiral system describes all such organizations from biology and mind to reality. The relationship between part and whole can be characterised as an instability that tends towards stability or equilibrium. Consistent with the description of a

complex system, instability occurs when there is contact with other organizations (i.e., perspectives), which acts as perturbations to the system. It is through action (i.e., actions that transform) that part-whole relationships move towards equilibration, where equilibrium (i.e., a totality or balance) is an ideal (Smith, 1993). Boom (2009, pp. 132-133) defines equilibration as “the tendency of the subject to develop increasing control over experience” where experience refers to “all exchanges with the environment outside the body.” In the case of knowledge development, the central mechanisms for this movement are assimilation and accommodation (von Glasersfeld, 1995). Overton (2006, p. 52) refers to assimilation and accommodation as the “action mechanisms of development.” In contrast to a behaviour state or motion, action on an object transforms that object in some way. Assimilation occurs when the effects of an action fit into an existing organization: “the cognitive organism perceives (assimilates) only what it can fit into the structures it already has” (von Glasersfeld, 1995, p. 63). That which does not fit is either ignored or not perceived. With accommodation, the effects are not ignored; rather, cognitive/conceptual structures adjust to fit those effects. The idea of transformation, assimilation and accommodation is perhaps best described by Overton’s (2006) description of making a drinking cup:

Completely adapted (e.g., successful) action entails only the *projection* of meaning onto the world (e.g., If I intend this object before me to hold water as a “cup,” and I successfully drink from it, no change occurs in my conceptual system). Partially adapted (e.g., partially successful) action results in exploratory actions, or *variations* (e.g., If the intended “cup” leads to water leaking onto my shirt, I vary my actions, such as putting my finger across a crack in the object). Exploratory action that is adaptive (e.g., The finger placement permits successful

drinking) entails reorganization of the system (transformational change) and hence new meanings (e.g., A cup is an object without cracks) (p. 52).

Greater equilibrium means an increase in the range of effects or perturbations that an organization can effectively deal with or account for. It should be noted that assimilation and accommodation always occur together. We experience the world in terms of our previous experience (assimilation), but there are always differences between previous experience and current experience, and we must adjust to these differences (accommodation).

The introduction of ways of accounting for an effect may conflict with part-whole relationships that underlie an organization; in this way, the totality may reorganize itself into a more complete organization. This is how Piaget's stages operate. Underlying a relational epistemology is the idea that the type of relationship within and between part-whole totalities gives rise to development.

Rather than seeing this as an endpoint, Piaget saw that in an open system, the greater the perspectives considered and coordinated, the more stable and thus closer to equilibration the system is (Müller & Carpendale, 2000). The question of how new forms of knowledge evolve from an increasingly stable system has been widely discussed in developmental schools of thought (e.g., Kitchener, 1985; Smith, 1993). A response to this question is that although development is directional, it is neither cyclical nor teleological because development is a life-long process (Chapman, 1988). Development is life-long because fully equilibrated knowledge is an ideal that development moves towards but never achieves. It is an ideal that is continually under revision (e.g., Newtonian physics). Knowledge involves re-discovery and reinvention. Hence,

transformation occurs when knowledge is subjected to scrutiny or to other views. In considering the views of others in light of one's own views, the latter are transformed—re-occurring actions that tend toward but prevent full equilibration (Müller & Carpendale, 2000; Smith, 1993).

Relational Epistemology: Cooperation and Constraint.

In *Sociological Studies*, Piaget (1977/1995) states that,

The social totality is neither a combination of pre-existing elements, nor a novel entity, but a system of relationships each of which in its own right brings about a transformation of the elements thus related . . . society is essentially a system of activities, in which elementary interactions consist, literally, in actions . . . reciprocally modifying each other according to certain laws of organization or equilibration (p. 41).

On Piaget's view, as Kitchener (2004, p. 56) notes, "The social whole is the resulting addition of all the relations among individual members." Piaget (1977/1995, p. 135) argued that the evidence used to validate Durkheim's claim that "reason has a social origin" is faulty. Piaget rejects the undifferentiated and potentially co-opted views of a collective as an adequate source of verification, especially if those views are constituted without an organizing principle or logical foundation. Knowledge contingent on and reduced to social factors alone is a "truth reduce[d] to what everyone agrees to" (Piaget, 1977/1995, p. 135). The view, advanced by Durkheim, "interpreted the 'universal' inherent in the Kantian *a priori* in terms of 'collective consciousness' superior and prior to individual consciousness" (Piaget, 1977/1995, p. 135). Piaget also rejected Durkheim's ethnographic evidence of the social origin of reason as contingent upon local, rather than scientific, classifications and representations (e.g., space organized as a

function of tribal territory). (Thus, a problem for Watson-Gegeo's local epistemologies is that they can similarly be understood to lack a universal aspect).

Piaget (1977/1995, p. 136) insisted that it was “neither the individual nor the set of individuals but the relationship among individuals, a relationship constantly modifying individual consciousness [itself]” that formed the basis of verification and hence of the type of knowledge so constructed. Piaget proposed there were two primary relationships—one of cooperation and one of constraint—which correspond to two respective forms of individuality (self and personality). Each relational form sits at the end of a continuum between an array of different degrees of cooperation and constraint. The individual is seen as ‘the self’ when he or she cannot decentrate or see beyond their own point of view. The ‘self’ corresponds to a relationship or morality of constraint. Constraint is characterized as the imposition of rules, values, beliefs, conventions, and opinions by an individual or body of authority (e.g., parent, teacher, political party). Constraint is causal in nature (e.g., society causes us to act) and leads to regulations and forms of knowledge that are poorly differentiated and therefore only partially equilibrated. Another consequence of constraint is a lack of conviction because beliefs are transmitted without critical inspection. For example, a child may follow the rule but break it when parents are out of the room. Such rule breaking can be explained, from a Vygotskian perspective, in terms of a failure to passively internalize a ready-made rule (Lawrence & Valsiner, 1993). On the other hand, from a Piagetian perspective, children will abide by a rule out of unilateral respect for, and deference to, their parents. Rule breaking may occur because the child is constrained by her own perspective, that is, by egocentrism. Therefore, while the child may think she is following the rule she is

actually constrained by her own perspective of what the rule entails or means. Conditions of constraint (i.e., parental authority and the child's deference) and egocentrism work together so that transformation of the rule as an interiorized action by the child is unlikely. For such a transformation to occur the child must be able to evaluate the rule on her own terms; this is more likely to occur amongst peers in situations where social relationships tend to be more equal than unilateral (Lapsley, 1996).

In contrast, 'personality' occurs when an individual actively seeks the perspective of others. Knowledge from personality/cooperation occurs when one "consciously realiz[es] the relativity of one's individual perspective and then relat[es] it to the set of all other possible perspectives . . . [it] implies a coordination of the individual with the universal" (Piaget 1977/1995, p. 218). It is within relations of cooperation that authentic intellectual exchange, reconstruction of knowledge, and novel solutions to problems can occur. The characteristic of this knowledge is its openness to revision; that is, regulated by the coordination of perspectives, veracity is determined by coordinating points of view.

Piaget (1964/1997) considered the cooperative relations which occur in school-age children to be more highly differentiated social forms than those which occur in infancy and pre-school years since such relations require advanced forms of thinking about the self vis-à-vis others. There is no separation between infants and parents because infants lack the self-awareness required to contemplate any distinction between themselves and others. To be clear, the infant does have a social world in the sense of parent-infant bonds and the interactions that characterize such bonds. However, in terms

of forms of thinking, this ‘oneness’ or symbiotic form, a form that nurtures the development of a range of cognitive and social abilities, is the initial step on a trajectory towards full sociality. This form of sociality can be defined as two fully autonomous persons able to come to a reasonable consensus through sharing their views.

During the pre-school years, the form of the relationship between self and others changes from a symbiotic one to a form whereby the child’s awareness of others is relative to the self. Unlike the infant, the young child has a limited self-awareness; this allows the child to view others as separate persons but only in relation to herself since the child operates only from her own point of view. Here too, the child engages in social life such as participating in loving relationships with family and playing with friends. But again, this *form* of sociality is limited because the child conducts these relationships under a socio-cognitive egocentrism whereby she believes others think as she does, that the world, so to speak, revolves around her. It is not until school age that children move away from this egocentrism towards autonomy and this heightened self-awareness leads them to appreciate the autonomous nature of others’ views. Thus, contrary to criticism of Piaget that he failed to take social factors into account in childhood cognitive development, he in fact describes development in terms of the forms of social relationships central to the child’s life. What seems to be at the heart of this criticism is a misconception that Piaget is describing content rather than form or structure.

Furthermore, there is resistance to the idea that full sociality entails greater autonomy as it relates to more equilibrated forms of thinking. Autonomy is often mistakenly described in terms of the isolated individual rather than as a relational position within the social world. An autonomous person is someone who, while

connected to others, is able to retain his or her individual identity. In this form of relationship, the individual is responsive to others without being constrained by them; nor does he relate to others by way of imposing his own ideas, feelings, and beliefs onto them. This idea may meet with resistance because close social bonds are often equated with forms of enmeshment wherein agreements are reached under constraint posing as cooperation. By contrast, rather than ignoring social factors, or taking a pessimistic view of development, Piaget attempted to describe ideal forms of thinking in terms of ideal forms of relationships.

Piaget (1964/1997) also rejected the idea that learning in and by itself explains development; rather, learning occurs as a function of development. He referred to non-spontaneous and spontaneous knowledge/concept development, describing the non-spontaneous as knowledge drawn from observing the effects of one's actions on objects. For example, by rolling a ball a child comes to expect round objects to be rollables. Logico-mathematical or abstract conceptual knowledge gained from modifying and transforming objects also falls under spontaneous concept development. Piaget used the example of a child who arranges ten pebbles into different shapes only to discover their sum to be independent of the order he places them in. Similarly, children come to learn the principles underlying class inclusion through manipulating objects—by grouping joining and separating, and ordering.

On the other hand, non-spontaneous knowledge is knowledge gained from instruction. Piaget stated that instruction can only accelerate development if the instructional content matches the child's developmental level as it pertains to spontaneous concepts and if the child is encouraged to make these same kinds of self-

discovered connections within the classroom environment. Piaget's critique of instruction was that school based activities are usually delivered via non-active methods (i.e., transmission style) and rarely meet the child's current level of spontaneous concept development since such material is pitched at either too high or too low a level.

Vygotsky (1986) also describes non-spontaneous and spontaneous conceptual development. However, unlike Piaget, Vygotsky conceives a very different role for both language and instruction. While he agreed with Piaget that instruction does not seem to coincide with development and that observing the scientific realm is the best place to observe concept development, he contended that spontaneous knowledge occurs *after* non-spontaneous knowledge. Contrary to Piaget's stance, Vygotsky argued that instruction mediates the understanding of scientific concepts the child would otherwise have little access to. Under spontaneous development, rudimentary concepts may begin to surface, making instructional content comprehensible; but these simple, more concrete understandings only develop into scientific knowledge, that is, conceptual understanding of principles and laws, under tutelage at school. Vygotsky saw concept development as occurring in a hierarchical order with higher generalizations or concepts subsuming lower ones.

Piaget, on the other hand, believed that conceptual knowledge first develops by actions taken by the child upon the physical world. These actions, in turn, lead to knowledge about reversible operations (e.g., $2+2=4$ and $4-2=2$ as it applied to conservation, transitivity and other concepts). The ability to perform reversible actions indicated that the child had interiorized such actions, since interiorization meant that the

child could now apply those concepts to other instances. For Piaget then, generalization was the product of the active construction rather than the primary motivator of it.

Vygotsky emphasized the mediating role language plays in conceptual knowledge, which he proposed can be communicated through stories and words found in literature and in classroom instruction. Piaget, on the other hand, argued that children are able to use conceptual words denoting relationships (e.g., because) in their everyday speech but are often unable to apply these words to scientific concepts unless they have first physically enacted those concepts. Children are then able to go back and use the words standing for the concept correctly. Piaget required evidence that children understand the concept. Vygotsky did not seem to share Piaget's concern with such evidentiary transformations. This could be why some theorists such as DeVries (2000) questions whether Vygotsky's central ideas support transmission as a mechanism for change (see also Wertsch & Bivens, 1992). For Vygotsky, the key to change is some form of mediator (e.g., social, cultural, historical knowledge passed down through language) that together with language negotiates the relationship between the child and his developing behaviours. However, Vygotsky seems to imply that the reason why the lower mental functions, a historical and personal genetic endowment, transition to (or is separate from or even transform into) higher mental functions is because of increases in language ability. Language is a mediator since it functions as a tool for thought; that is, it is positioned between the child and his behaviour and between the child and his social, cultural, and historical world acting as the mechanism of transformation. Language, according to Vygotsky, is a direct reflection of thought since the origins of thinking reside in egocentric speech (i.e., talking aloud to oneself which mediates behaviour).

Egocentric speech as a mediator is eventually turned inward and thought becomes the mediator. Piaget saw egocentric speech in different terms. He saw that the relevant aspect of egocentric speech was not talking to oneself but rather talking in terms of the self, as talk that does not include the perspective of others. This kind of relation between talk, self, and other, develops (rather than ‘fades’) as the child is able to ‘decentrate’ from her own view and is therefore increasingly able to be autonomously social with others. However, in Vygotsky’s terms, whether language reflects thinking or whether language is thought itself, it is still left unspecified how such thinking/language as a tool/mediator not only acts as a transformational mechanism, but also how it is then warranted by conversational or other means. Without a mechanism, the door is left open to the possibility that language serves as a pathway for the transmission of social information, including agreement by constraint posing as socially warranted or validated norms. Without explicit reference to how or why knowledge is *transformed* (not obtained or passed down), nor to how such transformations are verified, it is not surprising that theorists such as DeVries ponder whether Vygotsky was a constructivist or behaviourist. It is just this point that seems to concern Piaget.

Piaget (1964/1997) did not deny a role for social transmission, including instruction, and stated that such transmissions were expected and necessary. However, he emphasized form over content—it is the form of relation involved in constructing content that determines the form that content takes. The centrality of actions in the construction of operative knowledge, logico-mathematical knowledge, and social perspective taking may be one reason why Piaget was hesitant to give language a transformational role on its own account. This said, Piaget has been criticized for

underemphasizing the role that language plays in the transformation process. This critique has been addressed by Chapman (1991) who developed the idea of the epistemic triangle which includes communicative co-operations which underlying activities between persons.

Cooperative Interaction and Equilibration.

Piaget's ideas about intellectual development has been misinterpreted on many fronts, but as previously stated one of the most prevalent, but misguided, criticisms is that his was a rationalistic enterprise, one that saw the lone child or individual striving towards solving logico-mathematical deductions (see Mohanan, 1992, as cited in Larsen-Freeman, 1997, p. 154; DeVries, 1997; Lourenço & Machado, 1996; Smith, 1993). However, as Chapman (1988) and Lourenço and Machado (1996) point out, Piaget was interested in sensorimotor and operational action (i.e., a logic of action) rather than in axiomatic logic per se (Bibok, Carpendale, & Lewis, 2008; Boom, 2004; Kitchener, 2004). According to Lourenço and Machado (1996, p. 157; see also Chapman, 1988), Piaget later extensively revised his initial model on formal operations to include the idea that "from its very beginning knowledge always involves organization, inference, and meaning."

Furthermore, although Piaget's early attention was devoted to the relationship between cognition and social interaction, his later insights on individual organization are seen by his critics as supplanting rather than complementing this earlier work (Lourenço & Machado, 1996). It was not that Piaget abandoned his ideas on social interaction; rather, he came to the conclusion that a logic of action characterizes reality at every level—individual and social knowledge. Thus, Piaget's approach is one of relational or

social logic in that it describes the inter-relationship amongst the knower, the object, and others in active construction. In contrast with the received view of Piaget, DeVries (1997, p. 13) argues that “he, like Vygotsky, seemed at times to lean in the direction of the priority of the social. It is in the social that a system is able to be conserved.”

Piaget recognized that axiomatic logic in itself does not discount the possibility of conserving or equilibrating the wrong elements—making logical that which is asocial or amoral. To account for systems of principled activity, Piaget proposed a “synchronic viewpoint” (Piaget, 1977/1995, p. 88). On this view, “logic consists in operations which arise out of action.” The question of whether rationality is constituted by social or individual factors is not relevant. The laws behind logical operations are the same whether these actions are carried out by the individual or by the group in an intellectual or practical exchange, as long there is a coordination of actions moving toward an equilibrated state (Döbert, 2000, p. 145; Müller & Carpendale, 2000; Piaget, 1977/1995, p. 91). “The social relationships equilibrated into cooperation constitute *groupements* of operations exactly like the logical actions exercised on the external world by the individual, and the laws of *groupements* define the form of ideal equilibration common to both social and individual actions” (Piaget, 1977/1995, p. 146). *Groupements* are constituted only in cooperation and denote the most equilibrated operatory structure (Kitchener, 2004).

Piaget refers to the ability to go backwards in time (reversibility) and the obligation to honour prior understandings as reciprocity. Reciprocity “obliges both partners to refer constantly to the past in order to bring present and previous propositions into agreement” (Piaget, 1977/1997, p. 93). When a value is agreed upon, it is conserved.

The more fully an exchange is equilibrated, the more normative, rational, and inferential it is and the less causal and one-sided. Thus, objectivity is contingent on interaction because it requires taking another's perspective: when one takes another's perspective one learns about one's own (Kitchener, 2004).

As noted, it is only through cooperative exchanges that equilibration can occur. If rights are observed and obligations met, cooperation has a rational, normative structure with no causation because all operations are equilibrated. The idea of cooperation as social interaction with an equilibrated structure is best illustrated by Piaget's (1977/1995) plank and pillar example, which proceeds as follows. Two individuals, each on opposite sides of the river, set out to make a bridge using stone for the pillars and a plank for the deck. Each individual must cooperate such that for every action done by X, Y must adjust his own action. Adjusting one's actions in light of the other's action corresponds to a new operation based on reciprocal actions. Some actions are symmetrical: each individual must carry, set down, and directionally arrange the identical number of stones for the pillar. Some operations are complementary/supplementary such that one individual may have to make adjustments to accommodate to contingencies on his side of the river which are not required on the other side. The individuals each carry out their own actions but they do so in relation to one another. In short, equilibrated thinking involves actions that invoke operations such as adding, subtracting, comparing, reciprocity, supplementation, and so on.

Reciprocal modifications are not likely to occur under conditions of constraint. According to Carpendale & Müller (2004, p. 11.), Piaget's social theory was a "transformation model of how society influenced the individual." Learners do not

passively internalize that which is transmitted. Rather, content is always reconstructed or transformed even in assimilation. Piaget (1977/1995) noted that although the rate of reconfiguration can be increased by sociocultural transmission, the knowledge thus retained must follow a developmental trajectory involving the replacement of less adequate forms with more adaptive forms of knowledge in order to be equilibrated. Hence, knowledge is not appropriated; rather, the “individual is called upon to rethink the system of collective notions on his own account and by means of his own logic” (Piaget, 1977/1995, p. 138). For Boom (2004), equilibration increases the possibilities for interaction due in part to the individual possessing an overall conceptual understanding that allows him or her to engage in increasingly complex thinking.

Notably, Piaget suggests that cooperative relations are most likely to occur amongst peers. This is because peers can take each other to task without the risk of sanction. However, DeVries (1997) notes that teachers who respect their students and value their ideas are likely to engender cooperative relationships. Importantly, Piaget (1977/1995, p. 219) also pointed out that cooperation and constraint apply to adults as well as to children, parents, and teachers.

Piaget and Vygotsky: SLA and Education

This explication of Piaget’s theory has been presented to not only provide a theoretical framework for examining interaction in the classroom, but also to correct the misconception that Piaget’s was an individualistic account of knowing. This criticism has often been levelled by researchers who support a constructivist approach but who then turn to Vygotsky’s insights on the influence of culture on individual development

(e.g., Lave, 1988; see Lantolf, 2002). Recall Piaget's primary objective was understanding how coordinated actions operate across entire totalities; he was not interested in the effects of antecedent variables (Lourenço & Machado, 1996). (The effects of antecedent variables were of interest to the empiricists, but according to Piaget, these variables could provide only the weakest and first level of explanation.) Furthermore, Piaget was interested in how knowledge is constructed through experience, the criteria by which forms of knowledge can be judged, and how the transition between forms of knowledge can be characterized (Lapsley, 1996). Consistent with Piaget's position, culture, understood as historical to present day conventions and pathways for knowledge construction (i.e., artefacts), is positioned relationally next to moment-by-moment or real-time intra-and inter personal constructions—relations that define and provide a context for each other. Coordinating perspectives that invoke different pathways of knowing involve resolving complex perturbations, a process that takes time.

It should be evident that Piaget does not ignore the obligations of the individual nor does he discount the importance of the role played by individual cognition, even in the course of social interaction. Müller and Carpendale (2000), as well as Van der Veer and van IJzendoorn (1985), point out that because Vygotsky did not articulate the mechanisms by which knowledge is transferred from lower to higher mental functions, or from culture to individual, the sociocultural approach must rely on transmission rather than on transformative processes. Transmission does not account for how novel knowledge is possible. Piaget saw that the types of relations underlying any micro or macro society were linked to the potential to transform existing views into more adaptive and concurrently better forms of knowledge. This said, SLA theorists such as van Lier

(2000, p. 254), who typically and incorrectly characterises Piaget's approach as one that "place[s] an emphasis on the computational process that happen in the brain" fail to see that Piaget's emphasis on reversibility and coherence was a way to empirically observe how learning or development unfolds over time. It also provides a way to distinguish complex from superficial understanding. These are the themes that interested Piaget rather than computational processes. (I should add that I have been unable to locate any reference by Piaget to 'computational processes' or to any similar term, so van Lier's characterization of Piaget as emphasizing such processes is doubling puzzling.)

This normative and transformative aspect is important because it differentiates Piaget's interactionism from that of Watson-Gegeo's (2004), which stresses the non-universal. The pairing of knowledge with culture (i.e., sociocultural) instead of cognition (sociocognitive) is appropriate if knowledge is understood to be transmitted from specific cultures. Here there is no need for learning mechanisms, a specification of relational types, or explanations regarding norms. But as Müller and Carpendale (2004) point out, without a normative (evaluative) component in epistemology, there is no standard of agreement by which to judge the veracity of a proposition, no matter the culture. Validity issues turn back to problems associated with monolithic society and conformity.

Consistent with the collective, Piaget states that "constraint . . . transforms the individual much less than cooperation does and is limited to covering him with a thin layer of shared common notions" (Piaget, 1977/1995, p. 137) However, constraint has a directive quality as well (van Lier, 1994). The normative standards that come about through interaction, reciprocity, and equilibration are sociological, such that forms of thinking and forms of social relationships are two sides of the same universal coin. In every culture, there are

both cooperative and coercive relationships, virtual values, and regulations which are exchanged. When Watson-Gegeo raises objections about dominant views, what she rejects is the content of those views given that any hybrid worldview, any voice unheard, and especially any voice heard, begins with a normative exchange of values. As Kitchener (2004, p. 61) notes, “if we suppose that no individual, species, or society begins its existence with such epistemic norms and values, one must show how such norms emerge or develop—how they come about from the non-normative.”

These points suggest some essential differences between Piaget’s and Vygotsky’s views on development. As discussed, enculturation views such as Lave’s (1988) rely on cultural assimilation rather than on transformation to explain development. While it is the case that Vygotsky (1981, p. 140) did speak of transformation—“by acting on external nature and changing it, they also change their own nature and act on it at the same time”—the actual mechanism for transformation was not articulated. On this note, von Glasersfeld rejects the idea of knowledge transmission in the classroom. von Glasersfeld (1995) states that:

Adults and teachers transmit knowledge to children and students by interacting with them, and that certain forms of knowledge are inherent in society and transferred directly from the group to the individual. However, what mechanism could effect such a transfer from person to person, has never been explained (p. 66).

One reason why Vygotsky’s ideas are popular with educationalists is that he appears to stress the “social plane” before the “psychological plane.” The following passage from Vygotsky (1981) is frequently used to support a social view of learning:

Any function in the child’s cultural development appears twice, or on two planes.

First it appears on the social plane, and then on the psychological plane. First it appears between people as an interpsychological category, and then within the child as an intrapsychological category (p. 163).

Although Vygotsky is clear about where cultural development appears, the means by which the interpsychological (intermental) category changes to an intrapsychological (intramental) category is left unstated (von Glasersfeld, 1995). For SLA researchers such as Ohta (2000, p. 54), this mechanism is merely described as “meaningful social interaction” or, by Long (1996, p. 451), as “negotiation of meaning.” However, without some form of explanatory cognitive mechanism it is difficult to see how knowledge is transformed. Just as Piaget has been criticized for ignoring social factors, theorists focusing on cultural factors often neglect to explain how this transition takes place perhaps because it involves individual cognitive processes.

In terms of learning a foreign language, Lantolf (2003) and Ohta (2001) claim that Vygotsky’s (1978) egocentric speech, or what more recent researchers refer to as private speech, performs this transformative process. Private speech is speech spoken aloud to oneself rather than directed towards an addressee. Such speech often takes the form of imitation (i.e., children repeating something heard or said to them). From a Vygotskian perspective on early childhood development, private speech has a self-regulatory function and assists with mentally processing tasks. As children get older, private speech is internalized to become an internal or silent voice of thinking.

Piaget’s (1959) study of egocentric speech preceded and led to Vygotsky’s own examination of phenomenon. Piaget began to study egocentric speech because he initially believed it would provide a measure of the child’s immaturity (that is, the child’s egocentricity of thought). He was interested in describing different forms of reasoning

given that such reasoning, initially based on a centrated view (i.e., egocentrism) gradually develops into a form of reasoning based on taking into account, and sometimes adopting, the viewpoint of others. For Piaget (2000) egocentric speech has social implications. Piaget describes egocentric in terms of a failure or inability to take into account the perspective of others. Egocentric speech occurs when children talk aloud to themselves or when any speaker fails to reach intersubjectivity with an addressee. Piaget gives the example of the overly detailed notes of the novice lecturer who fails to take into account the knowledge level of his students. Both the child and the lecturer are centrating on their own point of view in that both begin from an ‘according to me’ vantage point. Thus, egocentrism impedes cooperation and the coordination of perspectives. Such speech, lacking as it does in intersubjectivity, is not as socialized as speech that takes into account an intended audience. Piaget (2000, p. 8) agrees with Vygotsky that private/egocentric speech is interiorized to give way to more developed ways of thinking; however, according to Piaget, Vygotsky did not take into account the importance of perspective taking in distinguishing between private speech and later communicative speech. According to Piaget, as children mature, they are increasingly able to decentrate from a “me” focus and are thereby more capable of partaking in the perspective taking required for more complex, abstract phenomena.

Lantolf (2003) uses Vygotsky’s notion of private speech both as the ‘missing mechanism’ for learning and as a way to connect mind and world. However, this view turns on a representational view of knowledge. Lantolf (2003, p. 351) states that “with regard to second-language (L2) learning, internalization is the process through which

learners construct a mental representation of what was at one point physically present (acoustic or visual) in external form.”

Piaget has been criticized for minimizing the role that that language plays in intellectual development in other ways as well. Although it is true that in his later work Piaget moved away from foregrounding the role language played in thought, his earlier research did address the issue of language in some detail. This so-called neglect was due in part to Piaget’s later conclusion that his description of logical operations/action schemes or *groupements* described reality at every level including language. Physical and logical schemes are prior to linguistic expression and hence learning language occurs in much the same way as any other coordinated action.

Equilibration: A Relational Process.

Although assimilation and accommodation are generally associated with individual cognitive development, these concepts have also been applied to the history of science, teaching, and general learning (von Glasersfeld, 1995, pp. 67-68). von Glasersfeld (1995, p. 67) describes equilibration as an “original theory of learning.” However, von Glasersfeld also states that assimilation and accommodation are unobservable processes taking place in individual minds. In agreement with this latter view, Chapman (1992, p. 53) states that Piaget “did not explain how . . . intersubjective equilibration was related to subject-object and intrasubjective forms of equilibration.” In corroboration, DeVries (1997, p. 13) observes that Piaget “did not study systematically relations between individual operations and social co-operations.”

However, in *Sociological Studies* Piaget (1977/1995, p. 210) states, “social life transforms the very nature of the individual.” Piaget insisted that without reciprocity of thought between individuals cognition would not progress; that is, isolated individuals could not develop intellectually without the benefit of others’ insights. Moreover, he recognized that if the same processes and organizations form the basis of both social interaction and individual thinking, then knowledge cannot be divided into public and private domains. Jopling (1993) states that such a view requires one to think

In terms of relations and reciprocities rather than inner-outer dichotomies. . . . Meaning is not ‘in the head,’ the exclusive function of representations, mental content . . . Meaning is a function of the complex networks of social practices that make up the shared and largely tacit background for human action (p. 299).

On this view, the things that people do are the things that people know. What people do in interaction is talk, and actions are constituted by talk (Turnbull, 2003). Note that this proposal is not that equilibration is reflected in talk, but rather that equilibration is constituted in talk.

According to DeVries (1997), what instigates the learning process (and equilibration) is interest. She states that in Piaget’s view interest was a primary “mental action” by which learners construct knowledge. Interest has a regulatory function. As a source of energy its ebb and flow mediates individual actions. As a result of exposure to a new perspective, perturbations or frictions arise that provide opportunities to refine or change thinking. In such a situation, learners turn to logic, in the broad sense, and interest fuels the need to resolve conflicts through verification within perspective taking. This occurs within conditions of cooperation. Cognition or thinking is distributed across

participants. On this account, *acquisition* can be redefined as collaborative transformation, a conceptualization that moves away from a set of ideas that cognition is solely a private affair and learning a mere transfer of contents from one head to another.

Several researchers in both education and psychology (Resnick, Levine, & Teasley, 1991; Resnick, Salmon, Zeitz, Wathen, & Holowchack, 1993; Wertsch, 1991) have described the idea of joint cognition. However, these positions proceed from the sociocultural claim that all knowledge occurs first on the social plane before it is cognized by the individual. This view negates its relational partner (the individual) whose initial action schemes are constructed by action on objects where independent thinking is crucial. Ultimately, as von Glasersfeld (1995) argues, it is individuals who must conceptualize and internalize knowledge for themselves. Moreover, because constructivism is premised on access to reality through one's own constructions, equilibration has been construed as a form of learning which requires perspective taking. Furthermore, because Piaget underlined the importance of social interaction in individual development, equilibration can be seen in both internal and external actions. This view is consistent with Atkinson, Churchill, Nishino, and Okada's (2007, p. 169) claim that "*what goes on between and what goes in cannot properly be separated.*"

The proposition that the same principles apply to inner mental processes as external ones has met with some resistance in SLA circles. As Zuengler and Miller (2006) point out, in SLA there is still a large divide between social and cognitive perspectives. Although in SLA, the idea of marrying individual and social cognition has received some support (e.g., Larsen-Freeman, 1997), to date only Atkinson (2002) and Atkinson, Churchill, Nishino, and Okada (2007) have endeavoured to bring these two

dimensions together. In acknowledgment of this treacherous terrain, Atkinson (2002, p. 536) makes it clear that such a relational view, what he refers to as a sociocognitive view, “does not yet exist in SLA.” Even after making this initial observation, several years later Atkinson et al. (2007) restated the same thing—that the concepts relating to the sociocognitive view had not been adopted in SLA.

Atkinson’s approach and his research objectives have several tenets in common with Piagetian theory. Generally, Atkinson (2002) and Atkinson et al. (2007) focus on what he refers to as alignment (e.g., Piaget’s coordination of perspectives). In agreement with von Glasersfeld (1995), Atkinson (2002) sees learning as a “default process” of adaptation to the environment. In terms of Piaget’s relational epistemology, Atkinson et al. (2007, p. 170) state that a sociocognitive perspective rejects divisions and seeks rather to “view mind, body, and world relationally and integratively.” They go on to define alignment as “the complex means by which human beings effect coordinated interaction” (p. 169) and as “the means by which human actors *dynamically adapt to*—that is, flexibly depend on, integrate with, and construct---the ever-changing mind-body-world environments” (p. 171). In applying these ideas to SLA, Atkinson et al. (2007, p. 172) state that “alignment includes the learner coming into coordinated interaction with the language being learned,” which in turn includes the usual resources available in the classroom for learning (e.g., books, lessons) and classroom talk amongst members. Furthermore, based on the results of their study, Atkinson et al. (2007, p. 169) concluded that “alignment is a necessary and crucial requirement for L2 development.”

Given these similarities with Piaget’s relational theory, it is interesting to note that Atkinson sees social cognition as falling under the auspices of the sociocultural

approach. Although this may have to do with unstated assumptions about Piaget's theory, it may also have to do with the fact that Atkinson attempts to fit his ideas into connectionism. However, this too is curious as Lantolf (1996, p. 725), whose name is ubiquitous within sociocultural SLA, describes connectionism as a "supposed alternative theor[y]" which relies on the typical cognitive computational metaphor where "subsymbolic computation" is carried out in the brain.

Following Atkinson's initial theoretical paper, Atkinson et al. (2007) moved on to examine the idea of alignment-in-action as it occurs in a tutoring session. This study involved the videotaping of Ako, a Japanese student of English, and Tomo, her aunt who was also her English tutor. Video and audio recordings were taken as Ako and Tomo worked on a grammar worksheet and later prepared Ako's upcoming assignment. Atkinson et al.'s detailed analysis of videotaped interaction during these sessions describes alignment in terms of joint attention (expressions of alignment), turn taking inclusive of gesture, and evidence of learning in progress. Also examined were the ways that Tomo and Ako independently and cooperatively justified knowledge so that learning could proceed. Some of the conversational excerpts reveal what Atkinson et al. tentatively suggest may be instances of learning. Conversations between Tomo and Ako also revealed evidence of socially constructed assimilation and accommodation. (Note that Atkinson et al. did not interpret their findings from a Piagetian perspective.)

Although Atkinson et al. (2007) acknowledge that a learner—in this case Ako—must internalize that which is aligned, there is no mention of how this process is accomplished. That is to say, Atkinson et al. seem to see alignment as *the* mechanism for learning. They do not envision a unity between mind and world whereby the

restructuring taking place *within* a person is a constituent part of the same process taking place *amongst* persons. Perhaps this is because Atkinson et al. (2007, p. 170) deem the notion of “cognitive internalization and restructuring” a “highly cognitivist orientation” and one that “assumes a basic division between mind and world, and a concomitant neglect of the latter.” However, as Müller and Carpendale (2000, p. 142) state, “individual operations of intelligence and social cooperation among individuals are two inseparable aspects of the same system, and they tend towards the same form of equilibrium.”

Thus, actions that construct the learning process can be characterized as transformations occurring through assimilation (note that accommodation occurs alongside assimilation) (Piaget, 1964/1997). For example, when the learner deals with familiar material, perturbations are assimilated based on familiarity—they fit into existing cognitive and conceptual structures. DeVries (1997) notes that this form of learning allows for goal directed physical and mental behaviours. However, when the learner is confronted by a perspective incongruous to existing structure, conceptual/cognitive adjustments are required. In order for this to take place, learners must decentrate or move away from their own views in order to coordinate those views with the perspectives of others. Hence, *acquisition* can be redefined in terms of collaborative transformations which move away from the position that cognition is solely a private affair and that learning involves the mere transfer of contents from one head to another.

Turnbull’s (2003) social pragmatic model of talk is consistent with a constructivist approach in that talk is conceptualized as actions constructed in response to

experience. The social pragmatic model supports the idea that meaning is not mechanistically derived; that is, words do not have fixed meaning, as meaning is not separable from content. The social pragmatic model also rejects Chomsky's (1968) model of language based on generative grammar. Chomsky's account of language results in fixed meaning and cannot account for the interpretive nature of language. The dominant cognitive view is not interested in talk as social practice, but only in the mental processes involved in turning external output and thought into mental representations that precede overt behaviour (Mitchell & Myles, 2004; Turnbull, 2003). Hence, talk is only interesting as an overt behaviour indicative of internal processes. Although many researchers purport to be interested in interaction, and though they may observe conversation, they do so only as a window onto the mental processes of the phenomenon under study (Turnbull, 2003).

In contrast, Turnbull (2003, p. 18) states: "The structure of talk influences the structure of cognition and vice versa. Structure is not a reflection of cognition but of the criteria that has to be met for interaction to occur." Words do not primarily reflect thought; rather, people coordinate actions in talk in order to construct their personal and social worlds. In this way, talk is primarily social action rather than information exchange. Code models cannot account for the intersubjective nature of talk. Being understood depends not on decoding messages (which require a one-to-one literal match between the encoded and decoded utterance), but on interpretation and inference. Addressees respond to what they believe the speaker's intention is, what s/he means to say, rather than to the literal meaning. Hence, meaning neither resides in words themselves (i.e., as objective knowledge), nor in individual minds; rather, meaning is

shared between participants in talk in order to meet transactional, interpersonal, and personal goals.

If human cognition is based on language, then it cannot be based on the computer metaphor, which begins with the premise that language and talk are two different things. While language includes linguistic structures and their rules, talk refers to the “activities or ways in which people together construct this universal form of social interaction and to social interaction so constructed” (Turnbull, 2003, p. 3). This idea rests on the premise that turn taking in talk is context dependent and context producing. When speaking a first language or in learning a new one, we are called upon to act on our intentions through talk, coordinate our meanings with others, and interpret meanings to understand other’s intended actions. These actions suggest that the ‘doing of language’ is, as Piaget suggested, an ongoing and life-long process; however, it is also one that is accomplished locally in real-time across sequential turns.

Several studies using a social pragmatic framework have been carried out (e.g., Atwood, Turnbull, & Carpendale, in press; Turnbull & Carpendale, 1999b; Turnbull & Carpendale, 2001; Turnbull & Carpendale, 2002). These studies have several features in common. First, they look to interaction among participants and use inductive methods to approach empirical questions. Second, only naturally occurring talk is used. Talk is recorded and transcribed using modified methods of conversation analysis or a simplification thereof (e.g., Mercer, 2008b). The researcher analyzes transcripts and approaches the analysis as a descriptive event.

Social Approaches to Language Acquisition and Learning

The turn to socially oriented research in SLA has resulted in an influx of theoretical and methodological approaches. For example, some studies have taken a discursive approach (Potter, 1996), others a conversation analytic approach (He, 2004; Markee, 2000, 2004; Seedhouse, 2004, 2005), an ecological approach (van Lier, 1996, 2000, 2004; Tudor, 2003), or a dialogic approach following the ideas of Bakhtin (Haneda & Wells, 2008). In general, all of these perspectives reject the idea of acquisition and the received view of the isolated learner, the non-native speaker (NNS) who receives ideal input from an ideal native speaker (NS). In the classroom, the teacher models correct speech, input which is absorbed by the student, and then observed as output in a version that can only be negatively compared to the original ideal form (Firth & Wagner, 2007). In contrast, social approaches generally agree with van Lier's (1994, p. 9) view that "knowledge is established through interaction . . . and change must be brought about through interaction." Further, rather than seen as the mere stringing together of discrete bits of information, learning is understood to be an integrative process.

Research is proceeding from a more social orientation than it has in the past. Nevertheless, Smith (2004) observes that although development is relevant to education and classroom issues, most of the socially oriented research being conducted in education lacks a developmental element (see also DeVries, 1997; von Glasersfeld, 1995). Mercer (2008b, p. 35) also claims that few studies pay attention to the temporal aspect of classroom life. Mercer (2008b) and Barab & Roth (2006) argue that, although most social researchers allude to background knowledge, they fail to treat that knowledge as temporal.

These critiques aside, of the social approaches, constructivism is the most radical in its movement away from Chomskian ideas of language and traditional views of cognition (Lantolf, 2000). For example, sociocultural approaches (e.g., Danato, 1994; Lantolf, 2000; Ohta, 1996) have applied Vygotsky's (1986) ideas on how thought and language are mediated by social and cultural factors to different learning theories. Sociocultural approaches reject the idea of language as a formal abstract system and focus instead on language use. However, traditional linguistic concerns are also addressed and traditional grammars have been used (Mitchell & Myles, 2004). Sociocultural inspired studies focus on participation, collaboration, context, and opportunities for learning. These same studies may also examine the ways learners can reach their potential over time with support or scaffolding within a zone of proximal development (i.e., the difference between individual and assisted learning). Methods used include recording, transcribing, and analyzing through interpretive protocols (Myles & Mitchell, 2004).

Mercer (2004, 2008b, p. 38) suggests that sociocultural theory may be a useful approach for studying the role of time in learning and social interaction. However, he rejects the concept of the zone of proximal development as a "static concept, representing an individual mental state at any point rather than a dynamic, dialogic process." van Lier (1996, p. 193) also rejects the usefulness of the zone of proximal development for describing the processes of adult learning. He further points out that although older children and adults may require guidance, they also have "inner resources" at their disposal. Dominice (2005, p. 164) agrees, observing that for adults, "learning is a construction. The sources of learning are interconnected in an adult's life. Adults learn

according to what they have learned before . . . considering the adult way of thinking as the result of a process puts learning on the side of constructivism.” However, Mezirow (1981) has found that adults can maintain a flexible point of view. In certain contexts and upon critical reflection, adults can transform their thinking away from traditional cultural values.

While Mercer (2008a, 2008b), van Lier (1996) and Atkinson (2002) have different approaches to social research, all share with Piaget ideas on how problem-solving, reasoning, and thinking changes with cooperative perspective taking. For example, in acknowledging the centrality of perspective taking, Mercer (2008b, p. 34) describes the process of becoming educated as the “gradual induction of students into new perspectives on the world and the development of new problem-solving skills.” Similarly, a constructivist position follows from the view that the goal of education is to enable students to “take and evaluate different perspectives in cooperation with others within problem situations” (Martin, 2008, p. 59).

Eyring (2001) refers to this educational approach as experiential language learning, which is consistent with some basic tenets of Piaget. Under experiential language learning (a strong version of communicative language teaching (CLT)), students seek out perspectives in order to problem-solve across different domains. For example, learners are usually involved in planning and carrying out individual and group projects. Such projects may include mapping, planning, and research, with explicit language learning as less of a focus. Eyring (2001, p. 334) also emphasizes that in this type of class, learners must have the opportunity to express their opinions: “logical reasoning and discussion are essential in group problem solving.” Discussion, debate,

and presentation, as well as pair and group work are emphasized. Following the ideas of Dewey (whose views also interested Piaget), Eyring (200, p. 335) states that experiential learning involves more than “observation of experience”; it also includes “abstract conceptualization, reflective observation, and active experimentation.” Moreover, she attributes success to individual interest and cooperative interaction amongst group members. SLA studies show cooperative and collaborative learning environments result in better learning strategies, interest, and more adaptive problem-solving skills. In less radical but still effective CLT classes, autonomy is encouraged in individual and group work. Learners may be required to assess, approach, and complete different types of tasks, improve on social conventions of language use (e.g., turn-taking, politeness, tone, contextual meanings), improve on grammar and pronunciation, and apply correction and feedback (Savignon, 2001).

Although Mercer (2000, 2004, 2008b) does not focus on language learning per se and proceeds from a sociocultural approach, he shares Piaget’s view of the necessity of perspective taking in generating knowledge. Mercer’s insights on education and learning address a temporal aspect that he argues has been overlooked in classroom studies. Mercer (2008b, p. 35) states: “As learning is a process that happens over time, and learning is mediated through dialogue, we need to study dialogue over time to understand how learning happens and why certain learning outcomes result.” Mercer’s position is that a temporal focus may shed light on successful and problematic strategies used in perspective taking and knowledge construction. The exclusion of temporality may be due to the fact that its inclusion would introduce “serious methodological and theoretical challenges” and thus require conceptual and methodological creativity (p. 35).

Furthermore, Mercer notes a lack of studies integrating cognitive development, learning, learning outcomes, and discourse observed over time. The first of two reasons for such neglect is that these types of studies are time consuming in terms of observation, transcription, and analysis. The other reason is that there are few if any studies focusing on the temporal to which either theoretical or methodological reference can be made.

Mercer's (2008b) study addresses the centrality of perspective taking in generating knowledge and uniquely addresses temporal aspects in social interaction. Because he dismisses the zone of proximal development, Mercer (2008b, p. 38) has proposed an alternative "intermental development zone" or IDZ. The IDZ is a cooperative "shared consciousness" that is "reconstituted constantly" and brings together "cognitive development and learning interactively" in and through talk over time. Talk as it proceeds over time, both turn by turn and over the course of events, constitutes the intersubjectivity necessary to pursue common interests, goals, and problem solving. Types of talk that unfold over time are not just tools, means, or mediators by which knowledge is jointly produced, but are a constitutive part of knowledge.

Also addressing the role of temporality, Helfrich (1996, p. 105) states that working towards goals relates to what she refers to as "time horizon." The way in which individuals construct present events by reference to the past has been referred to as "time perspective" (Richelle, 1996, p. 12), and "didactic time" (Perret, 2005, p. 138). In order to construct new knowledge, activities that take place in Mercer's IDZ include background knowledge (i.e., Piaget's notion of reciprocity), and shared common understandings—both of which have an historical and dynamic aspect through actions taken in talk. Mercer believes that studies need to look more closely at the ways

knowledge is constructed within time related activities. Perret (2005, pp. 139-140), for example, states that “learning new knowledge and skills implies a succession of times for listening, thinking, imitating, readings, questioning, writing, memorizing, practicing and discussing.” By examining the temporal character of classroom talk Mercer was able to establish connections between this study (Mercer, 2008b) and his earlier studies (e.g., Mercer, 1995, 2000) focussing on how different types of talk engender better or more adaptive forms of reasoning. In this study, Mercer (2008b) and colleagues observed, recorded, transcribed, and analysed the dialogue that took place during six math classes (students aged 10-to 11-years sitting in groups) over the duration of four months. Through the course of observations and in examining classroom dialogue, Mercer was able to track how peer and teacher talk over time (i.e., across individual turns and over classes) encouraged the perspective taking necessary to make improvements in learners’ reasoning, problem-solving, language use, and conceptual understanding.

Mercer’s (2008b) stated aim was to bring the dynamics of learning together with cognition. His ideas on temporality inform how perspective taking in equilibration unfolds over time in turns at talk and across classroom sessions (von Glasersfeld, 1995). Piaget’s (1977/1995) notion of reciprocity factors into the learning process in that learning involves linking concepts in order to bring coherence to what in the beginning may seem like undifferentiated content. Linking current content to background understandings involves going backwards and forwards in time. Furthermore, the course of learning often takes a U-shaped pattern with peaks and valleys (Larsen-Freeman, 2007). On a practical level, courses and daily lessons are often staged in terms of progressive difficulty and courses proceed over a given time. Treated as a skill, learning

another language requires training, practice, and goal setting (Bibok, Carpendale, & Lewis, 2008).

Although van Lier's (1996) research proceeds from an ecological approach, he provides useful insights on the transformative aspect of learning. van Lier proposes that development involves chances for controlled and free practice, using four different forms of interaction including transmission (one-way monologic, authority driven), IRF questioning (dialogic talk of teacher questioning-student answer), transaction (cooperative 2-way activities moving towards conversation), and transformation (self-determined contributions and co-construction as in conversation). Although all four actions are required, transformation is of primary importance. van Lier (1996, p. 191) relates transformation directly to Piaget's equilibration and disequilibrium.

Transformation occurs when "different perspectives, knowledge, and strategies create cognitive conflict [disequilibrium] in the participants . . . and in the resolution . . . new perspectives, knowledge and strategies are created . . . in addition to mere *change*, we have to account for change in a desirable direction, towards set goals (in other words *achievement*)" (van Lier 1996, p. 183). As learners move past monologic and other forms of discourse, the likelihood is that opportunities for perspective taking will increase. Furthermore, van Lier (1996, pp. 183-184) conceptualizes the classroom as a place where there is a "dynamic tension between diversity and homogeneity, between many voices and one voice, between autonomy and external control, between conversation and monologue . . . and to the extent that all participants shared this meta-interactional awareness this direction can be negotiated and rationally controlled."

Utterances leading to transformation, reports van Lier, are those that relate new

knowledge to background knowledge, set up expectations, validate positions, and promote interest, attention, and intersubjectivity in both predictable and unpredictable ways.

The research described in this section supports a social view of learning. Piaget's insights about the nature of cognition—the indivisibility between the individual and social world—further buttress this view. Given the insights of Piaget and others with respect to language, learning, and thinking, one of my central claims in this dissertation is that there is a seamlessness between what learners think and what learners do; that is, there is a reciprocal relationship between 'inner' and 'outer' processes.

Chapter 3

Goals and Method

Overview of the Study

In light of Piaget's contention that the same organizations and structures underlie both the cognitive and social domain, a primary goal of this dissertation is to examine the equilibration as a social process, one that is co-constructed through classroom talk.

Equilibration is a complex process; hence, there is no easy 'recipe.' However, I propose that the equilibration process includes, amongst other things, the interrelated processes of assimilation and accommodation, the resolution of perturbations, and perspective taking. Recall that equilibration has been variously defined. For example, Boom (2009, p. 132-133) sees equilibration as "increasing control over experience" while von Glasersfeld (1995, p. 63) characterizes equilibration as a gradual increase in the range of perturbations that one can deal with. Thus, the interrelated processes of assimilation and accommodation provide a pathway by learners can increase both the range and complexity of their knowledge of English.

I also propose that resolving perturbations is linked to perspective taking. When students share their viewpoints, meanings are co-constructed and individual opinions can shift. Perspective taking affords opportunities to refine, co-construct, and produce novel thinking. Traditionally held views would interpret this to mean better individual cognitive processing as observed by an increase in the complexity of language structure, but a social perspective entails more than this. The manifest evidence of 'doing' equilibration involves an increasing ability and willingness to participate in opportunities for perspective taking. Both teachers and students create these opportunities for

perspective taking which also enhances opportunities to make decisions about replacing less adequate forms of knowledge with more adequate ones. This knowledge pertains to linguistic and pragmatic aspects of the language and to propositions about the world. Such decisions rely on everyday reasoning. These accomplishments turn on reciprocal actions (e.g., conserving the past in order to bring new understanding to light), reconstruction, intersubjectivity or joint understanding, and everyday forms of reasoning.

DeVries (1997) also proposes that learner interest motivates perspective taking. van Lier (1994) agrees when he states that learners will be hesitant to participate unless they have a stake in the process, are engaged in the process, and are given the chance to bring authentic experience to the process (which is the opportunity to express what one actually believes and feels). Authentic action is intrinsically motivated. The sources for such judgements regarding motivation were observations, field notes, and the structure and content of talk itself.

The emphasis on cooperative perspective taking fits well with an extended view of the *Standards for Foreign Language Learning* (SFL) (1999).⁴ A companion to the *American Council on the Teaching of Foreign Languages* (ACTFL Guidelines, 1999), the SFL describes the pragmatic benefits of learning another language. Unlike the *ACTFL Guidelines* that outlines stage related linguistic criterion, SFL addresses “Knowing how, when, and why to say what to whom” (p. 3). One of the primary elements in the guide describes how each of the “Five C’s” listed within the SFL (e.g., *Communication, Cultures, Connections, Comparisons, and Communities*) can be used to afford opportunities for perspective taking and reasoning. For example, under beginner

⁴ Extended because the Five C’s apply to learning a foreign language other than English from K-12. However, the literature also states K-12 and beyond. These standards are proscriptions as set out by a coalition of four American-based national language associations.

Communication, Standard 1.1: *Students engage in conversations, provide and obtain information, express feelings and emotions, and exchange opinions.* Under *Culture*, Standard 2.2: *Students demonstrate an understanding of the relationship between the products and perspectives of the culture studied.* Under *Connections*, knowledge should be interdisciplinary in nature and Standard 3.1 holds that, *Students reinforce and further their knowledge of other disciplines.* Similarly, under Standard 3.2 *Students acquire information and recognize the distinctive viewpoints that are only available through the foreign language and its cultures.* The standard under *Comparisons* promotes understanding *the nature of language and the concept of culture and realizes that there are multiple ways of viewing the world.* This includes thinking critically about how language works. Lastly, under *Communities*, students should *participate in multilingual communities at home and around the world.* The upshot of the five C's is that the exchange of views plays a central role in proficiency level and description. These standards mesh well with the idea that knowledge is open to revision through perspective taking.

It is important to note that, unlike children who must learn both language and concepts, adults have the concepts already in hand (Turnbull, 2003). One of the major difficulties for the adult learner is the frustration of expressing a concept. In some instances, the content in English language classes is better suited to children as it targets both conceptual meanings and language forms (Savignon, 2001). This is one reason why it is important for adult language learners to begin expressing their personal opinions from the beginning stages.

Throughout the study, I will informally turn to the criteria as set out by the *American Council on the Teaching of Foreign Languages (ACTFL)* (1999) and the *Standards for Foreign Language Learning (SFL)* for insight on whether and how students are progressing. This progression may well take place over turns at talk and/or over several months of class participation.

Bridging the Gap Between Theory and Practice

The gap between theory and practice in SLA has been a topic that has prompted both commentary and research in the field (e.g., Block, 1994; Nunan, 1995). The main concern is whether theorists—some of whom have never taught a language class—should be making prescriptions to teachers about the best way to teach. In order to ‘narrow the gap’ between theory and practice, I completed the Certificate in English Teaching to Adults (CELTA). This credential is the most highly regarded entry-level credential and is accepted worldwide. After obtaining the CELTA, I taught ESL classes at all levels of proficiency. I also taught the *Test of English as a Foreign Language (TOEFL)* as well as *Teaching English to Speakers of Other Languages (TESOL)* course. The TESOL is a teacher-training course that prepares students to teach English abroad, usually in their home countries. I believe that this practical education and experience has helped inform this dissertation.

Goals and Research Questions

Although one of the primary goals of this dissertation is to examine the equilibration process with respect to perspective taking, assimilation and accommodation, and resolving perturbations, perhaps a relevant preliminary question is whether speaking

opportunities occur in the first place. There are several reasons to be concerned about lack of opportunities to speak. Decades of classroom research as well as more current research on discourse and participation provide a quantitative baseline or context from which one can proceed. This research suggests that the Recitation format (Barnes, 1992; Cazden, 1988; Mehan, 1979) which includes the Initiate-Respond-Evaluate (IRE) and the Initiate-Respond-Feedback (IRF) structure (Cazden, 1988; Tharp & Gallimore, 1988; Wells, 1999) not only persists, but has become to define the notion of ‘classroom talk’ (Nystrand & Gamoran, 1990). In recent research, Weist (2004) found that in foreign language literature classes—where an exchange of views is typically expected—the instructor did 90% of the talking. Further, Nystrand (1997) found that the Recitation format was used almost exclusively in 112 eighth and ninth grade language classrooms and was negatively correlated with learning. Other research has generally shown how Recitation structures limit student involvement and complex thinking whilst facilitating teacher control (e.g., Barnes, 1992; Cazden, 1988).

Teacher fronted classrooms have consequences for learning. Students are assigned the role of passive observers of their learning experience since they are not given the autonomy to initiate questions or topics, express their authentic opinions, or to elaborate on, challenge, or critique transmitted information. For the most part, this occurs because of the predominance of teacher-initiated questions designed to elicit pre-determined answers (Glisan & Donato, 2004; Weist, 2004). Without the opportunity to engage in authentic discourse and without an authentic classroom experience, students have no stake in their learning process; their main objective is to regurgitate information during tests (van Lier, 1996). Despite the emphasis on perspective taking and cultural

awareness as recommended by the *Standards for Foreign Language Learning* it seems that some teachers still fail to recognize the learning value in authentic exchange. This type of classroom environment is consistent with Piaget's notion of constraint with its one-sided control, lack of autonomy, authority, and freedom.

Autonomy, on the other hand, plays a role in authentic participation (i.e., genuine inquiry with no pre-specified answer and genuine interest) where students get involved because their verbal participation plays an integral role in the course content (van Lier, 1996). Nystrand (1997, p. 17) stresses the importance of learner autonomy since empowerment and collaboration work together in the construction of knowledge; further, he outlines the role of teachers should play which is to "moderate, direct discussion, probe, foresee and analyse the implication of student responses." Autonomy moves talk in the direction of sharing perspectives. Research by Mercer (2000), and Chinn, O'Dennell, and Jinks (2000) confirm that when students are given the opportunity to engage in perspective taking, they increase their participation and discourse is enhanced. As well, O'Keefe (1995) argues that student talk develops thinking. Thinking within an English language class entails attention to language and to the topics that provide opportunities to use that language. Success at learning another language depends on the airing of ideas and opinions and on the opportunity to take multiple and extended turns at talk (Glisan & Donato, 2004; van Lier, 1996). For the beginner in the language classroom, extended turns are conversational turns comprised of more than a few words (ACTFL Guidelines, 1999). As students progress, extended turns function to respond to a prior turn in order to explain, justify, suggest, position, share, or generate ideas. Although at the beginner level this sharing of perspectives may be comprised of sharing

basic personal information (e.g., likes and dislikes) and simple opinion (e.g., why I like *x*) (Kern, 2002), the *Standards of Foreign Language Learning* (1999) also states that beginners should be orienting to perspective taking and basic reasoning. Opportunities to participate are consistent with Piaget's description of cooperation as offering the freedom to explore ideas. However, it may be that teachers believe that students who have low proficiency are not yet ready to exchange opinions. Because perspective taking is an important aspect of this process, a goal of this study is to examine perspective taking with respect to equilibration at Beginner, Intermediate, High Intermediate, and TOEFL proficiency levels.

Quantifying participation is often muddled by our lack of knowledge concerning whether students fail to participate because of a teacher's individual style or because of personal reasons or preferences (Atwood, Turnbull, & Carpendale, in press). Rather than quantifying participation within and between classes, Markee (1994) suggests that the application of conversation analytic methods to SLA can be used to describe differences in participation. For example, these differences and language development can be described in terms of the pragmatic actions performed in talk in and across turns (e.g., question, answer, proposition, clarification, assertion, rejection, and repair). They can also be characterized by the way turns are structured (e.g., overlapping speech, hesitation, cut-offs), by the general character of a turn (e.g., length, fluidity, complexity), and by content itself (Markee, 2000; Turnbull, 2003). Describing or characterizing how classroom members go about jointly constructing the equilibration process offers more insight into complex processes than merely counting words to gauge participation. Thus, the question is not whether there are more opportunities in the quantitative sense, but

rather how opportunities with respect to equilibration (i.e., perspective taking, perturbations, as well as content, structure, complexity, and spontaneity—issues dealing with increasing autonomy) change over time.

Moreover, the *Standards for Foreign Language Learning* (1999) stresses that grammar (how) and vocabulary (what) are only two aspects of competence in a new language. Knowing a language is now thought to involve social-pragmatic issues such as “knowing how, when and why to say what to whom” (*Standards for Foreign Language Learning*, 1999). This knowledge turns on opportunities to participate in everyday talk both inside and outside the classroom—activities that involve the coordination of perspectives. I propose that these characterizations comprise the way that equilibration process takes place.

Another goal of this dissertation is to examine how classroom members deal collaboratively with perturbations via talk-in-interaction. Recall Piaget’s contention that the most frequent cause of accommodation and assimilation is interaction. Perturbations lead to disequilibrium and motivate the assimilation and accommodation process. Hence, compensating for, or resolving, a perturbation is one process that drives development. Piaget referred to perturbations as they occur both in the operative domain and in the social domain. However, within these domains the focus is on how cognitive structures would be transformed rather than on how perturbations arise in talk. Piaget did have an early interest in universal pragmatics as it pertained to co-construction of social agreement and conflict; however, the notion of perturbations as actions taken in talk for the purposes of learning via assimilation and accommodation has not been examined. According to Piaget, perturbations manifest themselves as either contradictions or gaps in

knowledge. Piaget posited that compensating for perturbations was a stage related process. In the *alpha* stage, a perturbation is ignored, leaving structure (and knowledge) unchanged. In light of the exposure in the *alpha* stage, in the *beta* stage, the perturbation is recognized and the gap filled or the contradiction resolved. This modification results in an advance in knowledge. In the *gamma* stage, the perturbation is anticipated and compensations take place before its actual occurrence. The knowledge derived from such compensatory processes and the joint methods used by individuals in such processes opens up possibilities for subsequent perturbations (Chapman, 1992).

Chapman (1992, p. 50-51) notes that Piaget described these compensatory stages in terms of childhood development in general and to the operatory domain (i.e., individual action on objects) in particular. He expands on the idea of perturbations arguing that the construct can be adapted to address issues within the intersubjective realm and to processes of learning. (Recall Piaget's contention that the same organization and structures that occurred within individual relations also occurred within inter-individual relations). Chapman (1992, p. 51) proposes that forms of equilibration takes place between individuals and one way of identifying these forms is "to consider the kinds of 'perturbations' that result in equilibration and how they would be manifest in the intersubjective sphere." Chapman sees that dialectical contradiction as well as gaps in knowledge can be resolved through joint activity (issues integrated into his idea of the epistemic triangle). A dialectical contradiction involves competing viewpoints and reasoned argumentation mediated by the spirit of cooperation. As a result of argumentation, one side might present evidence that compels the other side to agree;

hence a momentary equilibrium is achieved. Another outcome is that such argumentation may lead to an altogether new viewpoint (i.e., a new possibility).

The other form of perturbation addresses gaps in knowledge. Chapman (1992, p. 52) states that this type of perturbation occurs when participants lack the means to attain a goal. In the intersubjective realm, gaps in knowledge are filled in by “inquiry” or “interrogation” of another contributor. In contrast to transmission models, filling in gaps involves the joint production of knowledge; if each participant shares what they know, then collective knowledge has the potential to change individual knowledge.

Perturbations initiate the equilibration process since participants must assimilate and accommodate the content of such resolutions. This process relates to the way knowledge is constructed. Characterizing equilibration as a social process allows the analyst to observe the way perturbations are both generated and dealt with, how classroom members are held responsible and accountable for their actions, the way background knowledge is used or invoked, the way ideas are transformed, and the methods by which intersubjectivity is maintained through reciprocal supplementary and complementary actions.

Boom’s (2009) conceptualization of equilibration as one’s ability to exercise increasing control over experience also points to opportunities to participate in perspective taking and the co-construction of meaning. This involves acting on, and providing others with, opportunities to learn and using language in increasingly complex ways in order to express a viewpoint. As mentioned earlier, the *Standards for Foreign Language Learning* (1999) specifies in broad terms areas of content, whereas the *American Council on the Teaching of Foreign Languages (ACTFL Guidelines)* (1999)

lays out specific competencies within a developmental trajectory from novice to superior. The task for this study is not to test these guidelines but rather to use this information in order to make informed judgements as to whether students are in fact progressing in their use of English.

The central research questions under study are as follows:

1. Talk:

- a) What kind of opportunities are there for students to speak and how are conditions of cooperation and constraint related to these opportunities?
- b) How does talk change over time given increasing proficiency?

2. Equilibration:

- a) How can the equilibration process be characterized in terms of actions taken in talk?
- b) How are assimilation and accommodation carried out in talk? How are they linked to learning?
- c) What role does perspective taking and the resolution of perturbations play in the equilibration process? What role do they play in learning?
- d) Are there different kinds of perturbations, and if so, how are they dealt with, and what are the consequences of those actions? (For example, do they initiate the equilibrium process?)

Method

The English language classes that form the basis of the study took place at an internationally recognized language school. In total, four levels of classes were observed.

At the suggestion of the school administrators, only the morning or more conversational classes were recorded on a twice-weekly basis. Each of these classes was approximately three hours long. Observations/recording took place over a 10-month span. The classes observed were referred to by the institution's promotional literature as Beginner, Intermediate, High Intermediate, and TOEFL. High Intermediate was the highest level available within general classes unless students went on to take a TOEFL course.

In order to advance to the next level of proficiency students were required to obtain an average of 70% on a combination of written and verbal tests. Alongside this score students were required to attend classes at least 80% of the time. Students were not generally allowed to speak their L1 in class (but this rule was regularly broken with no consequence). As well, students were allowed to use electronic translators during regular classroom lessons.

This particular school was chosen for several reasons. Although the headquarters are based in New York and the school brand is part of a larger corporate entity, it is nonetheless an international concern with locations around the world, giving it a global reputation. It has two branches in Canada, one in Vancouver and the other in Toronto. In choosing an international institution rather than a locally owned and operated enterprise I believed the curriculum (e.g., methods, goals, evaluation) and syllabus (texts, expectations, goals) stood a better chance of following from a communicative rather than traditional (i.e., teacher-fronted) approach, since an international school is not overseen by an individual proprietor's personal direction.⁵

⁵ For example, at one school where I taught teachers were expected to teach in the 'Korean' style (i.e., teacher-fronted classroom with emphasis on rote learning).

The pedagogical approach was based on communicative language teaching (CLT) with an emphasis on the four skills (i.e., reading, writing, speaking, and listening). In general, CLT emphasizes the learner, speaking and cooperative interaction, and language use rather than form (Celce-Murcia, 2001). CLT was consistent with my own goals for the study. Students were encouraged to talk and collaborate on reading, writing, and listening tasks as well as when doing grammar. However, the degree to which this was realized largely depended on the teacher.

Another reason for choosing this school was that the classes were extremely small (4-8 students per class maximum). This provided advantages for recording and transcribing those recordings in terms of simplicity of voice recognition and transcript complexity. Limited class size also meant that if a student chose not to participate in the study, his or her voice could be easily identified and thereby eliminated from the study. The administrators prevented the videotaping of classes due to privacy concerns.

Lastly, fewer students increased the chances of individual verbal participation. Small classes also had a social advantage. That is, I was able to have some rapport with students and become part of the classroom milieu.

Besides a written overview, the terms of the study were explained to all students by the researcher. Because of language barriers, especially with beginners, students were offered one of several written overviews that had been translated into a variety of languages. A consent form was also distributed to each student. Both the overview and consent forms were available in English, Korean, Japanese, Chinese (Mandarin), Taiwanese, and Portuguese. All teachers and administrators were required to read and sign a separate information sheet as well as a consent form. Students were informed that

their participation was voluntary and their voices could easily be eliminated from the study if they chose not to participate. All students volunteered for participation.

In addition, a brief questionnaire was given to students. This questionnaire was meant to obtain some contextual information such as home country, first and additional languages spoken, reason for learning English, and so forth. Additionally, field notes were taken during each class that included observations about classroom interaction. The instructors also seemed willing to share their insights on the progress of certain students.

The complement of observation, field notes, audio recording, and use of conversation analytic techniques are consistent with an ethnographic approach (Tarone, Gass, & Cohen, 1994). Contextual data from the questionnaires and field notes, paired with a microanalysis of classroom talk, is suggestive of the type of studies done by Duff (2002), and over the years by Mercer (1995, 2000, 2004, 2008a, 2008b). However, despite the transcription techniques and the analysis of talk, both of which resemble the methods used in Conversation Analysis (e.g., Markee & Kasper, 2004; Seedhouse, 2004), the inclusion of such contextual data moves the study away from a conversation analytic approach (an approach that rejects the use of background information as contextually unnecessary).

As stated, each recorded class was approximately three hours in length. New student intake at the school occurred on an ongoing basis. After new students were assessed for their general proficiency level by means of a short conversation and a review of their prior education, the new students joined into the class activities without regard for the chapter in the text that was currently under study. (This is normal procedure at all schools that have continuous enrolment.)

The administrators of the school suggested that morning lessons, because of their content, were more likely to provide opportunities for speaking than were afternoon classes. Nonetheless, a fair portion of the recorded content consisted of listening to tapes, reading aloud, and writing with talk wrapped around these activities. In light of the sheer amount of data generated over the ten-month duration of the study, and although all recordings have been heard multiple times, detailed transcriptions of all the recorded material was rejected as impractical. As the focus of the study mainly concerns the social nature of knowledge construction, only relevant excerpts which further these goals have been transcribed and analysed. Duff (2002, p. 294) refers to selecting relevant instances as a “principled selection” of extracts. Duff (2002, pp. 294-295) also notes the challenges in dealing with multiple sourced data when she states that in such research “as in all empirical research, data reduction is necessary, often achieved by the principled selection of a limited number of representative activities, discourse samples, and focal research participants from a much larger study.”

Relevant information regarding the corpus obtained from the questionnaires and field notes is discussed within the introduction of the extract or within the analysis itself. It should be noted that except for the TOEFL classes, I have attempted to include as many extracts as possible that track the activities of Enzo, since he is the only student in the revolving corpus whose intent was to go through the three levels of the program. (However, as my initial purpose was not to capture any one student per se, there are other extracts used where Enzo is not a participant). Enzo’s ongoing participation in the program offers a rare opportunity to observe the ways that social interaction and language skills work together.

Following Mercer (2008b) and Duff (2002), I have used only a subset of the symbols used Conversation Analysis (Sacks, Schegloff, & Jefferson, 1974). These notations are briefly described below.

Pauses two seconds and over (**2.0**) are noted as they may indicate trouble spots of understanding as well as point to fluency and proficiency.

Overlapping speech is indicated by **[square brackets]** within each turn. Overlapping speech can indicate agreement, competition for a turn, or cut-off of the current speaker.

Unclear utterances that are (**inaudible**) are placed in single brackets and ((**laughter**)) and **side notes** such as ((**teacher points to Joe**)) placed in double brackets.

A **rise in intonation** is indicated by an up arrow ↑ and a fall in intonation by a down arrow ↓. Rises in intonation may indicate a question form but also surprise, disbelief, and uncertainty. A fall in intonation can signal disapproval, request for clarification, and other actions.

Words that are **emphasized** are underlined. Because English is a stressed timed language teachers may use emphasis to draw the learner's attention to a certain word or phrase that is a trouble spot.

Words that are **drawn out** are indicated by colons depending on the length of the sound. Extending a sound can indicate hesitation (**we::ll**) or other actions.

Words that are **cut off** or when there is an abrupt change in speaker is marked with a **dash-** on the word in the prior turn a **–dash** on the first word of the next turn.

Chapter 4

Beginner

Observation of the beginner class took place from October 3, 2006 to November 17, 2006. According to the school, by the end of the course students should be able to produce simple sentences and ask basic questions. Comprehension of normally paced conversation will still be somewhat limited. According to the *ACTFL Guidelines* (1999), there are three proficiency levels within beginner speaking. (Other areas of competence are listening, reading, and writing.) All of the students coming into the beginner course had abilities consistent with mid- or high-level novice (e.g., elementary use, very short utterances, frequent long pauses, and repetition of words). At high novice level, students should be able to form questions, make statements, and talk about basic objects and places, and use kinship terms. However, there is no autonomy of expression.

Students were working from the *North Star* (2003) workbook by Robin Mills and Laurie Frazier. The basic elements of the course consisted of this workbook along with recordings accompanying the master text. Teachers at this particular school were also allowed to devise their own activities as long as such activities were deemed appropriate.

The teacher of the course was a woman I will refer to as Martha. She was in her early to mid-forties, with five years of teaching experience. Her classes could be best described as low key (i.e., quiet and studious). The classroom had a large rectangle table in the centre of the room, with Martha at the head of the table. This meant that students could not pair with students across the table but only with students sitting next to them. The room was decorated with posters and drawings, with a white board at the front of the room. Because the school is located on one of the busiest intersections in the city, a

reoccurring annoyance for all classroom members (which students often mentioned) was the outside traffic noise.

The only student who followed through from Beginner to Intermediate High was a Taiwanese student (English name: Enzo). His extended stay at the school allowed me to observe whether and to what extent his opportunities to participate changed as he became more proficient (assuming that he did). Although Enzo appears in many examples, analysis will not be applied exclusively to his interactions, since a range of learners is necessary in order to fully observe classroom life.

The beginner course content addressed listening, speaking, writing, and reading. However, because many students take courses primarily in order to improve their speaking, there is a general trend towards giving students opportunities to speak within these four skills. This approach is consistent with the views of Murphy (1991) who suggests oral skills should be connected to the other three skills. Beginner students generally have problems with fluency, which is commonly defined as “the ability to link units of speech together with facility and without strain or inappropriate slowness or undue hesitation” (Hedge, 1993, pp. 275-276). Hedge, however, further suggests that a definition of fluency should also address the way that talk unfolds within natural conversation. As previously discussed, talk as opposed to language is comprised of actions; therefore, talk does not resemble written or ideal language (e.g., hesitation could signal rejection). Understood in these terms, fluency must be considered as socially relevant interaction.

The students in the beginner class are Dan (D) and Enzo (E), although Hosan (H) also occasionally came to class. Dan was a 25-year-old dentist from Rio de Janeiro. He

joined the class on October 10, 2006. Dan did not have any classes in English during his formal schooling, but prior to coming to Canada, he had employed a private tutor for six months. He reported that his father and brother could speak some English. Martha noted (in private conversation) that Dan was as a reluctant student with low motivation.

Although Dan told me that he considered his abilities in conversational English to be weak and that he needed to work on improving his conversational skills, he seldom practiced—that is, he spoke only when required and his conversations with peers were generally brief. However, his energy level picked up noticeably when the conversation turned to Brazil, dentistry, or any topic that concerned his interests. He seemed to dislike games whose activities he deemed non-applicable to his goals. That said, observational field notes reveal that quite often activities were somewhat child-like in nature, a common pitfall in beginner classes. Dan reacted to the teacher's pronounced tendency to provide conceptual explanations for common content as if students were learning language concepts for the first time. This approach led to instances of talking to students as though they were children. However, this occurred only intermittingly and upon observation, it seemed that most of Dan's motivational problems resided in his homesickness. As a result, he spent much of his non-instructional time talking to friends and relatives back in Rio de Janeiro (in Portuguese). Dan stated on occasion that Vancouver was very boring in comparison with Rio de Janeiro. In fact, although he originally planned to stay in Vancouver until March 2007, he eventually altered these plans to leave in early December. Perhaps mirroring his feelings, Dan's attendance was sporadic and he was often late to class. It seemed like his main goal was to advance to

the intermediate class but once there he seemed no happier (i.e., the same pattern of conversational reticence and sporadic attendance continued).

Enzo joined the class on October 13, 2006. He was a 25-year-old male from Taiwan. His plan was to attend all three levels (Beginner, Intermediate, and Intermediate High). This goal necessitated that he stay in Vancouver for several months. He stated that learning English would lead to greater work opportunities in his field. He described his occupation as either a production assistant or producer for low budget films in Taiwan. Unlike Dan, Enzo had received formal English instruction in elementary and high school; he had also received limited instruction in university. However, he also revealed that his English instructors could not actually speak English, a common problem as students usually only study grammar and reading. Enzo also reported that he wanted to integrate into the host city's culture and socialize with either native English speakers or with students with a different L1 than he so he would have to speak English to communicate. His closest friends were a Brazilian brother and sister, Paulo and Ana, whom he met in the intermediate class. Unlike Dan, Enzo stated that he enjoyed the small, almost exclusive, instruction with Martha. He seemed motivated and unbothered by her teaching style. He also reported liking the host city and that he was not eager to return to Taiwan because of Taiwan's hot weather. His attendance was regular and he was always on time. From an observer's point of view, Enzo had less overt self-confidence than Dan, but was more determined to make the best of his learning experience. Part of the reason for this may have been that Enzo had to save his own money for several years in order to come to Canada. In fact, because of his tight budget

he was unable to partake in most of the class trips or social invitations requiring any entrance fees. Despite these limitations, Enzo appeared to enjoy himself in class.

Hosan (H) was a Korean student in his mid-twenties. He was an infrequent member of the class and at some point stopped coming (even though he was still in the city). He had had English instruction throughout his formal schooling. Reportedly, he preferred self-study in the public library to classes. After his apartment was broken into and everything stolen (including several thousand dollars in cash), Hosan quit coming to class.

An analysis of talk can address both macro and micro issues in depth. Although there is an indeterminate number of important issues that could be analysed in any segment of talk, in the following examples I focus on details that pertain to my research questions only. Thus, not every line in a transcript is analysed.

In Example 1, the teacher is observing the students' ability to begin, maintain, and end a conversation. In addition to this observation, she took notes on what aspects of conversation students needed to improve upon. The length of the sequence suggests that the teacher understands the value of speaking as she suspends other activities so students can engage in naturally occurring and extended turns at speech with minimal interference. The topic of the conversation was consistent with the theme from the text, which was a childhood recollection of going to a green space or park-like setting. The length of conversation offers a rare chance to observe beginners co-constructing a conversation using the resources at their disposal.

The most frequently occurring phenomenon at beginner level were perturbations. Perturbations occurred when there was a problem with a class member's current way of

thinking or understanding. Such perturbations prompt actions that can resolve ensuing problems. The way that a given perturbation is resolved assists in the interpretation of the kind of perturbation dealt with. The way perturbations are dealt with also plays a role in the analysis of the equilibration process (e.g., whether and how new forms are assimilated and accommodated) and thus has consequences for learning. I found that as proficiency increased so did the complexity of the perturbations. At beginner level, problem spots tended to arise because of vocabulary issues. As students progressed, pragmatic and conceptual misunderstandings arose as well. From a Piagetian perspective, as students progress, what was once undifferentiated knowledge becomes more distinct knowledge. In turn, these distinctions allow for a larger range in the types of issues that may be problematic for learners.

Another issue that stands out in this and other beginner segments is how time-consuming and labour intensive beginner speech can be. This intensity can be observed not only in the structure and content within the examples but was expressed by several students. This intensity works against addressing every problem that may arise; that is, some perturbations may be ignored.

Finally, a general point applicable to this and other segments is the way that talk and meaning are co-constructed. The ideas illustrated in the pillar and plank example---that success requires cooperation in terms of reciprocal, complementary, and symmetrical actions---can be applied to the constructive processes taken in talk by classroom members in order to be understood and make meaning. This point is observable throughout all the examples and I will therefore only comment on this periodically.

October 20, 2006

Example 1, Beginner

(Teacher (T), Enzo (E), Dan (D), and Hosan (H))

- 1 E: when i was a child i went to park in taiwan (2.0) the park had so::::me
- 2 some some flower trees and and ah an ocean museum (2.0) i went to a
- 3 ocean museum
- 4 H: ocean museum (2.0) what is an ocean museum↑
- 5 E: museum is a place where have some (2.0) some ah ah other thing
- 6 H: other thing↑
- 7 T: so the theme of the museum is ocean↑ ocean things↑
- 8 E: yeah
- 9 T: like like fish and
- 10 E: like fish
- 11 T: fish fishing and um
- 12 E: and dolphin
- 13 T: dolphin and things in the ocean
- 14 E: yah i saw very dolphin in the ocean museum it was very funny it was very-
- 15 T: -oh yeah we have one too
- 16 D: and this museum have have green area↑
- 17 E: excuse me↑
- 18 D: in museum there are green a-area
- 19 E: area↑
- 20 D: yeah there are or no↓

21 E: ah (2.0)

22 D: are there are there green area or no↑

23 H: area

24 D: area

25 E: where or a

26 H: museum

27 D: museum yeah

28 E: in museum in a a in the park

29 D: in the park [okay]

30 H [oh:::]

31 E: it is part of part of the park

32 D: okay

33 H: the museum is big↑

34 E: yah it's very big

35 D: the museum inside the park↑

36 E: inside yeah (2.0) people always (2.0) like it (2.0) dolphin show

37 H: what is dolphin show↑

38 E: just some dolphin swimming in a pool there have um:::: fire [and]

39 H: [yeah i know]

40 E: firing and the dolphin jump through the firing (2.0) no↑

41 H yeah i know i saw that

42 E: yeah it's very funny

43 H: how much is that the dolph show price↑

44 E: it's free
45 H: free
46 E: yeah
47 H: really↑
48 E: yeah
49 H: mmmm you liar
50 E: no i'm not ((laughs)) what liar come on it true
51 H: really↑
52 E: really because we we are tawian taiwan taiwn ah ((taps pen looking for
53 the word)) (2.0) re-pub-lic public
54 D: (public parking)
55 E: it's a it's publica
56 T: public park
57 E: p-p-p- public park everything is free no charge
58 T: that's good
59 E: yeah

(continuation after a few turns)

60 H: do you have a sapari in taiwan↑
61 E: sapari↑
62 H: sapari sapari d-you know↑
63 T: sa::f::ari
64 H: sap-fari
65 T: safari

66 H: i like i like the safari
 67 D: i like too
 68 H: safari ((said to self))
 69 E: ((to teacher)) what is safari↑
 70 T: umm you have some lions some [tigers] giraffes and
 71 H: [animals] you ride car to see (2.0) the animal
 72 E: i have ahh no in this park have no animal just just have (2.0) o-ocean museum
 73 some [some] some animal in in in in water not [((chinese words))]
 74 H: [ah just ocean museum] [((chinese words))]

In line 1 of Example 1, Enzo (E) reflects on his visit to an ocean museum in Taiwan. His “when i was a child i went to park in taiwan” lacks only the article or determiner, “the” or “a”—articles not used in either Mandarin or Cantonese. However, in English the failure to use an article seldom poses a problem for the interpretation of the pragmatic actions taking place in talk. In this turn, E is informing his peers about something he did in the past (note that Chinese speakers also have problems with time references, but E uses “when, was, and went,” correctly). E effectively sets the scene for further elaboration. E is also using a more sophisticated sentence construction than stated by the *ACTFL Guidelines* (i.e., one or two words together).

E’s line 3, “ocean museum” proves to be a perturbation or gap in knowledge immediately observed by H’s repetition and subsequent query “ocean museum (2.0) what is an ocean museum↑.” The repetition in line 4 offers E the chance to self-correct if E has misspoken, but he does not do so. Although “ocean museum” is a perturbation for

both E and H, at this point, E mistakenly believes that it is only a problem for H. The evidence for this occurs in line 5: E tries to explain to H what an ocean museum is. E cannot complete the task, perhaps due to the complexity involved. E does not interpret H's request for clarification as a critique or rejection of the term "ocean museum." It could be that H is rejecting the term since he recognizes that no such term is used in English. However, whether this is in fact the case remains unclear, given that H offers no candidate replacement. At this point, it is unclear whether there is a conceptual problem (a lack of shared meaning or a vocabulary problem). Apparently, "ocean museum" does not fit with any of H's existing conceptual understandings an interpretation based on the manifest lack of substitute vocabulary. Although H most likely knows the words "ocean" and "museum" he is unable to conceptualize what E means; therefore, H is unable to either assimilate "ocean museum" into any prior understanding or accommodate his thinking to a new concept. H still seems confused in line 6 ("other thing"). Again, E is not asking for assistance and there is no other evidence to suggest that he is aware of a problem. E does not appear to realize that the confusion stems from a vocabulary issue. In this sense, there is a complete breakdown or lack of intersubjectivity: E's moving ahead with a description suggests that E believes H does not understand the concept and H cannot understand the concept because of vocabulary problems of which E is unaware. In line 6, H presses E to clarify and in doing so E and H are engaging in the joint production of knowledge (H's quest to find out what an ocean museum is and for E to have to explain and/or get the correct vocabulary).

In line 7, the teacher steps in perhaps in light of the impasse. Rather than resolving the perturbation, (e.g., aquarium), which would have provided a useful

connection between the concept E obviously has and the correct term, she moves to supply E with candidate concepts (e.g., ocean↑ ocean things↑). Although the teacher may not know what E actually means (some type of fishery museum or aquarium) and this is why she does not supply the correct vocabulary, her decision to not resolve the problem of ocean museum results in further problems in the future. Lines 7-13, display how the teacher works to uncover the concept behind ocean museum without making the connection between the concept and the correct term, “aquarium.” In fact, in line 7, the teacher seems to confirm that E would be correct in referring to an ocean museum (although why a museum would have a live dolphin as per line 15 is unclear). In this way, “ocean museum” is confirmed as an appropriate vocabulary choice. Hence, H and E miss at least two potential learning opportunities—an opportunity to learn the correct term and an opportunity for H to fully comprehend the content of E’s utterance.

In line 14, E states that the dolphin he saw in the ocean museum was funny. By using this adjective, it suggests a live show and this seems to be enough information for the teacher to gather that E means aquarium with a live dolphin show (“we have one here too”); thus, the teacher displays that she understands E’s intended meaning. She does not treat “ocean museum” as a perturbation and therefore E remains unaware of a problem. Neither does she ask E any probing questions designed to elicit his understanding of the difference between a museum and aquarium and then relate these differences to the topic of public green spaces or parks. Again, by line 15, a learning opportunity has been lost. (E’s confusion about the correct term persists into the intermediate class and is only resolved through a conversation with another student). By not addressing this issue at

this juncture it would be reasonable to assume that H, the original prober, remains confused.

Lines 16-31 contain an extended sequence that indicates another perturbation regarding the term “green space.” This segment also points to the cooperative methods D, E and H use to try to restore intersubjectivity (e.g., repetition, yes or no questions, and agreeing to move on). Such perturbations prompt each speaker to have to work with what others give him (e.g., clues as resources) in order to resolve the issue. Dealing with perturbations involves part-whole relationships. For example, there is a part-whole relationship between the individual requiring assistance and the group providing that assistance. In terms of talk, there is a relationship between the word(s) or concept(s) that require resolving and the actions taken in talk to accomplish that resolve. In these ways, cooperative relationships underlie the process of learning.

The way that new understandings are co-constructed with regard to part-whole relations can be observed in turns 16-31. In line 16, D asks if E’s museum has a green space. Since “green space” is the original topic of conversation, D’s integration of the topic back into the conversation conserves the topic. By making this move, D provides a context or common ground for what unfolds next. D makes a logical connection between “green space” and E’s “ocean museum” such that he inquires whether the museum has a “green area.” In line 17, E’s “excuse me” indicates that he either did not hear or that he does not understand the word “area.” Recall that the topic is green space (notably a term not commonly used in everyday English). However, rather than define the word, D treats E’s request for clarification as a mishearing. In line 20, D assumes E knows the meaning as he asks for a yes or no answer. Similarly, H repeats the word (note D has a heavier

accent than H and tends to run words together). In line 25, E utters words that signal confusion one of which is the word “where.” In a nice example of peer help or scaffolding H picks up “where” and builds onto it so E might better be able to grasp just where the area in question is. In line 27, D repeats and reinforces H’s utterance and this help results in E’s line 28 utterance “in the park.” Note that E may still not understand what the word “area” means. D (and H) have performed actions in talk that have led E to “park” and from there D can move on (lines 29, 32 “okay”). D now understands that the museum is in the park because he can connect “park” to “green space.”

This long segment (lines 16-32) and the previous segment both reveal that the resolution of perturbations may be only partial and incomplete. The original problem was the word “area” (and “aqua museum”) for E, but D’s concern was not to teach E what “area” means but rather to construct enough understanding for himself to move the conversation forward. This pattern resembles the prior set of turns that do not resolve “aqua museum”. The teacher had enough to go on to fulfil her need for a concept but allowed the perturbation to stand.

In line 37, H asks, “what is dolphin show↑” without using the article “a.” Despite the fact that E and H have had grammar-based English lessons at home and hear native English speakers talk everyday the structure of their first language persists—however this is a minor issue since the omission of an article does not interfere with intended meaning. The larger issue at hand is the meaning of “dolphin show.” Assuming that H knows what the words “dolphin” and “show” mean it can be assumed that he does not understand the concept. In line 38, E explains what a dolphin show is by using the description of a dolphin swimming around and by way of fire. Thus, because it is a concept that H is not

familiar with, E tries to resolve the perturbation through descriptive means—by building an image or concept of a “dolphin show.” Upon hearing, H acknowledges what he understands from this description and displays that he has assimilated (and accommodated) E’s contribution into his existing understandings. That this has occurred is evident in line 39, when H overlaps E to cut off further explanation signalling understanding (“yeah i know”).

In line 38, E uses the correct word “fire” but then changes it to the progressive “firing” (perhaps because the fire is ongoing in the dolphin show). After some short confirmation checks (lines 45-48) to confirm the show in Taiwan is free, H accuses E of being a liar. In line 50, E denies that he is lying by using emphasis and tone (“no i’m not”) as well as the colloquial term “come on” in his denial. In this utterance and moment of self-defence, E ‘sounds like’ a native speaker. While this may seem like a minor point, it is quite interesting when one considers the minimal expectations for beginners under the *ACTFL Guidelines*. Using these expressions in the right context is a complex move. Even though everyday expressions are encouraged in class, there is a relatively low expectation that such a non-literal utterance will be generated in the appropriate context. Thus, appropriate use of this everyday expression may indicate that E is aware of, and responding to, the language used in his presence. This corroborates E’s self-reported desire to fit into the society around him. From a speech act view, such use requires recognition that an utterance can perform more than one action (e.g., the expression can be understood to mean “come with me” as well as “are you serious?”). In this way, E’s utterance is quite sophisticated.

Lines 52-59 deal with a new perturbation by E. H's line 52, "really↑" acts as a prompt and opportunity for E to explain why the dolphin show is free. Although E's explanation "because we we are tawian taiwan taiwn ah ((taps pen looking for the word)) (2.0) re-pub-lic public" has the characteristic unfilled and repetitions that act as filled pauses to potentially give himself time, he correctly uses "because" to project an upcoming reason or explanation. One way to interpret E's pause and pen tap is to see it as a public indication of holding the turn. It also provides a way for E to indicate to H that he (E) is going to defend his position. As E hesitates, both D and the teacher propose candidate words ("public parking," "public park"). This attempt to help E is an example of how the equilibration process is co-constructed. The perturbation at issue is a word that fits closely in form to "public" or "republic." In line 55, E continues in his attempt to fit word to concept and, in line 56, the teacher's "public park" is accepted by E in line 57. He is then able to fluently add that "everything is free no charge."

As a side point, there is reason to believe that E's original intention was not "public park," but rather the first utterance "republic." This interpretation is supported by E's "because we we are tawian taiwan taiwn ah" referencing "we" as in the people of Taiwan, a republic of China. E could be trying to distinguish Taiwan from China for H who does not have knowledge of Taiwanese culture. However, it may also have been the case that "public park" was accepted by E, given that the dolphin show is in a park. On this account, E abandoned the explication of the concept of a republic and oriented to the more basic notion of a park.

Line 60 opens with another set of perturbations. H asks E if they have a "sapari" in Taiwan. This time, E asks for clarification from H, who in line 62 repeats the term

seemingly unaware there is a problem. Once again, there is a momentary disconnect since it is unclear whether E is orienting to “sapari↑” as a perturbation for H, given that E indicated a trouble spot or whether he too is unsure of the word. In line 62, H orients to E as though E, rather than H, has a problem. “Sapari” is a perturbation for both E and H; however, it is unclear if it is a problem for H and E for the same reasons. On this occasion, the teacher steps in to resolve the problem spot and, by doing so, helps H to recognize his vocabulary error. Thus, teacher or expert correction is one way that the equilibration process is co-constructed. In order to teach H “safari,” the teacher slows down her speech and elongates the pronunciation of the word so H can differentiate the sounds. In line 64, H retains the “p” and the “f” before using the word correctly in a sentence, and then goes on to repeat “safari” aloud. This repetition demonstrates that H is adding this word to his English vocabulary. This series of actions exemplifies a way in which equilibration as learning can take place turn-by-turn.

In line 69, E then asks the teacher what a safari is. In asking this, E makes it evident that “safari” was a perturbation for him as well. Since the pronunciation has already been clarified, it might be surmised that E does not know what a safari is. E now has to learn a new concept plus the word that describes it—E has to adjust or accommodate his current understandings to understand what a safari is.

In another example of equilibration as a social process, the teacher and H work together to scaffold E’s understanding. In line 70, the teacher begins to describe the animals and H overlaps the teacher’s turn. The teacher then gives H the opportunity to provide E with the description (“you ride in car to see (2.0) the animal”). Thus, another way for the equilibration to proceed is by expert and novice working collaboratively

together. Because of their efforts, E is able to compare the meaning of safari with ocean museum to conclude they are not the same thing (“i have ahh no in this park have no animal”).

Lines 72-74 illustrates the pragmatic contention that words do not have a fixed meaning. It also illustrates the distinction between interactional competence and competence with the grammar and vocabulary of English. That is, although E, D, and H have limited linguistic skills, they each display sophisticated ways of dealing with these limitations so they can interact with each other.

In line 72, E points out there are no such animals (i.e., safari type) in the park, just animals that live in water. In line 74, H overlaps E’s “[some]” with what conversation analysts refer to as a ‘change of state token,’ “ah.” This is a sophisticated way for H to display both a change in his understanding and an improvement in his interactional competence. It seems evident that H understood E before E used Chinese words to clarify meaning. E and H both display themselves as novices by confirming the term “ocean museum” when the correct term would be marine-park or maritime museum. The point here is that H and E understand each other even when they are using incorrect terms (and this may be why the teacher does not make a correction). This is a good example of the way that a term can be understood in a specific way by interactants even when it is not the correct term in the to-be-learned language. This finding undermines the view that shared meaning is only possible given agreement about the literal or dictionary definition of the word(s) in question.

Example 1 exemplifies beginner level. Speakers produce and orient to perturbations involving vocabulary and pronunciation that would not usually present any

significant difficulties for native speakers. Example 1 shows that perturbations can be resolved through different means; in particular, by teacher ‘telling’ or correction, by teacher and student collaboration (expert-novice), by peer telling or collaboration, and by self-correction. What is evident is that resolving perturbations occurs only when the student is ready, such readiness having to do with a desire to understand or to make meaning. Moreover, the example reveals a sharp distinction between students’ interactional competence and their grammatical competence (including repetitions that interfere with fluency). Students deal with perturbations not only to learn about the language but also for practical reasons; that is, in order to converse. Importantly, the example also offers a baseline from which to assess Enzo’s progress.

In Example 2 (below), the teacher and Enzo are talking about weather patterns. Enzo is the only student in the class. This example shows how previously learnt material (i.e., background knowledge) can resurface as both perturbation and as a point of common understanding.

November 14, 2006.

Example 2, Beginner

(Enzo and Teacher)

- 1 T: it’s difficult to see anything through these clouds and also he said the weather
- 2 is changing it’s getting warmer
- 3 E: umhm
- 4 T: in the north so the auras are not um
- 5 E: as predictable ((said slowly)) pred-wha-

- 6 T: -pre-dic-table
7 E: what's predictable↑
8 T: remember in our book we often do something where we predict where you
9 have to ah guess like you what will happen you know
10 E: ah yah

In example 2, the teacher and E are talking about the weather up north. In line 4, the teacher uses the word “auras” to refer to the northern lights (note that the correct word is “auroras”) as evidence in support of global warming. Because the teacher had previously introduced this difficult word, E does not display any problems with it. The teacher is not able to complete her line 4 utterance because, after a slight pause, E takes over the turn. E treats the teacher’s “um” as a perturbation that is resolved by E’s line 5 “predictable,” a word used on a prior occasion. Although E has already successfully produced the word “predictable,” he hesitates on the repeat (“pred-wha”), displaying a problem with the word. In line 6, the teacher responds by parsing the pronunciation but in line 7, E rejects this by revealing he does not know the meaning of the word. In line 8, the teacher undertakes two moves in order to clarify the meaning of “predictable.” First, she tries to jog E’s memory by referring to the past (“remember in our book”). Secondly, she re-supplies a definition. In line 10, E indicates that he understands.

This example reveals several important things. First, the interaction shows the way E takes responsibility for his own learning. Taking responsibility for one’s own learning should be incorporated into extended definitions of proficiency. As displayed in line 7, E willingly indicates that he does not know the meaning of the word “predictable.” Rather than ignoring the issue in order to save face or to continue with the conversation,

E treats his lack of knowledge as a learning opportunity, something many students are reluctant to do. Another point of interest is the way the teacher draws on the past (what Middleton & Edwards (1990) refer to as collective remembering) to resolve a current perturbation. Contextualizing the perturbation helps bring coherence to E's learning experience. Lastly, the overall exchange reveals the extent of E's interactional competence and the way that meaning is co-constructed. E's "umhm" in line 3 is a typical way to express understanding and involvement.

November 14, 2006.

Example 3, Beginner

(Enzo and Teacher)

- 1 E: martha can i ask you q-a vocabulary is reservation (3.0) this word can use
- 2 it's mean you have another suggestion↑ or you want to book something↑
- 3 because i check my dictionary it has too too many meaning
- 4 T: yeah there there are a lot of [meanings for reservation]
- 5 E: [in canada people use use] use use which one
- 6 meaning↑
- 7 T: well the basic meaning is that you have something
- 8 E: mhm
- 9 T: that is sa::ved or set aside for you or for somebody or for something
- 10 E: mhm
- 11 T: so it means that you're keeping part of it away from the main part
- 12 E: umhm

13 T: that's the basic meaning now because we have this basic meaning that you
14 you keep a little part for something there are many different uses

15 E: umhm

16 T: the easiest one is you go to a restaurant you phone early and say i want a
17 reservation for three people at six pm and then they save the table for you

18 E: yeah

19 T: another meaning for reservation could be a group of people for example first
20 nations people

21 E: umhm

22 T: they often have a lot of land in canada and that land is separated it belongs to
23 them only some of these places are called a reservation

24 E: reservation yah

25 T: um you can use it for feelings

26 E: for feelings↑

27 T: you can use it for feelings um if you have some feelings and you don't want to
28 give all of the information and feeling about a topic you can say i have some
29 reservations means i'm not sure about [the whole thing i'm not sure]

30 E: [i'm not sure because you have] because
31 you have your meaning is that you have a lot of idea↑

32 T: no it means you are keeping back [you are keeping back] a part of something

33 E: [you're keeping back↑]

34 T: so it's a little bit like separation but it's not the same as you have something
35 big and you divide it it means you have something and you take that little part

- 36 and and you you keep it you don't you you don't give all
- 37 E: so you want to talk about a part right↑
- 38 T: yeah that's right
- 39 E: it's similar to a secret↑
- 40 T: no it's not a secret it's not a secret but it is something that is held back not
- 41 everything is given something is held back that's sort of the basic meaning of
- 42 this word
- 43 E: because you want to keep a part don't want to tell another one right↑
- 44 T: yeah maybe you have some feeling you don't want to give all
- 45 E: yeah
- 46 T: yeah so that's the basic meaning that's why we can use it so many situations

Example 3, not only illustrates how meaning is co-constructed, but how E creates his own opportunities for learning. The analysis also reveals how seemingly small decisions made in conversation have consequences for learning.

In line 1, E asks the teacher about the word “reservation.” Although most of E’s request to ask a question is disjointed, E’s turn initial “martha can i ask you” is flawless. This turn initial request displays E’s social knowledge; that is, E’s polite request displays his deference to his teacher. His polite phrasing is also typical of the Canadian way of going about asking for such help. Packaged this way, E increases the chance that his teacher will respond in the way that E intends.

E’s lines 1-3, are a snapshot of his current ability and the difference between his linguistic competence and his pragmatic competence. As many of these examples reveal, these two competencies are very different. E’s “this word can use it’s mean you have

another suggestion↑ or you want to book something↑” would raise eyebrows if uttered by a native speaker, but when uttered by a learner the addressee works harder to infer meaning. Although E has put the “s” on “it’s” rather than on “mean” his appropriate use of intonation has in part mediated these errors. We know that the teacher inferred his intention because she does not ask for clarification.

The long three-second pause, also typical of beginners, may function to give E time to organize his intentions for the utterance. E successfully gets across that the word in question is “reservation” (“this word”), and by offering two candidate definitions, he makes it clear that he is confused by the word’s multiple meanings. Thus, even though E’s utterance has grammatical problems, he is actually using a rather sophisticated method of getting the teacher to recognize and answer his question. E’s actions taken in talk reveal E’s pragmatic competence.

E also goes on to inform the teacher that he has checked his dictionary, a move that signals that this request is subsequent to his own investigative work. This also positions E as a good student—again increasing the chances he will get assistance. Note that E’s turn falls into the ‘extended talk’ category as it far exceeds the length attributed to beginners in the *ACTFL Guidelines*. Taken together, although E’s grammatical structure may not be ‘native-like’ his pragmatic facility of the language is quite strong.

In line 4, the teacher concurs with E’s observation that the word “reservation” has many meanings. Again, E has created a learning opportunity for himself, an opportunity that seems to be motivated by his expressed interest in using English to fit into Canadian society. E, by means of his own investigations and everyday experiences, has uncovered a very difficult aspect of English, namely the homonym. E seems concerned with which

definition Canadians typically use. Note E's repetition of the word "use" that seems to act as a filled pause prior to "which one meaning." This utterance makes sense as E has presented two potential meanings. Again, the error makes no difference to intended meaning or to the teacher's ability to understand that intention.

It is not until line 7 that the teacher begins her explanation. Thereafter, for several turns, she and E engage in cooperative construction of meaning. E fully participates in this process by issuing backchannels in lines 8, 10, 12, 15, 18, 21, and 24. By using backchannels, E adds nothing new to the teacher's unfolding definitions, but E is participating in the conversation by signalling both his involvement and understanding of what the teacher is saying. If E did not contribute these backchannels it is likely that the teacher would stop talking and query E as to whether he was following the explanation. That E backchannels at the appropriate location—during an extended turn by a speaker—again reveals his social competence with the language.

In line 25, the teacher states that the word "reservation" can be used for feelings. Rather than using a backchannel, E issues a request for clarification ("for feelings↑"). This request focuses attention on a trouble spot or perturbation, which, if handled with care, is an opportunity for E to learn. In lines 28 and 29, the teacher begins her explanation of "reservation" as it pertains to feelings. Rather than providing an example or synonym to illustrate how feelings are associated with the word (e.g., caution, hesitation, doubt) she opts to define the meaning through description alone relating the "reservation" to holding back information.

In lines 30 and 31, E attempts to restate what he thinks the teacher means, even cutting in with an overlap. This overlap displays the cooperative and co-constructed

nature of meaning. That is, even though E requested the explanation, he is fully involved in the process of constructing that very explanation; he does not passively absorb transmitted information. E's involvement is also indicative of a cooperative learning environment. Although the teacher is the expert, she has provided a classroom atmosphere such that E can position himself as a knowledgeable participant in the conversation and play a role in his own learning experience.

E's interpretation of the teacher's explanation is that if one has many ideas they can afford to hold some back, a reasonable assumption given the teacher's explanation. However, she quickly rejects E's proposed restatement by beginning her utterance with "no," an unhedged (i.e., unreserved) rejection. Such rejections have the potential to act as a constraint; however, in this case, the constraint seems to be the teacher's explanation itself. Rather than change her strategy in light of E's continued confusion, the teacher maintains her strategy (lines, 34-36) which is a questionable choice as such an explanation fails to convey how emotions fit with the word "reservation." Note that the teacher also makes things more confusing by introducing the idea of separation. In line 37, E once again attempts to obtain some meaning based on the teacher's prior utterance ("apart"). In line 39, E makes the logical connection to a secret. E's prolonged confusion should have been a clear indicator to the teacher that she needed to change her methods. Note that the word "reservation" used in this way may or may not have an equivalent word/meaning in Chinese. If the latter is the case then E must accommodate his thinking to encompass a new concept-word relationship.

In line 40, the teacher again issues an unhedged no (as opposed to "not quite," or "I can see why you would think that") to reiterate the idea of holding back. In line 43, E

repeats this idea of holding back but it is unclear if he actually understands the meaning. Again, the teacher could have illustrated the meaning with a contextual example but does not. In line 44, the teacher brings back the idea of feelings but it is rather unclear after this many turns how the notion of feelings fits with the prior utterances. In line 45, E issues a “yeah,” and the teacher seems satisfied with the exchange (i.e., she moves on).

It may be that a simple strategy change on the teacher’s part would have raised the likelihood that E understood the point. To make this a more effective opportunity to learn for E, the teacher might have begun by writing the word “reservation” on the board and eliciting definitions from E (as he seemed familiar with them). In doing so, the teacher would have been working with what E already knows, from a point of common ground rather than from a teacher “telling.” This would have placed E in a more equal position as he would have had more control over the learning opportunity. She could have then explained that “reservation” involves the notion of hesitation and so forth. The teacher could also elicit from E similar meanings in the Chinese language. Recall that the teacher and E are alone and given this, E does not have a peer to consult with. Such peer consultations clarify and confirm meaning. This lack of peer contact puts the onus on the teacher to explain, which can be problematic as any explanation depends on a culturally defined way of understanding the world.

In Example 4, the teacher and E are talking about how a person should refer to the Middle East. They are looking at a globe. This example shows how the equilibration process is co-constructed in and through cooperative interactions.

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Example 4, Beginner

- 1 E: how how can i say (2.0) ah middle asia↑
- 2 T: ah middle middle east
- 3 E: middle east
- 4 T: yeah
- 5 E: ah mid mid middle e-east west east middle east ((said to self))
- 6 T: ((laughs)) it's kind of in the middle so i don't know it's hard to say whether
- 7 it's ah east or west but we call it middle east
- 8 E: so you are west right↑
- 9 T: i guess this the line is ahhh ((looking at globe))
- 10 E: here↑
- 11 T: ye::ah i guess the line is h-
- 12 E: -here↑
- 13 T: somewhere here yeah i dunno
- 14 E: so you you you are west
- 15 T: we're west
- 16 E: you're you are west
- 17 T: we're west [here]
- 18 E: [i am i am] east
- 19 T: and you're east and this is kind of the middle here so so ((laughs))
- 20 E: so we c-not not not middle asia middle east just middle east
- 21 T: yeah because asia is considered east

- 22 E: mhm
- 23 T: and then europe is considered west so in between asia and europe is this area
- 24 here that is in the middle
- 25 E: ((there you go))
- 26 T: so that's why we call it middle east
- 27 E: ((to self)) middle east
- 28 T: ((laughs)) i don't know how do you translate that in taiwanese what do you
- 29 you call it↑
- 30 E: ((zong dong))
- 31 T: middle:::↑
- 32 E: middle::: yeah it's the same ((laughs))
- 33 T: it's the same ((laughs))

In Example 4, E seems to have some understanding of concept but requires assistance with the correct terminology (“how can i say middle asia”). In this example, the teacher and E are using a map as a tool for mediating knowledge and providing a visual meeting place for joint attention. E’s line 1 utterance is taken to mean “what is the English or Western term for middle asia” rather than “how do I pronounce middle asia” (the literal meaning of the utterance). That this is the case is displayed in the teacher’s line 2 when she treats “middle asia” as a perturbation, and then resolves it with “middle east.” E may want to know how North Americans refer to the Middle East because of his desire to understand his own culture through another’s perspective.

In line 3, E’s repetition of “middle east” is a way to assimilate the new term, which has been acknowledged as correct by the teacher in line 4. Hence, this simple two-

turn sequence displays the equilibration process in action. In line 5, E seems to continue with this process speaking aloud the concept alongside the new vocabulary. What might be referred to as an instance of “private speech” in sociocultural terms can be viewed as the joint processes of assimilation in Piagetian terms as E is attempting to coordinate what he knows (the concept of middle earth) with new vocabulary (provided by the teacher). Moreover, in lines 6 and 7, the teacher orients to E’s struggle. In line 8, E manifestly orients to perspective taking. He attempts to see the world from the same perspective as the teacher (“so you are west right↑”).

Lines 9-13, display how orienting to a tool like a globe mediates knowledge. The teacher’s “i dunno,” and “i guess” manifestly point to the fact that, at least for these few turns, that she is no longer the expert, that she has temporarily relinquished control and stepped into a peer role. By doing this, the teacher manifestly displays to E that there is no loss of prestige in “not knowing;” that is, the teacher is demonstrating that the expert-novice role is a flexible one predicated on experience. One might note that, in these sequences, English is not the issue under consideration.

In line 14, E confirms (“so you you you are west”) and in line 16 he repeats the request for confirmation that the teacher (and Canada) is in the West and he is in the East (line 18). Upon listening to the recording, it sounds as though E is attempting to get these facts straight. He is assimilating/accomodating this information. In line 20, E again confirms with the teacher that the correct term is “middle east” rather than “middle asia.” (Note that the teacher and E are pointing to the Persian Gulf area). In order to generate these understandings, a cultural comparison is used. Once again, this issue has only been raised because of E’s curiosity and motivation to learn.

In line 21, the teacher provides an explanation for why “middle east” is used. In line 27, E once again repeats the term to himself to assimilate the term. In line 28, the teacher asks what “middle east” would be in Taiwanese. This strategy is consistent with the call for “comparison” in the *Standards for Foreign Language Learning*. According to this standard, comparing one’s own language to the language under study helps develop insight into the nature of language and plays a role in perspective taking. It also positions the teacher as a momentary learner and peer. In line 30, E translates Middle East as “zong dong.” The teacher ‘as learner’ responds with “middle::↑.” She leaves the slot open for E who then successfully puts together the meaning by providing the English translation. These last turns are a vivid example of the role that cooperation, perspective taking, and joint attention play in the learning process.

Chapter 5

Intermediate

According to the school's promotional materials, by the end of the intermediate course students should be able to speak using simple sentences, phrases, and questions. Students should also be able to partake in predictable and everyday conversations. Similarly, under the *ACTFL Guidelines*, students should be able to initiate and sustain simple conversation having to do with simple topics. Although utterance length is slightly longer than seen at the beginner level, long pauses and repetition are still frequent. However, addressees should better understand speakers. At the higher levels within intermediate, the range of conversational strategies increase and discourse should be more coherent or connected.

The intermediate class teacher was a young man by the name of John. He had a livelier class than the beginning level teacher. One of John's strengths was that he recognized that, although students (particularly Asians) may have received intensive instruction in English grammar and reading in their home countries, they were less likely to have had the same opportunities to engage in conversation. John stated that he believed students should have practice in expressing their personal point of view. Consistent with this stance, John worked hard at providing opportunities for students to share their views on a variety of topics, including ones that veered away from the *Northstar Intermediate* text. His approach was to elicit responses to 'why' questions. At first, students seemed a bit perplexed by this approach; eventually, students began asking each other to give reasons within their own peer talk. Providing such opportunities to explain their views also gave students practice in talking about abstract concepts (e.g.,

their own ideas) rather than the concrete (e.g., what do you say at a party), as had been the predominant practice at the beginner level. If students were unable to grasp the abstract, John would simplify and concretize the more difficult concepts, and use questions designed to elicit understandings that were also more concrete. John's providing of more opportunities for conversation resulted in many more occasions of perspective taking for students.

The setting of the intermediate class was also a bit different than the beginner class. The room was larger and brighter but the traffic noise was much worse than in the other room.

The revolving set of students in the intermediate class included, on a fairly regular basis, Dan (D), Enzo (E), Sarah (Sar), Sashiko (Sas), Myuki (M), Tadahiro (Ta), Yuri (Y), Ana (A) and Paulo (P), as well as, on occasion, Joshua (J) and Soujoun (So).

Sarah was a young 14-year-old Taiwanese student who had studied English for six years in elementary school. Myuki was a Japanese student of about 25 years of age. She had studied English in high school and university. She was very outgoing and tended to create opportunities to interact. Similarly, Sashiko, another Japanese student, had received English instruction from elementary school through university, for a total of 13 years of instruction. Tadahiro had studied English for three years and wanted to go on to university in the U.S. Joshua was a Chinese student who had studied English for ten years in China and was intent on going to graduate school in the U.S. He told John that none of his English instructors could actually speak English and so had concentrated on grammar and reading.

Ana and Paulo were siblings from Brazil who had studied English for four years in high school and private English language schools. Unlike their Asian peers who preferred listening to the teacher talk as a method of study, both Ana and Paulo preferred social conversations. Because Ana and Paulo were so outgoing and social, their presence in the class had a very positive effect on speaking frequency. Ana was particularly boisterous and her outgoing nature changed the entire class atmosphere. Ana spoke to everyone and was willing to make mistakes and correct others in a good-humoured way. She took pleasure in trying to figure out what others were saying and encouraged people to interpret and correct her. Ana treated the class as one ongoing and exciting opportunity to learn (she almost single-handedly turned the class into a learner centred class). In this way, she created opportunities for all students. Unlike Dan (who had left by early December), Ana and her brother, Paulo, were eager to explore the city while acknowledging that it was smaller and quieter than their hometown in Brazil. Paulo and Ana also seemed to have a positive effect on Enzo as he socialized with them after school.

Joon stated that he had studied English for eight years in Korea and that he preferred to listen to the teacher speak. Soujoun was from China where he studied English for ten years. His plan was to immigrate to the U.S. and go to graduate school. He was the only Asian student to characterize group work and social conversation as his preferred mode of study.

In Example 1, D and teacher are talking about cultural traditions. Sas is also in class but she does not speak during this particular exchange. D and Sas have listened to a recording of people (actors) explaining the meaning behind their traditional attire. The

content of these recordings deals with exercises using the four skills (e.g., reading, writing, listening, and speaking) in a workbook. Students then proceed to complete grammar, vocabulary, identification, and explanation questions dealing with each of the four skills. Instead of following the workbook page-by-page, teachers will often conduct similar exercises using informal conversation and the master text (and workbook) as a guide. Some schools create their own roster of activities to either complement or at times replace the text. For example, at this particular school the teacher worked from a binder that combined items from the text and workbook with materials designed by the school's curriculum team.

In Example 1, the teacher encourages D to speak by requiring explanations for his answers. As stated, D was a reluctant speaker so at times the conversation seems strained. This slightly uncomfortable atmosphere may also be due to the teacher's overuse of this elicitation technique. D's reluctance to participate coupled with the teacher's persistence resulted in a subtle constraint. However, the teacher's intent was not to constrain D, but rather to provide him opportunities to speak from his own point of view. Problem spots pertaining to structure and meaning tend to emerge out of this conversational content. In addition to such language issues, perturbations arise because of differences in opinion. In this case, what is equilibrated is a different way of thinking about issues. So, in Example 1, the teacher does not focus on D's language ability but rather on D's ideas. In order to understand these ideas, the teacher sometimes requests that D clarify or restate his position. Note that this strategy was more effective when the class size was larger and student motivation was higher. When the class was larger,

students welcomed the opportunity to express their opinions and mirrored the teacher's technique in their own peer talk.

Promoting discussion amidst such reluctance is a difficult task. Lazaraton (2001) has outlined some pointers for overcoming such obstacles. Lazaraton maintains that discussion has a better chance of success if students know the topic beforehand. Lazaraton (2001), Block (1994), and Nunan (1995) state that students benefit from being informed about the academic or learning advantages of classroom activities prior to undertaking them. Lazaraton suggests that raising students' awareness about the way discussion helps improve speaking and listening skills in conjunction with information about how sharing of opinions improves fluency, vocabulary, cohesion, and motivation can raise motivation. The teacher could also discuss how this criterion is required for advancement. Linking specific activities to outcome could empower students and give them a greater sense of control over their processes of learning. Because student-centred learning veers away from the practices of teacher-fronted learning (and may be perceived as doing more so with Asian students) participation and motivation could potentially increase if students were informed up front how certain activities benefit them in the short and long term.

November 28th, 2006.

Example 1, Intermediate

(Dan and the teacher are talking about foot binding in China).

- 1 T: why why do you think they did this for for many several hundred years↑
- 2 D: i dunno it's terri-ble

3 T: it's [terrible] but why do you think they did this↑

4 D: [i dunno]

5 D: ahah (3.0) ahh (3.) they:: they:: like it

6 T: they liked it↑

7 D: i dunno maybe

8 T: so you think they cho::se to do it↑ (2.0) did you think it was the women

9 who liked this or the men that liked this↑

10 D: ((laughs)) probably ah: more woman

11 T: you think the woman but then why do you think they stopped doing it

12 D: stop but in the:::um (2.0) the ahhh one hundred years↑

13 T: yeah about a hundred years ago maybe a little bit less

14 D: a hundred years ago (3.0) ahhh the coolture of the (2.0) of the country

15 T: okay ah ah ookay now tell me if you were a woman do you think you

16 would like to do this that you would like to do this to your feet (2.0) do you

17 think it looks comfortable↑

18 D: no comfortable

19 T: but but then why would they like to do that do you think

20 D: no like but ahhh (2.0) they ummm this is a form de (2.0) of coolture of

21 the cou[ntry] and the people can use the: the kind of shoes

22 T: mm[mhm]

23 T: okay so people use a kind of shoe in this traditional culture

24 D: yeah traditional

25 T: so you you think you think that maybe it's a good thing that woman did

26 this because it's traditional culture

27 D: yeah it's a good thing but no comfortable

28 T: but not comfortable

29 D: yeah

30 T: okay kind of like we talked about with the women with the brass rings on

31 their neck

32 D: mm

33 T: remember that↑

34 D: yes

35 T: okay did you think that was comfortable↑

36 D: no ((laughs))

37 T: but but why do you think those women did it before

38 D: mmmm

39 T: do you think they did it because the women enjoyed it or because the

40 men enjoyed it

41 D: ahh men enjoyed

42 T: because men enjoyed it i think that is more the reason why that they

43 bound their feet as well umm so now tell me in brazil do women do

44 anything similar to binding their feet or getting surgery on their feet or

45 anything else any other surgery

46 D: ye::s very common the woman have ahh may make make a surgery

47 cosmetic surgery in brazil

48 T: umhm so it's very common for women↓ is it common for men↑

49 D: no↓ no↓
50 T: but why do you think that is
51 D: (3.0) men i think that men is less vanity
52 T: they're less vain ((laughs))
53 D: yeah less yeah less vain and (2.0) w-women ah prefer ahhh quickly and
54 easier
55 T: they prefer what↑
56 D: ah ah some things quickly and easier ahhh resoolts
57 T: oh so so you mean like they so ahh but you're talking more about
58 liposuction
59 D: liposuction
60 T: they they are too lazy to exercise
61 D: yea:h no men men men do-doing exercise
62 T: so men like doing exercise
63 D: men like doing exercise
64 T: so they they're always playing soccer so they don't need liposuction
65 D: no but no play soccer (2.0) gym
66 T: oh okay
67 D: the men like doing like going to the gym in brazil
68 T: okay but women do not like going to the gym
69 D: yes (2.) true the women the women don't like to but hm (3.0) umm in
70 brazil (4.0) lipo lipo shsh
71 T: lipo-suction do you want me to write it↑ ((writes liposuction on board))

- 72 D: yes (4.0) liposuction normally the woman
- 73 T: oh okay
- 74 D: but ahh three years ago some famous famous top model died getting
- 75 liposuction
- 76 T: she died getting liposuction↑
- 77 D: yeah she died
- 78 T: so was she very fat↑
- 79 D: no↓
- 80 T: so she wasn't very fat
- 81 D: no but top model it's necessary liposuction

In line 1, the teacher asks D about why he thinks Chinese women had their feet bound. In line 2, D responds with a turndown (“i dunno”) and then gives his view of the tradition (“it’s terrible”). The teacher acknowledges this response (“i know”), but rather than letting the “i dunno” stand the teacher persists by asking D “why” Chinese women may have had this done. Requiring D to provide reasons serves several functions. First, it gives D an extended turn to practice putting an argument together in English. Secondly, extended turns expose areas in need of correction or revision. Thirdly, expressing viewpoints promotes authenticity and motivates other students to participate.

In line 4, D repeats his “i dunno” turndown before the teacher completes his turn, perhaps trying to close down a continued line of questioning. In observing the interaction it seemed as though D rather wished the teacher would move on to something else. D’s turndowns create conditions of constraint. However, rather than this constraint emanating from the teacher (i.e., from an authority figure), D places a constraint on

himself by limiting his opportunities to learn. In line 5, D responds by hedging followed by his assertion that Chinese women had their feet bound because of personal choice—they liked it. In line 6, the teacher challenges this response (“they liked it↑”) and in doing so this *idea* is treated by the teacher as a perturbation. This rejection acts a challenge prompting D to weaken his initial response (“i dunno maybe”). This weakened response in the face of a challenge displays D’s interactional or social competence. However, even in backing down, the conversation remains slightly uncomfortable (e.g., D’s “i dunno’s” and the teacher’s persistence create conditions of constraint).

In line 8, the teacher checks to make sure that he understands D correctly (“so you think they cho:::se to do it↑”). Elongating the word “choose” offers D the chance to hear how the teacher has interpreted D’s assertion as well as a chance to correct any misinterpretations.

In line 8, the teacher challenges D again by offering two alternatives (“did you think it was the women who liked this or the men that liked this↑”). Considered in the context of the previous challenge (“they liked it↑”), this challenge can be characterized as designed to initiate the equilibration process of accommodation (i.e., for D to revise the way he conceptualizes ‘choice’). The teacher may also be curious as to why D takes such a position. The teacher’s way of setting up the problem space invites perspective taking. In order to respond, D must look at the issue from both a woman’s and a man’s perspective. In line 10, D states that it was most likely women who preferred foot binding. In line 11, the teacher challenges D (“but then why do you think they stopped doing it”). The teacher uses this question in order to initiate equilibration for D. That is, the careful consideration of this question may lead to D revising his original stance.

Notice that D does not respond by saying that the women no longer cared for the tradition, but rather that he dodges the issue by using hesitation tactics (filled pauses) and by responding to a question with a question (“the ahhh one hundred years↑). This ‘non-response’ response displays D’s interactional skill.

Once Dan establishes a time line, he blames the culture for foot binding (thereby skirting his own view). In response, the teacher directly tries to get D to put himself in the position of a woman, to look at the situation from her perspective (“if you were a woman do you think you would like to do this”). By asking D to put himself in a woman’s shoes, the teacher is trying to alter D’s thinking by moving his perspective away from his own egocentric view. In Piagetian terms, the teacher is helping D to decentrate from his own view so he can accommodate another way of seeing. At the same time, the teacher asks D to consider whether he (D) would have liked to have his own feet subjected to binding. When in line 18, D states he would find it uncomfortable (“no comfortable”) the teacher then brings the Chinese women back into the discussion (“but but then why would they like to do that do you think”). In effect, the teacher is trying to prompt D to change his point of view by getting D to acknowledge that there is no difference between men and woman in this respect; that is, pain is pain regardless of gender.

In line 20-21, D concedes that, although they are not comfortable, such practices are acceptable because they are dictated by culture. The teacher then appears to abandon his attempts to elicit a change in D’s perspective since they both come to the agreement that foot binding is uncomfortable.

In line 30, the teacher draws on background understandings (i.e., collective memory) to guide D's reasoning process. Perhaps part of the rationale for this is that if D believes foot binding is merely a lifestyle choice then a better strategy may be to move to another example with the same implications. In an attempt to bring together the similarities between the two practices, the teacher draws on a prior discussion about African tribal neck rings. Again, the teacher asks D if wearing neck rings looks comfortable. After answering in the negative, the teacher asks D to consider why "those" women did so. Again, D offers a turndown response ("mmmm").

In line 39, the teacher issues the same alternatives: "do you think they did it because the women enjoyed it or because the men enjoyed it." Perhaps for reasons having to do with the prior discussion, D states that the men enjoyed neck rings. In line 42, the teacher repeats D's response thereby confirming it as correct ("because men enjoyed it"). The teacher also confirms that D has correctly shifted his (D's) perspective; the teacher then moves quickly to relate this conclusion back to the issue of foot binding ("i think that is more the reason why that they bound their feet as well").

Beginning on line 42, the teacher asks D about similar practices in Brazil. Because there is a topic shift with no follow-up there is no evidence to suggest that D was able to make the connection between the two practices (i.e., that D was, in effect, able to accommodate). In response to this line of inquiry, D begins with the correct form "have" but then treats it as a perturbation, changing it to "make make" (repetition being a common pattern for beginners). In line 48, the teacher follows up by asking whether plastic surgery is common for men from Brazil. By opening up a related but new topic, the teacher is offering D more time on the floor and therefore more time to practice his

conversational skills. (However, Sas has been left out of the conversation). D's interest in surgery in Brazil is evident from his intonation and lengthier contributions.

When D says that it is not common for men to have surgery, the teacher urges him to give a reason. In line 51, after a lengthy three-second pause, D responds with "men i think that men is less vanity." D's response is interesting for a couple of reasons. First, it is the first time in this conversation that D has incorporated the words "i think" into his response. Taken together with his intonation, D's "i think" suggests that this is D's actual opinion. Secondly, this assertion may explain why D took the position that women chose to have their feet bound. In trying to get D to see alternative reasons for such practices, the teacher was trying to move D toward the idea that men could have induced women's so-called "vanity." The teacher's response and laugh clearly suggest that he is not surprised at D's point of view.

The teacher treats D's line 51, "men is less vanity" as a perturbation changing it to "they're less vain." This change also confirms what D means. D then uses this new form and notes that women prefer quick and easy results (as compared to men). The teacher takes this to mean that D is referring to liposuction although it is unclear how he made this connection (confirmed by D). Notice that when D is responding in a natural fashion he tends to use several filled pauses "men men men" something that is also seen in E's speech.

To this point, D has been describing women's behaviour from his own point of view. In line 60, the teacher playfully mocks this view (evidenced by tone and emphasis on "lazy") when he summarizes D's general opinion that women are "too lazy to exercise." When D thinks the teacher is referring to men he quickly tries to straighten out

the confusion. The teacher then takes D's "no men men men do-doing exercise" and revises it to "men like doing exercise" which D then repeats. Lines 60-63 confirm that learning opportunities arise both from a language focus and from airing perspectives. Teacher corrections model correct structure and tell students the teacher is paying attention to what they are saying.

The rest of the segment reveals that learning opportunities are open to the teacher as well as to students. In this segment, it is the teacher who must replace a current assumption with a new understanding. I have observed that quite often such role reversals are due to cultural issues. In this instance, the teacher assumes that men in Brazil are fit as a result of soccer or football. In line 65, D unhesitatingly corrects this assumption with an abrupt "no" and goes on to say that men are fit because they go the gym. D upends the teacher's stereotype and in response the teacher must accommodate his thinking.

In line 70, D struggles with the word liposuction (lipo lipo shsh) even though he successfully pronounced the word in line 59. A few turns later, D has retained part of the word "lipo" but struggles to bring it back into use as he has not assimilated it into his speaking repertoire. To provide a visual aid the teacher writes the word liposuction on the board. With this aid, in line 72, D is able to repeat the word correctly and without hesitation.

This example has several notable features. First John seemed to encourage participation from D but not from Sas. The teacher's exchange with D is very long and there is no indication that Sas is even in the room. Given this, the conversation between D and the teacher resembles a private one. However, this kind of participation error did

not occur again even after several months. Moreover, Sas is a very quiet student.

Although the conversation seems strained at times, it lacks the typical hallmarks of disputational talk (Mercer, 1995, 2000). That is, there is no evidence of cut-offs, overlaps, abrupt turn-downs, coercion, direct put-downs, and so forth.

Also of note was the reciprocal perspective taking. The teacher tries to encourage D to view cultural traditions as sometimes occurring for reasons other than free choice. Later in the segment, D corrected the teacher's assumption with regard to Brazilian men's leisure time.

Field observations reveal that D was a reluctant student in the beginner class but less so in the intermediate class. In the beginner class, D was often bored, but no such observations were made at the intermediate level. Although at times D seems reluctant to explain his views, it also seems as though the teacher's method of encouraging explanation had positive effects on D's participation (but note that this may also have to do with class size). D's turns are still relatively short, but with the teacher's prompting after every turn D has the opportunity to take more turns and the option to extend the length of a turn. D is able to express an authentic viewpoint, as well as correct his own vocabulary and sentence structure. By engaging in perspective taking, D is also able to practice his speaking, listening, and comprehension skills with a native speaker, something that most language students state they do not get enough chances to do.

In Example 2, siblings Ana and Paulo from Brazil have joined the class. Due to their outgoing personalities, the classroom climate changed noticeably. The class as a whole became more talkative and this fit well with the teacher's conversational teaching style. Unfortunately, Dan had left by this time and therefore I was therefore unable to

observe whether the presence of Ana and Paulo would have changed his participation behaviours.

In Example 2 Intermediate, the teacher has put students into groups to discuss a series of hypothetical situations and ethical dilemmas. My observations lead me to conclude that group work offers several advantages over individual study for specific types of content. First, students were able to get to know each other in groups and these relationships led to social activities. Students reported that they liked socializing with students from different cultures because it forced them to speak English. When they socialize with students from their own country, they reported that they just spoke their first language. Second, peer discussions seemed to increase participation and decrease concern with errors. As seen in Example 2, P, E, and A question, ask for clarification, and correct each other without noticeable embarrassment or hesitation. Thirdly, although one Asian student told me that Brazilians and Asians are like “fire and water” (i.e., boisterous versus quiet) my observations seemed to suggest that as long as gregarious students take an interest in what their quieter classmates have to say and do not dominate the floor themselves they can provide opportunities for learning for quieter students. Talkative students’ willingness to speak motivates other students since the gregarious students do not seem concerned with making errors but only getting their point of view across. Increased verbal participation also leads to more occasions whereby perspectives are coordinated amongst participants. All group members engage in working towards understanding achieving some consensus or unified view.

As a result of an increase in class size, the teacher was able to put students into small discussion groups for most learning activities. He then went from group to group

while discussion took place, frequently asking groups to present their conclusions. In the following examples, groups are discussing a series of dilemmas (e.g., What should Mary do? Is this the correct behaviour in this situation?). The content generally related to issues that were of interest to students (e.g., the experiences of a language student, ethics, and traditions). These conversations were consistent with the teacher's ongoing efforts to encourage students to share their viewpoints. Similar to the 'foot binding' excerpt, what are being equilibrated are aspects of the language along with ideas and concepts. Also apparent is the competence with which these students interact; as proficiency increases students seem to take more responsibility for their learning. They work hard to resolve linguistic and conceptual issues for themselves and turn to the teacher (and sometimes the researcher) only when they cannot arrive at agreed upon resolutions within the group.

December 5, 2007

Example 2, Intermediate

(Ana, Paulo and Enzo are discussing whether 'Judy' should change their accent to fit into Australian society).

- 1 E: i think don't worry too much because time can change it this accent
- 2 P: they have to accept her↑
- 3 E: yeah because the the the the:: australia environment can can change this accent
- 4 maybe little ahh at a time like
- 5 P: her accent is her [coolture and she] didn't she didn't have to change it
- 6 A: [it's her identity]
- 7 E: no i don't think so i think ah because judy just high scho[ol st]udent

8 P: [yeah]

9 E: they have ability ability to they-she still have ability to change his accent

10 A: her accent

11 E: yeah

12 P: you want to change your accent↑

13 E: of course

14 P: yeah do you want to talk like a canadian↑

15 E: yeah

16 P: yeah↑

17 E: would you want↑

18 P: yeah of course

19 E: yah everyone want to changee their accent

20 P: yeah

21 A: but i think that ahh that the people have a self-conscious about her↑ and she

22 is what's an comadate encomadate if she's encomadate↑ (turns to researcher)

23 R: incompet[ant]↑

24 P: [trou]ble

25 A: no

26 P: trouble

27 A: trouble no ((inaudible))

28 P: trouble

29 A: trouble yeah

30 E: trouble↑

31 A: if she's trouble↑
32 P: trable↑ or trouble
33 E: trouble
34 P: trouble
35 A: yeah and it's possible to her (2.0) change her accent
36 P: ((laughs)) (3.0) yeah bu:t this kind of accent i think it's good to change but
37 if you live in the country [ahh]
38 E: [mhm]
39 P: i think you don't have to change your accent if you live in the country or
40 you live in the north i think you don't need to change your accent because only
41 a re-gional↑ regiona[l]
42 E: [m]hm
43 P: accent like if you come from another country a:and like me i':m coming from
44 brazil to canada so have if have to speak like them to improve more than i can
45 to speak like them
46 E: yeah
47 A: if you are in your own country and you want to work on a tv or something
48 similar i think he want to ahh you don't have the accent
49 P: of course
50 A: ahh it's hard to it's very terrible to you to work on tv and have an accent so
51 P: yeah but let's return to what we are talking about that's about judy
52 A: we are finished with-
53 P: --no no so what judy have to do↑

54 E: don't worry too much just change her accent little by little just give her some
55 time and she can change

In Example 2, the group discusses the hypothetical situation of Judy who wonders whether she should change her accent to fit into Australian society. E begins this exchange by expressing his view ("i think don't worry too much because time can change it this accent"). As compared to beginner examples, E's utterance shows more fluidity in that it is less repetitious, does not contain any filled or unfilled pauses, and has a slightly quicker tempo. E has also improved his intonation. E seems to be more comfortable during peer talk and more willing to express himself. As observed here, E is able to supply a reason for his opinion, ("time can change it this accent").

In line 2, P responds with a clarification question that draws attention to the implication of E's statement (i.e., those around Judy will have to accept her accent before it begins to change). This clarification question displays P's involvement in E's contribution. It also expands E's initial focus on accent; that is, P's turn points to the social implications of E's proposition. P's turn also prompts a response from E, which requires E to again take the floor in order to elaborate on *why* time can change Judy's accent ("yeah because"). E's assertion that time will change her accent so she need not worry stands as E's perspective, a perspective that ostensibly can influence the opinions of his peers. (Note that although E's repetition ("the the the the") interrupts fluency he is still understood by his addressees).

In line 5, P then self-selects into a turn and draws a connection between accent and culture. P states that one's accent is part of one's culture; therefore, Judy should not have to change her accent. Note that P's point differs from E's suggestion that time will

take care of her accent. Although P believes Judy should not have to change her accent, his reasoning is based on Judy's cultural heritage. However, there is no indication that P overtly disagrees with E; that is, he does not display any disagreement markers such as 'but,' or 'no.' P's assertion complements rather than contradicts E's point. (Of note: the group's ability to express views on a situation surpasses many of the criteria in the *ACTFL Guidelines* for this stage of intermediate proficiency). P's utterance also contains repetitions and the incorrect use of "didn't" instead of the correct "shouldn't." These types of errors, however, do not pose any threat to understanding (i.e., no one asks for clarification). As P speaks, A overlaps P's "coolture" with "it's her identity." In so doing, student A is able to apply the word "identity" to a rather abstract notion. Rather than disagreeing with her brother, she strengthens his argument by being more precise. The turns of students A and P display the intersubjective nature of cooperation. Students E, P, and A agree that Judy has no need to worry about her accent.

In line 7, E displays that he is following the points that P and A are making. This reveals E's listening and comprehension skills. Student E disagrees, using a strong turn initial "no." Turn initial 'no's' are referred to as bald on record since the meaning is unambiguous, direct, potentially face-threatening, and thus used less frequently than indirect disagreements (e.g., 'ah but,' 'maybe,' "yes, but"). Bald on record utterances can lack deference markers common to indirect strategies and therefore are more commonly used between peers with equal status or by those in authority (Turnbull, 2003). Recall that Piaget suggested that individuals were most likely to engage in cooperative exchange within peer talk, whereby they can express themselves freely, and therefore are more likely to consider another's viewpoint. E makes it clear that he is expressing his own

point of view (“i don’t think so i think”). In line 7, E begins to unravel his reasons and P responds with a backchannel indicating involvement. E tries to explain that since Judy is young she has the ability to change her accent. From E’s point of view, a change in accent would pose no threat to Judy’s identity. (Note that one of E’s goals was to integrate into Canadian culture). Student E seems to be saying that learning another language is akin to perfecting a skill so issues of identity need not be a factor. Student E’s concern is age and if Judy is still young then she can change her accent. This point is central because it is the view that P eventually agrees with.

In line 9, E is able to replace “they” with “she.” This displays how E uses his background knowledge to override an error. In an example of how a similar issue can be dealt with interpersonally, student A takes the momentary position of expert when she corrects E’s “his” by way of “her” (a pronoun error that repeatedly gives E trouble), a correction that E accepts in line 11. Student A’s correction suggests that within peer talk the role of expert is a fluid one.

In line 12, P then asks E if he wants to change his accent to which E replies in the affirmative (“of course”). P has moved the hypothetical to the personal domain. P then asks E if he wants to talk like a Canadian. Again, by drawing on a hypothetical scenario that resonates with their own desires P and E are able to engage in an authentic and insightful exchange. When in line 15, E responds with “yeah” P responds in kind with what seems like a challenge (“yeah↑”); however, when E asks P the same question, P (somewhat surprisingly given his position on Judy) agrees that he too would change his accent (“yeah of course”). E and P then mutually agree that everyone would change their accent. E’s challenge of P’s opinion back in line 7 together with E’s view seems to have

prompted P to shift his perspective from the hypothetical to the more real or practical. P accomplished this by assimilating and accommodating the view put forth by E (only accomplished through turns taken at talk with P). If E had have gone along with P in line 7 it is hard to imagine that P would have come to realize his position.

In line 21, A runs into some vocabulary trouble with the word “comadate.” Students A, P, and E as well as the researcher work together to try to resolve the problem spot. This process effectively delays the continuation of the topic at hand suggesting that at times perturbations must be resolved before a viewpoint can be understood.

Lines 24-34 take place in quick succession displaying involvement. Student A’s turn initial “but” projects an upcoming disagreement but A’s vocabulary trouble (“comodate”) sidelines her comment. A then turns to the researcher for help and she responds with a candidate word (“incompetent↑”). P offers his candidate word which A, also using a bald on record “no,” rejects. P again offers “trouble” (this time with an insistent tone), but A once again rejects this word in line 27. In line 31, A attempts to incorporate the word “trouble” into her sentence but stops as if it were a clarification. In line 32, P, addressing E, asks whether the correct form is “trable” or “trouble”. E is cast into the expert position and with emphasis which indicates his confidence states that the word is “trouble.” In the student role, P echoes the word with corresponding emphasis. This interaction illustrates the way that cooperation within peer talk can act as a learning opportunity and means by which meaning is co-constructed.

In line 36, P shifts the topic to the issue of regional accents. P argues that country people should not have to change their accents like city people do. At this point, it is unclear how the topic of regional accents relates to Judy, but it may be one way for P to

retain his initial position that accent relates to cultural identity. P distinguishes between country people who have no reason to change their accents and travelled and educated people like himself who need to develop these skills. In making these distinctions, P constructs an identity group with A and E (we who are international) and those who are not. In agreeing with P, E gives this view credence. Students P and A then agree that one must change one's accent if working on TV, presumably because such accents should be neutral or more posh. In line 51, P then points out that the group has digressed from the main topic of Judy (even though it was P who raised the regional accent issue). Student A then attempts to query P as to whether they are not finished with Judy. In a display of control, P rejects A ("no no") and leads the group back to the topic of Judy. E then repeats his original contribution.

January 12, 2007

Example 3, Intermediate

(Ana and Enzo talking about why Ana is tired. R is researcher)

- 1 E: last night you got party↑
- 2 A: what↑
- 3 E: because last night you have party or something like [this↑]
- 4 A: [no] i'm stay home
- 5 E: you stay home for study↑ are you kidding me↑
- 6 A: yeah yeah no it's true
- 7 E: come on
- 8 A: yeah

9 E: you know someb-

10 A: -i go to be[d]↑

11 E: [p]eople who:: come from brazil a::lways li:ke pa::rty right↑

12 A: yes i su::re that i stay home yeah ah yeah after school i go to:: to stanley park

13 E: stanley park↑

14 A: yeah after i go to

15 E: today↑

16 A: yesterday

17 E: hm

18 A: ah i went to stanley park and ah after i go to::↑ after stanley :::aqua::rium

19 aqua::rium↑ aquarium↓ aquarium↓↓

20 E: where↑

21 A: in stanley-ach:: aquarium

22 A: ((looks to researcher for clarification))

23 R: aquarium

24 A: aquarium yeah aquarium↑

25 E: aqu↑

26 R: with the fish with the fish

27 A: fish vancouver aquarium

28 E: oh ahh a-a-it's aqua museum↑

29 R: aqua::riu::m

30 E: because i have never heard this this vocabulary i always just hear aqua aqua

31 aqua

32 ((laughter))

33 E: aquarium

Example 3 Intermediate demonstrates the value of talk between peers (Ana and Enzo). The analysis focuses on the kind of learning opportunities that arise in cooperative talk between peers. In addition, from the turns examined thus far, it is clear that E has developed both his language competence and his interactional competence. There is a discernable difference between E's 'voice' on this occasion and his 'beginner' voice. In this instance, E's voice is strong, his pronunciation is clear, and his speech is more fluent. E seems to be better able to accomplish what he wants to using English. On observation, I credit E's development to his participation in informal conversation, classroom talk, self-study, social events, and day-to-day encounters with English speakers. This said, I also suggest that it would be impossible to chart this growth without near constant contact with E. These segments reveal the leaps, bounds, peaks, and valleys that students experience over time within given situations. (E is presently speaking to a friend and peer and is therefore under less pressure than he would be in the classroom).

The beginning of the exchange is characterised by a casual question ("last night you got party↑"). Perhaps due to a syntax problem, A asks for clarification. In response, E self-corrects to "you have party" which A then responds to. In line 5, E asks a rhetorical question ("you stay home for study↑") and by using a common colloquialism ("are you kidding me↑") indicating surprise. The combined effect of these two actions is the carrying out of kidding or joking. Joking is associated with solidarity and interpersonal familiarity. To joke successfully requires common ground to ensure no

offense is taken and that the joke is ‘pulled off’ (Turnbull, 2003). E’s use of the colloquial “are you kidding me” also displays E’s growing competence in the social world around him; that is, his increasing integration into the culture. What stands out is that E uses this phrase in an appropriate way, with the correct intonation (i.e., surprise), and with no hesitation.

In line 5, A responds in way that also displays a sophisticated competence (“yeah yeah no it’s true”). Here, A puts together two words that if taken literally make little sense (i.e., yeah no), but are routinely understood by English speakers. A’s “yeah yeah” does the action of confirming she stayed home while her “no it’s true” acts as a counterclaim to E’s “are you kidding me↑.” Thus both E’s teasing and A’s response reveals a sophisticated use of the language as both A and E’s use of these terms require inferential skills for correct interpretation and use. This is seen again in line 7, when E playfully says “come on” in order to tease A. E’s tone and non-hesitant delivery can be contrasted to his speech in the beginner class that was repetitious, halting, and less inferential.

In line 9, E begins but is cut-off by A. Given the context of the interaction, this cut-off displays involvement. It also gives E time to self-correct “someb” to “people.” E responds to A’s prior turn with “people who:: come from brazil a::lways li:ke pa::rty right↑.” Again, using a rhetorical and jocular strategy, E makes gentle fun of A. He uses a singsong intonation and drawn out words that signal his intent is to tease. His use of “right↑” is a token of both solidarity and joking.

In response to E’s teasing, A, in line 12, assures E that she stayed home and then informs him that she went to Stanley Park, a major tourist attraction in the city. In line

13, E clarifies Stanley Park, but A makes the assumption that E knows Stanley Park and therefore orients to time stating, “after I go to.” E recognizes that the problematic issue in this utterance is time and so seeks further clarification with “today↑.” The exchange thus far draws attention to the point that proficiency is more than fluency and vocabulary. Proficiency also includes actions taken in talk; that is, how addressees respond to speakers in order to clarify, query, question, repair, and so forth. Proficiency includes the ability to use the appropriate actions in order to maintain intersubjectivity. In this particular instance, E performs these actions with ability.

Student A then clears up the time issue evidenced by E’s line 17 “hm.” In lines 18-19, A attempts to state a timeline of events using “went” and “after.” A’s “go:::↑” projects a potential difficulty. She proceeds to try out the word “aquarium” using a range of tones from highest to lowest. In speaking aloud, A is performing a public ‘learning moment’ as it were. She is working out the best way to say the word and the best version to assimilate into her language repertoire. As she makes her learning process public so too is it a learning opportunity for all listening.

In line 20, E’s “where↑” in response to “aquarium” initiates a sequence that restores a missed opportunity for E from beginner class. In this sequence of peer talk, A is positioned as a peer-teacher. Student E’s line 20 prompts A to orient to the location of the aquarium, but there is reason to suggest that E is actually confused about the meaning of the word. We can assume he is unfamiliar with the word because his “aqua museum” was left to stand by the beginner teacher, Martha. As A practices, E is unable to draw together the concept of aquarium with the word, in other words to assimilate/accomodate “aquarium.” Because A is unaware that E does not know the word (thereby displaying a

lack of intersubjectivity), she assumes she has the incorrect word (as evidenced in line 22 when she looks to the researcher for clarification). “Aquarium” thus confirmed (“aquarium yeah aquarium↑”), A goes on to question E’s knowledge of the word. This is an excellent example of peer learning in action since E and A negotiate the meaning (with help) until they reach some objective agreement. In line 25, E queries the front end of the word “aqua↑,” either questioning the rest of the pronunciation or perhaps in a social display of cognition in that he is attempting to fit the word into his background understandings.

In order to get A and E back online, R, in line 26, attempts to add some context (“the fish”) and A confidently emphasizes the connection (“fish vancouver aquarium”). These joint actions build a context for meaning such that it increases the likelihood that E will be able to assimilate and accommodate the concept/word to that which he already knows “aqua museum/dolphin show.” What we see here is a potential learning moment in action. The evidence for this proposition is found in E’s change of state token “oh ahh” in line 28 indicating recognition. Note that E is ‘checking’ rather than ‘stating’ as he is unsure if aquarium and aqua museum refers to the same thing. In line 29, R confirms that they are the same. E then explains the problem of the language learner at large when he states, “i always just hear aqua aqua aqua.” This explanation is accepted since what follows is laughter. The point here is that turn-by-turn compensations were the methods by which A and E were able to reach an understanding and, for the time being, agree on what constituted an objective (correct) meaning. They accomplished this by coordinating their perspectives and in doing so we can observe equilibration in action.

E's candidness instigates perspective taking as anyone who has tried to learn a language, understand legalese, or expert talk can relate to E's experience.

In example 4 below, Enzo and Yuri are discussing the war in Iraq. As a result of Y's misuse of the idiomatic phrase "out of the woods," the pair run into some misunderstandings. This sequence shows the way E, as a more experienced peer, guides the interaction so that the perturbation is eventually resolved. E achieves this resolution in part by taking Y's perspective; that is, in order for E to fully comprehend Y's error he must first understand the idea Y is trying to convey.

January 12, 2007

Example 4, Intermediate

- 1 E: no the war is not over yet there are too much people there are too many people
- 2 like bush do you know bush↑
- 3 Y: ah:::no::: most people dislike bushi
- 4 E: yeah::: but in the war-
- 5 Y: -he's a stupid
- 6 E: ahh but in the war there are other people like bush no how can i say
- 7 Y: no:::most people not like bushi because he's insane
- 8 E: no like it's similar to bush there are other people similar to bush you know↑
- 9 Y: what people what person↑
- 10 E: like um::: how can i say ah bush and some people who live in middle asia
- 11 india and asia they always like fight they always like war so i think the war is
- 12 is not out of the wo-woods
- 13 Y: i don't think so because i think the war is out of the woods because iraq and

- 14 iran something like ((inaudible))
- 15 E: hm
- 16 Y: has has war has um (2.0) has the continued the war
- 17 E: umhm
- 18 T: keep the war
- 19 Y: yes so i think the war is out of the woods
- 20 E: do you mean (2.0) isn't or is↑
- 21 Y: is
- 22 E: is out of the war↑
- 23 Y: yes because you know iraq↑
- 24 E: yeah i know
- 25 T: yeah their they they are still continuing the war
- 26 E: so so i think you mean isn't out of the war-woods because out of war means
- 27 safe
- 28 Y: ah yeah ((laughs)) yes my mistake so i think the war isn't out of the woods

In line 1, E begins by stating that the war in Iraq is not over because there are other people involved who are similar to George Bush. In saying, “there are too many people like Bush” E displays his capability to use abbreviated talk to imply larger inferential meanings. However, Y requires certain inferential skills to interpret what E means. Student E is also able to self-correct a minor perturbation (“too much people” to “too many people”) without Y prompting. This self-correction indicates that a better form has replaced an incorrect one. Such self-correction also suggests that E takes responsibility for, and has a measure of control over, his own learning experience. His

line 1-2 utterance also lacks some of the hesitations and repetitions that were present in his beginner level talk. E then turns the floor over to Y when he asks her if she knows Bush.

In line 3, Y interprets E in a literal manner to mean ‘many people like or are in favour of Bush.’ Instead of orienting to the point E was trying to make (i.e., that are many Bush-type characters complicit in the war), Y responds based on her misinterpretation—that most people dislike Bush. In doing so, Y is operating under the assumption she is correcting a mistaken belief held by E. This initial lack of intersubjectivity sets E and Y off on a protracted course of confusion. One reason for such confusion is that Y is notably less proficient in English than E (as observational field notes suggest). This proficiency includes Y’s listening and comprehension skills. If Y did not understand E’s point, her asking for clarification would have displayed her competence and positioned her differently in relation to E. (This example, can be compared to the previous example with E, A, and P who all displayed their listening and comprehension skills by initiating clarification questions). It could also be that Y did not actively listen to E’s initial point because she was eager to express her own opinion about Bush.

In line 4, E does a turn initial hesitant agree (“yeah::”) acknowledging Y’s overall dislike of Bush, and follows this by a “but” projecting an upcoming disagreement. E then attempts to go back to his point but is cut-off by Y who counters with her own opinion on Bush. At this point, Y has control of the interaction.

In line 6, E tries to go back to his point (“ahh but in the war there are other people like bush no how can i say”). E is attempting to gain some control but is also hampered

by his own language skills. However, in order to make himself understood he self-corrects “there are too many people like bush” to “but in the war there are other people like bush.” What E tries to do here to resolve the perturbation by adding context (“in the war”) hoping that this addition will enable Y to understand his intended meaning. Restoring this intersubjectivity means that Y has to coordinate, or consider E’s perspective (i.e., she has to listen to E rather than react to E). Note, however, that at this point E does not substitute “like” with “similar” which may have been a more effective strategy given the trajectory Y is on. E displays his own uncertainty that his strategy will work when he says, “how can i say.” That E’s attempted resolve is unsuccessful is confirmed in line 7 when Y continues to state that most people hate Bush. This lack of intersubjectivity continues in part because Y does not orient to E’s revision. This could be because Y cannot ‘hear’ the changes due to her proficiency level. She therefore continues to misinterpret E to mean that people *like* or admire Bush and she is not reticent to point out that it is E who is mistaken (e.g., bald on record no::::).

In line 8, E counters with a bald on record “no” making it clear that there is a misinterpretation or problem afoot. On his third attempt at resolving the problem, E successfully rephrases by substituting “like” for “similar.” He completes his turn with the tag “you know↑” as a way to confirm whether Y now understands. That this substitution is successful is evident in Y’s line 9 (“what people what person↑”) which suggests that Y now knows that something more is wrong than E’s opinion of Bush.

On the surface, E’s attempt at rephrasing his utterance in order to be understood by Y may appear as a typical minor compensation. However, what is notable is that E used a course of action (add more context, improve precision) that is consistent with that

which a native speaker may have taken. In this way, E is engaging in fairly complex and sophisticated language and pragmatic manoeuvres. This segment shows how E to be able to skilfully use both his linguistic and interactional competence in order to be understood so that conversation can proceed. E is taking more control over his interactions than he did at the beginner level and he has more skill with the language since he is able to make adjustments more quickly (i.e., with fewer turns and hesitations).

In line 10, E continues. Although he begins with “like um::: how can is say ah,” which displays the nature of the explanation ahead, he presses on. E’s “some people who live in middle asia india and asia they always like fight they always like war” expands on the point he was trying to make. Note that back in Example 4 Beginner, the teacher substituted “middle east” for “middle ssia.” In line 10, E has either not assimilated “middle east” into his language repertoire or he rejects the new term. It could be that East Asians commonly use the term “middle asia” and because E and Y are referring to their own culture, rather than how Westerners refer to the Middle East, E uses the Asian term. On this attempt, E successfully makes his point clear.

Unusual is that the expression “out of the woods” is used in relation to war. There has been no prior class discussion about the typical context of use for this idiomatic expression, and therefore it is not surprising that Y and E would apply it in this context. What is important is that Y and E understand what each other means by such an expression. They are able to retain intersubjectivity around a misapplied idiomatic expression because they both understand the general meaning. The confusion arises not because of this misapplication but because of whether the war is out of, or still in, the woods.

By line 16, it becomes apparent that Y may be confused about how to use the idiomatic expression correctly, (“war is out of the woods” paired with “continued the war”). The teacher is listening to this discussion but does not correct Y. E indicates his listening skills by using backchannels and by querying Y’s “continued the war” rephrasing it as “keep the war.” Y then accepts this interpretation and pairs this with “war is out of the woods” which becomes a perturbation. In line 20, E directly questions Y’s intended meaning (“do you mean”) and offers Y a simple choice between two options rather than complicating matters with an explanation (“is or isn’t”). These actions by provide E with another window into the way that perturbations are dealt with by peers, particularly by peers with superior language skills. In these actions, we again see E’s competence (e.g., listening skills, direct clarification question). Moreover, by listening closely and showing interest in Y’s opinion E is exhibiting cooperative perspective taking behaviours. In this instance, E is the expert offering Y the opportunity to clarify and, by doing so, she improves her skills. Again, this request for clarification is necessary in order for a mutual exchange to take place. Student E’s clarification is accomplished without the repetitions that characterized his speech at the beginner level (note that the teacher does not request clarification even though he is listening in).

In line 21, Y chooses “is—is out of the war—(which E clarifies rather than assumes). Y, seemingly oblivious as to why E would be trying to clarify, continues. In line 25, the teacher speaks but does not refer to the confusion. In line 26, E comes back to the perturbation and provides a learning moment for Y (whether she wants to take it up is another matter). Notice that in order to understand the error E had to take Y’s perspective which he displays in his statement “i think you mean.” Notice also that E

hedges this utterance. Several reasons could be related to this hedging. It could be that E is trying to save Y's face (i.e., not embarrass her) because she is a peer. The teacher is also present. As well, E is still rather unconfident with regard to his language skills (as he often told the researcher). E's "isn't out of the war-woods because out of war means safe" foregrounds E's skills. If Y is able to comprehend this difference she will assimilate and accommodate this meaning. Again, note how straightforward E's explanation is and how his engagement with Y has afforded the latter an opportunity for learning. It is only subsequent to E's instructive interaction that Y can understand and acknowledge the error. Y is then able to display that she has assimilated E's correction ("isn't out of the woods").

Example 4 exemplifies E's progress. By acting as the more experienced peer, student E appears to be taking greater responsibility for language within the interaction. As his language skills increase so too does his facility for dealing with perturbations. In this example, E questions Y's meaning and offers her a choice between two options instead of offering a potentially confusing explanation. E displays that he and Y have a common understanding; that is, E appears confident that Y knows the basic meanings but is merely confused as to which one is appropriate in this context. In giving Y the two options, E is indirectly and perhaps with a certain subtlety, displaying a definitional meaning. This strategy also displays E's interactional competence as the actions taken protect Y from embarrassment.

In Example 5 below, students are discussing the ethical and social implications of the question "if you could get away with it would you do it?" This example reveals the interactional competence of the students. They organize turn taking, actively listen to

each other, and successfully resolve perturbations arising during the discussion. In this segment, E and J take Y to task for stating she would make an excuse in order to avoid a boring workplace meeting. While E questions Y's integrity, J presents some cogent reasons why Y should reconsider her position. The teacher listens but does not intervene.

January 18, 2007

Example 5, Intermediate

(Enzo, Yuri, Joshua discuss ethical behaviour).

- 1 E: what is your opinion yuri↑
- 2 Y: um:::maybe i will not do that but actually i will i will be pretending ((asks
- 3 researcher for how to phrase but ignores her advice)) pretending i am busy so
- 4 that i don't i escape boring meeting but it is also no punishment
- 5 J: what it means pretending↑ ((said to Enzo while Yuri is talking))
- 6 E: ((in response Enzo says the taiwanese word for pretending))
- 7 E: no punishment↑
- 8 Y: yes ((laughs))
- 9 E: because you lie again↓ why you lie again↓
- 10 Y: yes i know
- 11 E: so-
- 12 J: -i think others you lose your lose your-
- 13 Y: -job↑
- 14 E: honest↑ honest↑
- 15 J: you lose your you lose your ((says to teacher)) what the word we are workmate

16 T: what's that↑
17 J: like we are the classmate if we are the company workmate↑
18 T: yeah like colleagues or co-workers
19 J: colleagues co-workers
20 T: like someone you work with is a colleague
21 J: how you spell that↑
22 T: c.o.l.l.e.a.g.u.e.
23 Y: ah c.o.l.l.↑
24 J: o
25 T: a.g.u.e.
26 Y: e.a.↑ colleague↑ coolog↑ colleague ((inaudible))
27 T: yes
28 J: college↑
29 E: colleague
30 J: colleagee
31 (5.0)
32 J: i i i mean you will lose the friend lose your friend lose your collig because
33 you want to work together for a long time so if you you always think about
34 you're are busy you cannot attend your the office party it is no good i think it is
35 no good if i think the company just like a family like an extend to a family and
36 you can work together and do anything together maybe it is not good for you
37 but i know what you mean if the company is no good and all all of the
38 colleague is is very very very very very very i don't know how to say so that

39 way you would try to do that okay you understand↑

40 Y: uhm

In line 1, E begins by offering Y the floor to express her opinion. The direct manner in which E does this displays E's role as facilitator. (In this discussion, the teacher has appointed a group leader who is responsible for making sure all members get a chance to speak). Appointing a group leader maximizes the advantages of group discussion (Lazaraton, 2001). In line 2, Y states she would skip the boring meeting if she could get away with it because there is no punishment. Note that although Y has some trouble with the wording nobody in the group requests a clarification. In line 5, J asks E what "pretending" means. This query, along with E's response, co-constructs E's facilitator-expert identity and offers an opportunity for learning. Instead of explaining and potentially disrupting the flow of conversation, E gives J the Taiwanese word for pretending. By doing this, E has provided a quick way to provide Y the concept that can now be assimilated into the new vocabulary word.

In line 7, E responds loudly with "no punishment↑" indicating his outrage or astonishment that acts as a prompt for clarification by Y. Note that when this group was discussing another ethical scenario moments before Y declared that if there was no punishment a person could act without guilt. Her rationale was that if the matter were serious enough there would be legal consequences or punishment by authorities. Y then acknowledges her stance followed by a laugh that acts to soften or make light of her own response.

However, in line 9, E holds Y morally accountable for her position. (E is serious, but not angry). E's "because you lie again↓" acts as an accusation that implies that Y is a

serial liar. E's "why you lie again↓" is an attempt to hold Y accountable. Given that E has raised some doubts about Y's moral character, the expected response to such an accusation would be for Y to defend or give a reason for her position. This would allow E to understand why Y takes this stance. In line 10, Y admits that she is aware she would be lying, and in this admission, she confirms E's characterization. Y does not volunteer to explain herself at this time.

What is notable to this point is the authentic nature of the exchange. The students are not attending to language *per se*, but to each other's ideas. What unfolds in the next segment is the way that the conversation moves between these ideas and more specific language points. This movement characterizes intermediate talk. Recall that when E, D, and H were talking in beginner class about the dolphin show and safari their conversation was more controlled and simple. By contrast, in this conversation, E, Y, and J are displaying that they have the skills to engage in more abstract topics and complex ideas.

In line 11, E's "so" indicates that an explanation should be forthcoming. Because there is no overlap with J's line 12 it seems as though an immediate explanation is not going to occur. J then takes the floor to make the point that Y loses something (i.e., in a moral sense), but before he can finish Y cuts him off with the candidate answer "job↑". Note that Y's candidate response fails to respond to J's moral overtone. In line 14, E substitutes Y's job with the word honest (meaning honesty). In doing so, he tries to point out again that there is a moral element to situation. By questioning Y's personal integrity, E reveals his own ethics to which he holds Y accountable. Viewed this way, Y is afforded a better view of who E is. In other words, in light of E's criticism, Y has an alternative perspective on her own behaviour. It seems as though E wants Y to

reconsider her position and the motivation to do so is a loss of personal and social integrity. Y's current viewpoint would have to accommodate in order to incorporate the larger issue of interpersonal responsibility.

The way that perturbations are resolved over turns can be observed in lines 15-30. Student J breaks off from his general line of reasoning in order to clarify a vocabulary word. These turns show equilibration 'in flight,' so to speak. In line 15, J asks the teacher for another word for "classmate" or "workmate." In suggesting these candidate terms, J demonstrates that he understands the concept. What J is searching for is the way that that concept is typically described by English speakers. J uses the substitute phrase "company workmate" in order to present the concept to the teacher who then suggests "colleagues" or "co-workers." Thus, another way to resolve a perturbation is by offering similar candidate terms.

In line 19, J practices the words colleagues and co-workers by repeating them aloud. In line 20, the teacher gives the definition of "colleague" which enables J to gauge whether this word is accurately describing what he means. J also asks for the spelling and attempts to copy it down while repeating it aloud. In line 24, J repeats and in line 26, Y attempts to spell and say the word aloud too. From a Piagetian perspective, Y and J are trying to assimilate the word into an existing concept. Note that E is silent. In line 28, J mistakenly uses the word "college↑" instead of "colleague"—his upturn indicates that he was unsure of his pronunciation. Student E once again steps in without hesitation to resolve the problem by providing the correct pronunciation that J then mimics. (Note that J pronounces the "e" on the end of the word which is a very common occurrence among Chinese and Korean speakers since they voice all vowels).

After a long pause, J is ready to construct his turn. In line 32, J uses the word collig instead of colleague, but in line 38 he self-corrects and pronounces colleague without error. This long sequence points to how cooperation works to engender the learning process.

J goes on to make the case (which has cultural underpinnings) that work colleagues are akin to an extended family. Due to the nature of work relationships one must take the long-range view when working with a company. This explanation spans some eight lines and is therefore an extended turn at talk (*which surpasses ACTFL Guideline expectations*). J's tone indicates his seriousness and his engagement in expressing his view. What J is doing is attempting to motivate Y to look at the situation in another way; that is, if Y were to approach the meeting with different thinking she would interpret the meeting in a different way. For Y to adopt J's way of thinking, she would have to accommodate and assimilate this view. However, at this point, Y appears to give only a tepid response ("uhm"). However, as an observer it was plain Y was moved by E's comments and J's more subtle critique. Thereafter Y made it a point to demonstrate that she had a strong moral compass (e.g., throw them in jail because they did something wrong).

January 18, 2007

Example 6, Intermediate

(Same group including Tadihiro (TA) discusses skipping out on compulsory military service)

1 Y: it is duty to go army in my country and yours right↑

2 E: yeah he's guilty

3 TA: if a man don't go in de army what will you do what will they do↑

4 E: ah make some fake fake fake disease ah ((inaudible))

5 J: ((laughs)) i think maybe just like if this guy's always very lazy so they will

6 ((inaudible)) i think maybe the government try to educate educate him and try a

7 new job and and try to to persuade to try his best to do his job well and see he

8 also can earn many money as others don't don't don't let him go to the jail too

9 serious

10 Y: ah because we are different country so korea if you have to go in the army

11 but if if you don't want to or if you don't go to there you go to jail

12 J: ((laughs))

13 Y: because it is duty in my country

14 J: okay okay i know i know i know

15 E: but army is equal to jail no↑

16 Y: ((laughs)) i know

. ((chit chat and then they get back on the topic))

17 Y: is it duty to go to army in china↑

18 J: ah no

19 E: in china you should pay some money for joining army

20 Y: ahhhh really interesting

21 E: yah because army is a very popular job

22 Y: so we have different custom right↑ so we have different opinion

23 E: in taiwan some people pay money because they don't want to join the army

24 Y: yes in korea also but they go to jail

25 E: ah so they fake an illness right↑

26 Y: yes yes

27 J: oh::: ((laughs))

In this last example, the same group discusses the ethics of compulsory military service (military service is compulsory in Korea and Taiwan). This example shows how the group organizes individual perspective taking. Also notable are E's attempts at humour. As discussed previously, joking or humour involves differentiated or complex knowledge of language and interaction since its production and interpretation depends largely upon inference and cultural knowledge. From a social point of view, the use of humour creates a sense of solidarity within the group (Turnbull, 2003).

In line 1, Y begins by confirming that army service is compulsory in her country. She then displays her knowledge of Taiwan by using the tag "right↑." In line 3, TA asks what the consequences of not going into the military are. In line 4, E misinterprets TA's meaning as asking what a person has to do get *out* of service. Speaking in a deadpan style, E states that one could make up "a fake fake fake disease." The manifest evidence that E was in fact 'doing' humour is J's laughter. Student J then continues with an extended turn explaining what he thinks the government would do. He then repeats the word "try" several times revealing that in his opinion it is hard to recondition a lazy man.

In line 10, Y self-selects into the turn to draw the group's attention to the issue of cultural differences. By pointing out that Korean resisters go to jail, she distinguishes her culture and country (and herself) from others in the group. In response, J laughs to which Y solemnly counters with the point that military service a duty in her country. Note that

part of J's laughter may have to do with the fact that subsequent to Y's public dress down about lying to get out of a boring meeting or party she has now suddenly developed a strict moral code (when it comes to others). As a follow-up to Y's solemnity, J offers a backhanded apology with his "okay okay i know i know i know." In line 15, E uses humour when he likens the army to jail. E's tag on "no↑" is part of the structure of the humour, a signpost of a joke that draws the audience in. J laughs and agrees. What we see in the exchange between Y and J, and between E and J are finely woven turn-taking. Student E's humour is only humour because J laughs. Student Y can be interpreted as being defensive because J responds with "okay okay i know i know i know." In this latter case, repetition does not reflect proficiency status but rather a weak apology that is typical of native speakers.

In line 17, Y asks J if it is "duty" to go into the army in China. J declares that it is not to which E responds that in China "you should pay some money for joining army." Student E explains that in China going into the army is a popular job. Student Y explicitly orients to what E has to say as offering a new perspective, one that reveals cultural differences ("so we have different custom right↑ so we have different opinion"). One reading of Y's utterance is she is stressing cultural differences as a way to gain back her loss of face in the last discussion. She could also be making a rather cogent point that perspective taking is linked to the development of knowledge.

Rather than orient to Y in a serious manner, E humorously distinguishes Taiwan from China as by intimating that the Taiwanese buy their way out of the military. Y does not orient to the joke (she does not seem to get how E used the Chinese as a stepping-stone to make a crack about Taiwanese); rather, Y takes E literally ("yes in korea also")

before restating that resisters go to jail. Rather than leave it at this, E teases Y about the fact that Korean's also fake illness, a fact she concedes. J orients to this concession and to E's humour with laughter.

Chapter 6

Intermediate High

According to the language school's handbook, when students complete High Intermediate Level 5/6 they should be able to communicate with greater confidence, hold conversations on familiar topics, explain problems, express personal opinions, and write on a variety of topics. Under the *ACTFL Guidelines*, Intermediate High speakers should be able to converse with ease within simple social situations and exchange information related to work, school, and interests. Spoken language should be syntactically more correct than at intermediate level but students may still have problems using correct time frames and sustaining connected discourse.

This class was observed from March 15-May 2007. At the beginning of the observation period, six students were enrolled in the class. Because of a lack of interaction, these excerpts focus on four students: Enzo (E), Nick (N), Hoy (H) and Mingue (M). Nick, from Taiwan, was approximately 28 years of age and had studied English in high school, university, and in a private English language school. He reported that he had received ten years of prior English instruction. His intention was to be a pilot, which required fluent English. Hoy, from Korea, a 25-year-old, stated that he had had no previous English instruction in public school but that he did attend private English lessons. Mingue, from Korea, had undergone one year of English study in high school. He stated he wanted to advance into graduate school. It is noteworthy that, out of the four contributors, only one student (Mingue) reported preferring a 'teacher talking-students listening' classroom format. All other students preferred group or pair work.

Unfortunately, in this particular class, the teacher opted for a largely teacher-fronted format. She assumed the primary speaker role such that students were usually only able to take a few turns at a time, and only rarely able to engage in extended turns at talk (i.e., fewer such turns than at beginner or intermediate level). Because of the preponderance of teacher talk, students were less likely to self-select into a turn, express opinions, or explain why they held the views they did. During the observation period (mornings only over nearly three months), students did not participate in any pair or group work. Both the preponderance of teacher talk and lack of group work acted as a constraint that effectively limited opportunities to participate in both the “official” structure of teacher-student interaction and in the “infrastructure” of peer talk (Philips, 1983, p. 73). The teacher controlled the direction of speakership in the class. Most of the opportunities that she granted to student to speak had a purpose: slots were designed to confirm what she was saying or to address broad issues to which she would then supply an answer. Her focus was explaining vocabulary words that happened to arise while she was telling a story.

However, in contrast to traditional teacher-fronted classes that have a ‘law and order’ orientation, this teacher’s constraint over the class was the result of her urge to entertain. Given the abundance of teacher talk and the lack of pair or group work, there were few opportunities for students to co-construct knowledge amongst each other. Akin to the traditional classroom, students who spoke had the floor until the teacher took the floor away. These observed practices point to the importance of accountability, class monitoring by peers or supervisors, and better teacher training. In comparison to ineffective teachers, effective teachers take a facilitation approach, encourage student

engagement, small group work, and design their questions so that questions and interactions promote reasoning processes (Gillies, 2007).

My observations, however, led me to believe that students liked this teacher. One probable reason for this was that she created an informal atmosphere whereby students could relax as an audience rather than as participants. However, in doing the majority of the talking, she unintentionally became a constraint on her students' opportunities to learn. The teacher as the centre of attention let the students 'off the hook', so to speak, for having to take responsibility and do any substantive work of their own. (Recall too that most of the Asian students surveyed reported a preference for listening to teacher talk as opposed to participating in talk themselves). Moreover, from this observer's perspective, it was very unclear what exactly the day-to-day learning objectives were.

This class poses a limitation to the study because development was difficult to observe. However, rather than focusing on the preponderance of teacher talk, I will turn my attention to the few instances where students did speak. Within these excerpts, teacher control is also evident. I have also focused on extracts where Enzo speaks in order to capture the skills that had developed over the course of his stay.

In Intermediate High Example 1, the teacher asks E for the vocabulary that describes a scientist who studies weather.

March 22, 2007

Example 1, Intermediate High

(Enzo and teacher).

1 T: what's the name for the scientists who study weather↑

- 2 E: i forgot that vocabulary is too long for me
- 3 T: do you know what it starts with↑
- 4 E: yeah but i already forgot in martha's class it was already four months ago
- 5 T: ((laughs)) in martha's class really↑ you have to wait until unit four to learn
- 6 that word again ((laughs)) yeah i know some people just call them weather
- 7 people but they are actually called meteorologists you can make a song about it
- 8 meteorologist

In this sequence, the teacher begins by asking E a question that the teacher presumably knows the answer to. Rather than providing an answer, the expected response, E does a turndown and then states “that vocabulary is too long for me.” At this point, it is unclear whether E means that the word the teacher is looking for is too long or whether E has forgotten because he learnt the word too long ago. In either case, the missing word is a perturbation for E. Unlike several of the examples discussed in the prior section, it is not the concept that is problematic but rather the word that corresponds to that concept.

In line 3, the teacher uses a guessing game to elicit a correct response. E's “yeah” indicates he knows the first letter although he does not supply it. E goes on to explain that he does not know the word because it has been too long since he used the word in the beginner class. In this way, E is orienting to time; however, rather than invoking background knowledge derived in the past, E is using time as an excuse for his lack of knowledge.

E's ‘forgetting’ can be interpreted as part of the U-shape of learning (i.e., regression). It could also be that E did not fully assimilate the word into his language

repertoire. However, both explanations are consistent with the lack of opportunities for speaking available to E. As compared to beginner and intermediate classes, E, in this class, was offered far fewer speaking opportunities thereby restricting any potential use of the word again. It is noteworthy that this interaction reveals little in the way of authentic engagement in the conversation or any need by E to employ significant interactional skills. The teacher's two restrictive questions, coupled with E's two turn-down responses, point to a constrained type of interaction, an interaction closing down, rather than initiating, the conversation. As other classroom researchers have pointed out, questions designed to elicit a pre-determined response have nowhere to go (except to another student) if the targetted student is either unable or unwilling to participate.

In lines 3 to 5, the teacher displays surprise that E learnt the word in beginner class ("in martha's class really↑"). Instead of canvassing the class, the teacher takes the floor, makes a joke, and supplies the answer, followed by another joke, all of which close any opportunities for participation from students. The teacher resolves the perturbation with no assistance from students. I suggest this is a weaker form of resolution than observed thus far (i.e., group resolution and so forth). There is also no follow-up talk about weather in the city, weather in their home countries, or any other aspect of weather as the conversation progresses; therefore, the teaching of the word "meteorologist" requires the same type of contextualizing observed in previous classes.

In Example 2 below, the class is discussing cultural differences in food and eating habits. The goal of the discussion was to elicit words denoting time shifting (*ACTFL Guidelines* state this remains a difficult task for students at this level). Since this was

one of the more interactive occasions in this class, E had the opportunity to reflect on the changing nature of his own country and culture from a distance. In doing so, perturbations arise that are resolved with the teacher's help. Although resolving perturbations that arise in the course of a discussion seems reasonable and is sometimes required to enable the discussion to continue, the extent to which these corrections curtail the flow of ideas is a matter of concern. Within the previous examples of peer talk, perturbations that interfered with intended meaning were usually resolved by the speaker and addressee and quite often by other class members. However, in this example, the question is whether the resolution of perturbations overshadows perspective taking. For the teacher's purposes, such resolutions may have been necessary and important. However, their mode of execution may pose a type of constraint because other students are not invited to participate in that resolution process. Hence, learning opportunities are limited to receptive rather than productive learning.

May 3, 2007

Example 2, Intermediate High

(Class discusses the eating habits of specific cultures).

- 1 E: people in taiwan they they like ah they they really need ah non
- 2 sticky rice for their breakfast but people now in taiwan if you want to prepare
- 3 non-sticky rice it's you need sometimes it's not convenient so people in taiwan
- 4 ah they they start to have ah bread or just bacon egg fried egg or something like
- 5 that for breakfast ahh shop breakfast shop a hamburger sand-
- 6 T: breakfast sandwich

7 E: sandwich yes to as their breakfast
8 T: oh so it's becoming more western more westernized breakfast style
9 E: yes yes
10 T: because people want to sleep more than eat
11 E: you can't imagine ah people in taipei ah their how can i can say that the paste
12 is very fast
13 T: pace
14 E: paste
15 T: paste no pace the speed
16 E: paste speed is is paste people paste
17 T: it's this pace what you just said was paste like toothpaste versus the speed of
18 something or like when you are like walking speed we call it pace with c
19 E: ah yes pace it's very different ah from ah
20 T: other cities
21 E: than here yes
22 T: oh yeah vancouver is rea::lly relaxed it's like oh yeah why are you in a hurry
23 E: we have mrt mrt just like skytrain here and you can the ah ah what is that not
24 an-animato::r ah the↑
25 T: escalator
26 E: escalator yeah they divide two two side you cannot you can standing you can
27 stand on the right side to to wait for the the ah
28 T: escalator
29 E: escalator move but you have to walk or run in the left side you have to keep

30 left side clean

31 T: clear

32 E: clear you have to walk you cannot just stay because everyone is in a hurry

In line 1, E takes an extended turn to describe the changing eating habits in Taiwan, habits that are becoming more westernized. The first part of his utterance is marked by filled pauses (“like ah”) and repetitions which slow, but give time to organize, his speech. In comparing what people “need” with what people “do,” E is comparing the past with the present. E also refers to the past by using the word “so” (“if you want to prepare non-sticky rice it’s you need sometimes it’s not convenient so people in taiwan ah they they start to . . .”). He goes on to describe what people are eating now and then mentions breakfast shops by which he means fast food restaurants like McDonald’s. The teacher cuts him off in line 6 by changing what was most likely “hamburger sandwich” to “breakfast sandwich,” which curiously is not a commonly used term. In line 7, E accepts completion of the phrase “sandwich yes,” but not does repeat the phrase “breakfast sandwich.” Instead, E says “sandwich yes to as their breakfast” which can be interpreted to mean ‘a sandwich related to breakfast.’ Hence, it is unclear whether E assimilated this term into his language repertoire. (Note that if the teacher needed to interject at this point, it may have been more useful to use the common phrase ‘fast food restaurant’). The teacher does rephrase E’s line 8 by summarizing the general idea (“breakfast is becoming more westernized”). Summarizing clarifies for students who may have been having difficulty following the conversation and it gives E the opportunity to make any

changes if the teacher has misinterpreted. Summarizing also allows E the chance to hear a native speaker model the gist of his ideas in a more succinct and correct form.

In line 11, E offers some insight into the busy lifestyle in Taipei. E's "you can't imagine" is a figurative utterance that is technically unnecessary but serves the story telling aspect of E's utterance well. It also displays E's increasing facility with descriptive language. Student E also projects an upcoming perturbation ("how can i can say") before he notes that the "paste" is very fast.

A resolution sequence unfolds from lines 11-19 with line 11 containing the perturbation "paste," line 13 the teacher resolution of "pace," and line 14 when the unassimilated "paste" emerges again. Note that to this point, the teacher has not actually emphasized the word "pace" as has been commonly done by previous teachers. (Something that may also be interfering with E's repeated error is hearing. The teacher has a notable lisp making the two words difficult to distinguish when she pronounces them). After E is unable to correct (see line 16), the teacher then offers definitions in order to add context. However, as evidenced back in line 11, E is not confused about the concept associated with "pace" but only with the correct vocabulary/pronunciation. In light of E's continued confusion, in lines 17, 18, and 19, the teacher explains the difference between "paste" and "pace" more thoroughly. She compares "pace" and "toothpaste" with vocal emphasis on the problematic letter C (note that she does not write the words on the board, which may have cleared things up earlier). Line 19 concludes the sequence when E uses a change in state token "ah" then confirms with "yes pace." From a Piagetian framework, the teacher is assisting in the assimilation of "pace" into an existing conceptual structure. Student E has existing knowledge of the context within

which the word fits, but must resolve the perturbation with a better form that will *eventually* account for all other instances of use. These events as described are suggestive of a potential learning moment; however, such moments could only be confirmed in a future instance of use (recall how Middle Asia reappeared). Given that E understood the meaning of the word “pace,” this problem could have been resolved more efficiently by using a timely strategy, such as writing the word on the board or an interactive strategy such as asking another student to pronounce “pace.” The benefit of such strategies: E could then continue with the ideas he was trying to express.

In line 19, E continues with his turn when he points out that the “pace” is very different before he uses a filled pause “ah” which the teacher then uses to opt into the turn. Her self-selection in line 20 can be viewed in at least a couple of ways. On the one hand, such a move displays cooperative co-construction of meaning—that the teacher and E are doing conversation together. In this view, the teacher may have offered “other cities” in order to smooth the way for E to have a relatively unbroken turn at talk. Filling in words would act as scaffolding fluency. On the other hand, the teacher’s opting in could be considered a cut-off. On this view, her “other cities” functions to abbreviate E’s turn, and prevents the opportunity for E to complete and speak for himself—even if his unheard completion was another perturbation that led to another resolution of some sort. Note that E did not ask for the teacher’s assistance nor did he hesitate in any way that differs significantly from his utterance in line 1. In fact, as line 21 suggests, the teacher’s “other cities” is not quite what E seems to have meant as he substitutes it for the word “here” (i.e., Vancouver).

After the teacher's line 22 comment, E goes back to compare Vancouver's skytrain to the MRT in Taiwan. Again, E projects an upcoming problem through filled pauses ("ah ah"). Unlike the unsolicited fill-in seen in line 20, E directly appeals for assistance ("what is that not an-animato::r ah the↑"). E's "animato::r" displays that he is willing to make his mistakes public before he appeals for help. He seems to know the concept as his "animato::r" is close to "elevator" in that both denote motion. In line 25, the teacher supplies the resolution; however, eliciting a candidate resolve from other students may have been a better strategy for involving the class at this point in the lengthy, almost exclusive, conversation (note that throughout this lengthy sequence no other student has taken a turn). The length of the exchange between E and the teacher raises the issue of how long a teacher can reasonably engage with one student to the exclusion of the others before the latter turn away to engage in other things. My notes indicate that after such long exchanges students who are not being invited to contribute (even if it is just offering a correction) generally 'tune-out' (e.g., play on their laptops, with translators, or even sleep).

In line 25, the teacher corrects the perturbation "animator" to "escalator" and E's acceptance is indicated in line 26. In line 27, E seems to pause before using "escalator." In response, the teacher supplies the word. Whether E would have produced "escalator" on his own (thereby making line 28 a cut-off) is unclear. If in fact E 'lost' the word it could have been due to factors such as memory, practice, the one-sided nature of the resolution, or because E's focus is divided between these issues and his story. Subsequent to the teacher's assistance, E uses "escalator" without hesitation before

returning to his description. This pattern is repeated by E's word "clean" which the teacher changes to "clear" which is then quickly reused by E as he continues.

The next example of Intermediate High classroom talk, Example 3 (below), is the longest interactive turn-taking segment over several months of observation of this class. Because of its length, I focus the analysis on only certain important interactional sequences. On this occasion, the class is discussing the ideal age to learn a language. As a language researcher and teacher, it is interesting to hear the student's opinions on this topic. From a class management perspective it is relevant to see how the teacher manages turn taking and how knowledge is facilitated over such an extended exchange of turns. Similar to Example 2, the teacher begins by rotating speakers (e.g., E to H) in quick succession but her conversation with N ends up dominating most of the exchange. This example differs from Example 2, however, in that the teacher seems to put the emphasis on the expressing of viewpoints rather than on correction. In response to this, students display some insight into the best age to learn a language and in some cases provide well-reasoned arguments and insights. My analysis focuses on the way that these arguments are initiated, structured, and constructed by classroom members.

May 9th May 2007

Example 3, Intermediate High

- 1 T: what's your idea on the ideal age to learn another language↑
- 2 E: five to seven
- 3 T: five to seven okay so early elementary school like kindergarten to grade two
- 4 maybe okay how about you homen↑

5 H: between ah (2.0) twenty and thirty

6 T: twenty or thirty↑ that's the best age to learn another language↑

7 H: yes

8 T: okay that's a huge gap why do you think that↑

9 H: ((inaudible)) i think over twenty is better because they have a lot of

10 background and their culture before they have another language

11 T: okay so you're being wa::y more practical because you think if you're over

12 the age of twenty then you have a lot of background info a lot of li::fe and

13 culture and more information on human behaviour and all that stuff right

14 and then you think it will better to learn a language okay any other

15 opinions what do you guys think↑ when is the best age

16 N: elementary school

17 T: like high elementary low elementary or mid

18 N: high just elementary school

19 T: like elementary grade what↑

20 N: ahhh four

21 T: grade four↑

22 N: ahh ((inaudible))

23 T: why is that↑

24 N: cause by grade four they know their own language but they don't understand

25 the grammar and organizi the organi orga-

26 T: -organization structure

27 N: yeah structure yeah right so ah they go to elementary school they study about

28 the structure of their own language so at that time they study second language
29 or another language ah they can study another language more easily because
30 they can compare with their own language so ah they can understand another
31 language structure and ah the using
32 T: usage
33 N: yeah usage so i think that time is ah the best time
34 T: best okay wow i dunno for that i think that student has to be quite talented like
35 high IQ because in order for you to understand all the functions of your own
36 language you have to be well educated in your language first but as you
37 know just because you are a native speaker it doesn't mean they all speak the
38 the same some people use language much better or more creatively than others
39 right↑ so for your theory to be more widely spread than that student has to know
40 know their L1 really thoroughly to compare like new language and old language
41 like for example korean or japanese since we have a lot of esl students from that
42 area um they are kind've considered to be opposite of english like their sentence
43 structure ah english is an svo language and korean and japanese is not
44 so that's why a lot people have a lot of difficulties because they have different
45 structures-
46 N: -bu-
47 T: -what happens in cases like that↑
48 N: but the (actor) they already adopted their ah own language their own language
49 structure so the (actor) if they starting second language they can't sometimes
50 they can confused like other students around my age they when they come to

51 study english for example if they study english they sometimes confusing the
 52 structure because they already adopted their own languages structure so i think
 53 the time is better because to compare because ah when i study english grammar
 54 structure ah ah i used to compare with my own language structure so i can
 55 ca-can't understand easily
 56 T: so it's easier for you to study that way
 57 N: yeah
 58 T: so basically you're talking about grammatical structures right↑
 59 N: yeah because i already have a base of my own language structure
 60 T: how long have you been studying english↑
 61 : ((inaudible)) almost eight month or no nine month
 62 T: you've only started studying english
 63 N: specific more specific because before that time i didn't care english because
 64 i don't want to study english i hate english
 65 ((class laughs))
 66 T: wo::w
 67 N: yeah because it's so difficult and also ah i can't understand i can i can't
 68 understand its structure or this vocabulary
 69 T: it gives you a headache
 70 N: yeah so i hate that just a i need english to enter my univers so when i was in
 71 business and high school student i study english just the reading and just the
 72 the listening that's it
 73 T: did you go to any private um academies or like private tutoring

74 N: when
75 T: like during high school
76 N: no i didn't just
77 T: no extra just just from school
78 N: yeah just to hold the university i don't need to any more so
79 T: so what made you change your mind↑
80 N: because i wanna go to graduate school
81 T: oh okay so
82 N: so i study english again last year from last year so from that time until now
83 almost nine months
84 T: almost nine months of focussed studying so i guess in this case your idea is
85 correct like when you are a little bit older and you study a language you can
86 focus better instead like when you're young you just kind've learn about
87 everything but here he had a definite purpose graduate school must have english
88 ability right↑ direct line so yeah it makes it makes concentrating much easier
89 it's just that every day you have to deal with-
90 E: -but that that that could cause ah more press pre ah pressure
91 T: press↑
92 E: pressure
93 T: pressure yes but some people work well under pressure they need pressure to
94 work if you give them ten years they're like laalalalalalala yeah they don't
95 work that way they need pressure and they become better focussed but some
96 people who have self-motivation can work because they can schedule their own

97 time ((lines missing for brevity))

98 T: mingue how about you↑

99 M: i think ah somebody learn english i think is a good as a children because ah a

100 children is like ah language sponge-

101 T: sponge oh yeah very good imagery

102 M: so if i learn if i learn ah english as an ah adult it is difficult because ah the

103 english ah english is is sinked is sticked↑ sticked↑ okay fixed because-

104 T: -fixed because it's very difficult to change

105 M: because my first language ah sentence order is subject is subject object verb

106 and western is subject verb object so it is difficult so i think ah maybe children

107 is good i think

In line 1, the teacher directs a question to E that elicits his opinion (“what’s your idea on”). This open-ended question displays to E and the rest of the class that the discussion structure is sharing of opinions. It also signals to students that they should be prepared to speak. E’s answers the question (“five to seven”) without hesitation. In line 3, the teacher accepts E’s response and extends it further by supplying some contextual information. She does not ask E to explain why he states this age is best. Instead, she moves on to H. In doing so, the teacher controls who takes the floor and when. That control can be viewed as practical, making it possible for all students to take a turn, or as constraining the opportunities for students to contribute as they see fit. H then responds with “twenty to thirty.” Instead of letting this answer stand as she did with E, the teacher queries H’s response and encourages him to justify his answer in line 8 (“why do you think that↑”). H begins by projecting an upcoming opinion (“i think”) and justification

("because"). H then states that older students have more background knowledge and cultural awareness (elements that feature in the Five C's). Notice that H speaks with no hesitations in the expression of intelligible ideas. In lines 11-14, the teacher summarizes H's opinion, a strategy that serves as a 'second hearing' for other students and clarifies for H the accuracy of the way his turn has been interpreted. This summary also works to validate H's perspective.

In line 15, the teacher then opens the floor to the other students with "what do you guys think↑". Student N self-selects into the turn by responding with "elementary school." Similar to H, the teacher attempts to draw out more details by outlining a choice between more specifics ("high," "low," "mid"). In line 18, N chooses "high" but then backs away opting for "just elementary school." However, the teacher refuses to let N off the hook and in line 19 presses him to indicate a grade. In line 20, N opts for grade four; however, his turn-initial hesitation "ahhh" projects a possible forced reply meant to prevent further probing. In line 21, the teacher presses for confirmation ("grade four↑") perhaps cognizant that N may be trying to evade further scrutiny. In response, N does a turndown refusing to answer, a response that prompts the teacher to be more direct ("why's that↑"). In line 24, N rallies with a turn initial projection of an explanation ("cause") going on to state that although grade four students know their own language they do not yet understand the grammar of that language.

In line 25, N struggles with the word "organization" with his utterance "organizi the organi orga-". It seems likely that N knows the concept since he is using it in an appropriate context and has produced most of the word correctly. Partial construction can be viewed in terms of equilibration. Student N attempts to expand on what he does

know (“organizi, “organi,” “orga-”) in order to produce the rest of the word. Notice that when he produces the “i” after the “z” he then backs off to a correct point. Student N is trying to coordinate what he has displayed with any additional background knowledge. As a social process, N makes what he knows publically available for expansion by other classroom members. The teacher coordinates her knowledge with N’s to complete the word in line 26 (“organization structure”).

In line 27, N accepts “structure” over “organization” which is interesting considering he was struggling with “organization.” This switch may have been because he believed “structure” to be the more representative term. Student N then goes on to explain that, by grade four, students have the ability to compare the grammatical structures of their L1 with the structures of their new language (note that this seems to contradict what he said back in lines 24-25). After the teacher corrects N’s “using” to “usage,” she offers her own opinion, an opinion that rejects N’s point of view. She takes the floor for several turns to explain why she rejects N’s view; namely, because structures vary between languages learning by comparison does not work.

In line 46, N projects a rebuttal (“bu-”) but is overtaken by the teacher who challenges N (“what happens in cases like that↑”) to defend his view in light of conflicting evidence. Student N’s lengthy counter indicates his conviction, involvement, and willingness to take on the challenge. Although N’s point is somewhat hard to follow, he seems to be asserting that it would be easier for children to learn the formal rules of their L2 if they did so while learning the rules of their L1. Children could then compare the two structures side-by-side during the learning process. If children have already learnt the grammar of their L1, such comparisons would be difficult because the L1

grammar would interfere with the grammar of the L2. However, this interpretation depends on whether N meant “can” or “can’t” which is not clarified (“i can ca-can’t understand easily”). Given N’s contention that grade four students are at the best age to learn, I interpret N to mean “can’t.” If this is correct, N’s general point seems to be that contrary to experts’ (i.e., scholars and teachers), views about the correct way to learn an L2, the fact is that students learn by comparing the structure of their L1 to their L2. If this is the way learning proceeds then comparing formal structure should take place when children are still flexible in their understanding about such structures.

In line 56, the teacher responds with “so it’s easier for you to learn that way,” thereby challenging N’s claim. N replies “yeah.” Given the complexity of N’s counter argument, and the importance of making sure that N’s perspective is understood so class members can build onto these ideas (whether to agree or disagree), the teacher as facilitator should be summarizing N’s position rather than simply challenging it. Reading back N’s general position would insure that both she and the class have interpreted him correctly. This summary may not have taken place because the teacher’s line 58 clarification “so basically you’re talking grammatical structures right↑”, suggests that she does not really understand what N was trying to say in the first place. When N states he already has a base knowledge of his L1, he could mean one of the two things: either knowledge of L1 structure makes it difficult to learn an L2 at an older age (i.e., inflexibility) or that grammatical knowledge of his L1 helps him to learn an L2. Again, given that he argued grade four was the best age to learn an L2, the latter position is unlikely. Rather than clarify or elicit clarification from another student (who is

presumably listening), the teacher changes the subject to how long N has been studying English.

Note that the roundtable selection process has been put on hold because the teacher has prolonged her discussion with N. Even in light of her decision to focus on N, the teacher could have opened the floor or selected another student to ask N questions that would have clarified his position. This strategy would have shifted the two-way discussion to a group or public one. Establishing a pattern of group elicitation would promote listening skills, increase participation, and decrease the likelihood that students become bored or distracted. Moreover, if the teacher began such discussions by reminding students of the benefits of close listening, clarifying, and challenging has on learning they might be more willing to participate.

Instead of rotating to another student, the teacher says “how long have you been studying english[↑]. In line 61, N goes on to state that he has studied English for eight or nine months. The teacher follows up by asking whether this was his initial start time (because he is in a high intermediate class). Student N reveals that he previously hated learning English because it was too difficult. The class laughter reveals that at least some members are following the conversation. In stating that he could not understand the structure of English, the confusion over whether N previously meant “can or can’t” is resolved. However, this point is not integrated back to that discussion.

In the next set of turns, N establishes that he studied as little English as possible to enter university. His current goal, to be accepted into graduate school, has motivated him to learn more English. What is noticeable is that lines 73-83 have the turn taking structure and content of a private conversation rather than of classroom talk. In

particular, there is a lack of specific academic content and there is no rotation of turns.

In line 84, the teacher gives the upshot of N's contribution (graduate school or a goal is motivating). How this relates to the rest of the class is unstated by the teacher.

By line 90, E attempts to enter the conversation by cutting the teacher off with the observation that "that that that could cause ah more press pre ah pressure". This move by E could be interpreted as a challenge or, conversely, as a bid to express his perspective. However, given that N and the teacher have dominated the floor and that the teacher seems to inject the conversation with her own strong opinions I suggest the former to be the case. In making this move, E relocates the conversation back into the public domain. (Note the repetitions in E's utterance, largely absent from his peer talk, suggest that nerves may be playing a factor here as he cuts off the teacher). E's self-correction "press pre ah pressure" is equilibration in flight so to speak, as he pulls together his resources in order to make such a correction. The teacher's "press↑" coupled with E's correct re-stating display the interactional work involved in compensatory actions taken in talk to self-correct.

In line 93, the teacher rejects E's idea when she notes that some people work well under pressure. Rather than return to E to follow up what he has to say about this, the teacher moves on to another student. In line 99, M states that the best time to learn another language is childhood because "children is like ah language sponge-." The teacher follows up this remark with a compliment, and in so doing acknowledges M status as an advanced learner.

In lines 102-103, M continues to explain. Although M's turn is marked by filled pauses ("ah") and repetition ("if i learn"), he is able to make a very cogent point. In line

103, M struggles with vocabulary by first describing English as “singed is sticked↑ sticked↑.” M then turns to “fixed” (“okay fixed”) which the teacher acknowledges as correct by providing a contextual definition. The combination of working out the correction aloud and the teacher’s follow-up confirmation is yet another example of the co-constructed nature of the equilibration process. To justify his perspective further, M uses a comparison; that is, he compares the structure of his own language to the structure of English.

Before turning to the TOEFL class, some concluding remarks are in order. Over the course of beginner to high intermediate classes, improvements in language use and interactional competence have taken place. Learners have displayed increases in autonomy. The idea of increasing autonomy is linked to spontaneity. Increasing control over the language is followed by increases in interactional competence. Students are more able and willing to volunteer their points of view using a greater range of strategies (e.g., counter points, joking, criticising, detailed explanations, and figures of speech). Spontaneity can be generally described as saying what you want, when you want, in the way you want. As time passed, Enzo was better able to enter into conversation using an increasing range of vocabulary and constructions alongside an increasing range of conversational strategies. These gains relate to increases in the range of opportunities for learning.

In this last section, I turn my attention to students studying for the Test of English as a Foreign Language (TOEFL). Examining a TOEFL class offers a way to observe this trajectory of learning in a more complete way. It also fills out the study in terms of the

observation of teaching strategies, since one of the TOEFL teachers had significantly more experience than the teachers observed thus far.

Chapter 7

Test of English as a Foreign Language (TOEFL)

Upon completion of the TOEFL course, students should be able to communicate spontaneously with good grammatical control and provide details to support ideas. TOEFL students spend a lot of time listening to tapes on different topics (e.g., robotics, brain surgery, and architecture), locating the main ideas of a given narrative, and then completing writing and speaking tasks based on that material. TOEFL is a prerequisite for foreign language speakers to enter Canadian and American universities at both the entry and graduate level—therefore the age range in TOEFL classes can vary from young high school students preparing for university entrance to older adults who want to retrain or advance in their careers by getting advanced degrees. TOEFL focuses on the four areas of competence (reading, writing, listening, and speaking) by drawing on students' logical reasoning and inferential skills. Students must be proficient enough in English so their verbal and written responses are coherent and logical.

Instruction in TOEFL focuses on teaching students efficient strategies for approaching questions dealing with the four skill areas (e.g., how to detect main ideas and supporting details while paying less attention to distracters). Students spend most of their time listening to recordings based on a wide variety of topics. This material can be complex and the topics are most likely unfamiliar, such as an art historian talking about 17th Century art or a social scientist explaining her latest research to a group. The unfamiliar and rather scholarly content reflects the fact that the TOEFL is designed for students wanting to continue in academia. TOEFL presents a challenge, especially to students' listening and comprehension skills. After listening to recordings, students must

write a short essay or talk about the competing views within the dialogue and do so within a fixed time (usually one or two minutes). This timed aspect is meant to test spontaneous vocabulary choices, fluency, sentence construction, as well as listening skills so described.

TOEFL classes vary in the extent to which they are interactive, depending on the instructor. For example, the instructor can choose to work strictly out of a TOEFL manual or can incorporate some of her own content, such as listening to a CBC radio interview or a program such as *Quirks and Quarks*. Moreover, many of the same activities can be approached on either an individual or group basis. In the latter case, students provide peer feedback and the teacher acts, for the most part, as a facilitator. Students are encouraged to take online practice tests throughout the course. The course is extremely challenging and, as a result, it is not unusual for students to take the test several times.

TOEFL classes are included as part of the study in order to examine learners who are closest to the Advanced Superior range on the *ACTFL Guidelines*. These guidelines are consistent with the learning objectives for the TOEFL course. An abbreviated list of these objectives is as follows: Students should be able to converse with ease using a range of native-like discourse strategies. They must be able to support opinions and hypothesize, but may not be able to talk at length on unfamiliar abstract topics. Superior speakers should also be able to distinguish main ideas from supporting information. Errors tend to occur in low frequency structures but do not interfere with communication.

As previously stated, because the course design at this particular school did not go beyond Intermediate High, a TOEFFL class was included to examine the nature of talk

and interaction at an advanced proficiency level. Consistent with the analyses presented so far, my aim is to view cooperation and/or constraint, perspective taking, and social equilibration. It is important to note that not all TOEFL students are necessarily as advanced as the guidelines predict. Some schools admit TOEFL students based on the students' ability to pay, and to continue paying, tuition.

This revolving class was comprised of Loreena (L) and Aurora (Au), two women from the Philippines, both approximately 32 years of age. Their first language was Tagalog. As the Philippines has an historical connection to the United States, most Philippine citizens learn English in school. Loreena received English instruction from elementary through to university; further, all of her siblings and parents spoke some English. Loreena's objective was to obtain certification so as to allow her to work as a nurse in Canada. Aurora stated that she had studied English in the Philippines for fourteen years. Tatiana (Ta), age 32, was from the Ukraine and had studied English for ten years. She was working in the office of the school, but wanted to find work as an engineer in Canada. Ramene (Ra) was an Iranian male in his early twenties whose first language was Farsi. He had four years of formal English by way of elementary and high school. He had attempted the TOEFL on a prior occasion but had received a low score. Kim (K) was a 32 year-old male from Korea who had learnt some English in high school. His goal was to get into an American graduate school. Azaday (A) was a nurse from Iran with nine years of formal English instruction in high school and university. She wanted to be certified as a nurse in Canada. Robin was a 17-year-old male from Thailand. He took English in high school with some additional education at a private English language school. While he had immigration and work plans, he reported frustration at not being

able to express his thoughts and emotions in English. Interestingly, with the exception of one student (Ramene) all other students reported preferring group or pair work to a traditional teacher-fronted classroom. All the students stated that their goal was to become highly proficient.

The English skills of students in the TOEFL class are notably more advanced than students in the Intermediate High class. However, what sets their skills apart is not so much the fact that they do not make vocabulary and grammatical errors, which in fact they do, but that they also have greater pragmatic facility with the language; that is, they are able to accomplish more actions using a greater range of strategies. Going back to the idea of spontaneity, which is related to autonomy, these students are better able to say what they want, when they want, in the way they want. Of course, this means these students have a larger vocabulary and more facility with the structure of the language. However, when we consider that a tourist in a foreign country can successfully order food, hail a taxi, and go to market with little or no ability of a native language then we have to re-consider what competency means. There is a social component whose roots do not lay in the structure of the language, but rather in interactional skill. These skills, related to one's willingness to do what must be done in order to be understood, involve meaning making by waving one's hands, laughing, producing 'broken' speech, and so forth. All of the examples thus far reveal increases in these interactional and pragmatic skills. Learners are better able to use the structure of the language to support these interactional skills in order to accomplish the actions in talk they want, and to discuss the content in a meaningful way.

June 5, 2007

Example 1, TOEFL

(Note this is the Intermediate teacher, John, who is in training as a TOEFL teacher).

(Tatiana (Ta) explains algorithms to Robin (R), Ramene (Ra), and the teacher (T)).

1 T: so we're talking about my favourite topic algorithms so a list of operations

2 tatiana you're my engineer can you explain in little more detail for robin what

3 does an algorithm do what does an algorithm do↑

4 Ta: ah algor shows you how to act in ah in your step for step for example

5 T: so is it does it look like a list of [directions like this]

6 Ta: [yes sometimes it] could look different

7 equation for example like ah first like wake up in the morning second if it's

8 seven thirty ah then i go to bathroom if it's eight o'clock i will run away

9 to my ((inaudible)) walk step number five like aha ah like after i run away to

10 the walk like so so i come to the walk i start to read paper if if ahh i come in

11 from the walk late i'm going to the step number ten if i'm coming from the

12 walk early

13 R: like a flow chart↑

14 Ta: yeah so s-something like that it it could be simple operation could be

15 mathematical equation for example could be like for example if you're

16 writing program it's ah algorithm so first you write algorithm how it should

17 like if-

18 T: it's often used with computers like computer programs

19 R: i see yeah

20 Ta: so it's ah like
21 R: yeah
22 Ta: it's the basis for programming
23 R: i see
24 Ta: for the programming you use algorithm then you put algorithm into like code
25 machine code or some ah particular operations
26 R: wow i see okay i got it
27 Ra: zero one one
28 T: sorry↑
29 Ra: zero one one
30 Ta: yeah ah:: not zero um
31 Ra: yeah but numbers digits or symbols [or symbols ((inaudible))]
32 Ta [yeah it's it's] the machine will transfer it
33 to the symbol usually put some kind of code if one if n more than x than go to
34 ten if it's equal then go to this one
35 R: it's some kind of ((inaudible)) of of the language of the program for computer
36 L: yeah but it's the first step of programming
37 R: like (cobalt and empassy) like
38 L: yeah yeah yeah all the languages they use algorithm like the special
39 characters are different but the algorithm is the same for all languages
40 R: ah i see

The sequence begins with the teacher giving the floor to Ta to explain what algorithms are, which he does with “you’re my engineer”. This shifting expertise is common in TOEFL classes since the topics under scrutiny can pertain to the professions of some students. Since Ta is both an engineer and advanced student, the teacher may be more likely to grant her equal or even higher status than himself. Support for this idea comes from the fact that Ta has been given control to explain a concept the teacher knows little about. Along with a granted expert status, R contributes to this expert identity as he is the one Ta’s explanation is directed to. The eventual definition is co-constructed by Ta and those who ask her questions that elicit the eventual meaning. In line 5, the teacher summarizes by way of the question “does it look like a list of directions like this”. Ta overlaps his utterance with a partial agreement. Both the overlap suggestive of authority and partial agreement suggest that further explanation is forthcoming.

In lines 6-12, Ta takes the floor. She demonstrates her proficiency level with regard to topic, linguistic ability, and interactional skill when she gives examples meant to explain what an algorithm is. Although her English skills are advanced, Ta has a noticeable accent. This accent is part of the constitution of her identity as a non-native speaker. For example, Ta rarely uses articles before nouns. Her description of an algorithmic process is somewhat hard to follow. However, this may be because Ta is trying to explain a complicated concept. To do so she uses an analogy, another difficult task as it involves language pertaining to abstract concepts. However, as compared to advanced intermediate students Ta is better able and thus more willing to undertake such a detailed description. She is better able to explain in part because she seems better at

using stress and tone of voice. As well, Ta organizes her explanation by giving examples, another expression of her proficiency.

In line 13, R displays the same kind of competencies when he compares an algorithm to a flow chart (“like a flow chart↑”). Ta gives a hedged agreement (“yeah something like that”) that maintains her position as expert. She then continues on the floor using the idea of a math equation. The teacher does not break in to correct Ta’s lack of article use. He does add that algorithms are used with computer programs, a contribution that acts to preserve his authority and signal that the defining of algorithm is a group activity.

In line 19, R indicates his understanding and continues to confirm this understanding in lines 23 and 26. R’s backchannels such as “i see,” and “yeah” along with his change of state token “wow i see okay i got it” is manifest evidence that Ta’s explanation was successful and of R’s accommodation and assimilation process. This change of state token coupled with R’s tone of voice reveals R’s interactional competence as the utterance also functions as a way to stop Ta from continuing with her explanation.

In line 27, Ra self-selects into the next turn. His utterance “zero one one” is his attempt to add to Ta’s explanation rather than ask for information. This addition suggests that Ra has some prior knowledge of what algorithms are. However, because he offers this contribution after R has indicated understanding suggests that Ra can either add to Ta’s explanation or that he wants to publically (or maybe just to Ta) demonstrate that he too knows what an algorithm is. However, in line 30, after an initial hesitation, “yeah ah::”, Ta rejects Ra’s contribution and in so doing maintains her own status as expert. Notice

here that Ta structures this rejection in a skilful way; that is, she first accepts Ra with “yeah” and then projects an upcoming rejection, “ah::”, before delivering the outright rejection “not zero”. In line 31, Ra counters with a turn initial agree, which may indicate he is giving Ta her due respect, but follows this with a “but” that projects a counter claim or disagreement. Ra’s “numbers digits or symbols” functions as a way for Ra to reiterate that he has knowledge to contribute and to signal to Ta that he is not going to take a backseat to her expertise. In the next line, Ta acknowledges what Ra has to say, “yeah it’s”, but then goes on to expand by using more expert terminology or detail which is linked to expertise. On the one hand, the exchange between Ta and Ra can be seen as an instance of co-constructed knowledge. On the other hand, it can be seen as the co-constructed knowledge by way of a minor power struggle. In lines 32-34, Ta expands on this and in line 35, R says “language of the program for computer” in an attempt to restate what Ta has said previously.

L, who has been silent to this point, does a turn initial agree followed by a projected disagreement with “but” in order to point include the point that an algorithm is the first step in programming. In line 38, L expands on the underlying concept of an algorithm and R then ends the sequence with another change of state token, “he sees”.

This excerpt offers a way the co-construction of knowledge turn by turn. It also reveals the way that such co-construction of knowledge can function as a property of the individual that, in turn, plays a role in identity. In this interaction, the teacher granted Ta the role of expert. Ta took the responsibility of explaining to R (who positioned himself as the learner by asking about algorithms). As expert, Ta became gatekeeper of what constituted valid knowledge. The way that Ta handled her expertise resulted in a minor

but noticeable power struggle. This struggle aside, Ta's explanation was co-constructed by her own contributions, by the contributions of Ra, L, and the teacher and by R's own response to those contributions.

In Example 2 (below and in all other examples that follow), the teacher is Liam rather than John (the Intermediate teacher). Liam was an experienced TOEFL teacher who replaced John near the end of the course. In Example 2, (below) the class has just listened to a recording on gender differences in talk. As perspective taking is a critical component of the test, the teacher has set up the discussion so that students can practice expressing their respective points of view. The teacher has also chosen a topic likely to generate discussion and interest (and one that is consistent with the Five C's of *Foreign Language Education*). Talking about gender differences generates conversation since the content of such conversation usually entails a nested set of comparisons such as: differences in the structure and use of a native language as compared to English, differences between men and women, and differences in cultural habits and traditions.

What is notable about the next set of examples is how a more experienced teacher facilitates and manages the conversation. The management of these conversations is the central concern in the analysis.

June 21, 2007

Example 2, TOEFL

(Azeday (Az), Aurora (Au), Ramene (Ra). Loreena (L), Kim (K), Robin (R)).

- 1 T: think about your own culture do you think males and females have different
- 2 ways of speaking (2.0) not necessarily different words sometimes different

3 words but different ways that they speak when they say something (4.0) what
4 do you think↑
5 R: it is difference
6 T: there is a difference↑ yeah
7 R: i don't know ((laughs))
8 Az: [yeah i think so]
9 Au: [i guess so] tone the way they say something
10 T: so sometimes they use different tones
11 Au: yeah
12 L: if it's the female it may be more intimate or something but if not then they use
13 a different tone and then because in the philippines there is rich and poor
14 right↑ so if you belong to the lower class how you communicate with others is
15 you can see oh okay so you came from the middle class people or the higher
16 class people
17 T: mmm so it's not so much gender as like class as well
18 L: it's not really it's just the tone
19 A: ((inaudible))
20 L: just the tone
21 Az: just the tone yeah cause i believe a man speaking is more stronger the way
22 they like ah talk but the lady there is spoken ((inaudible))
23 L: cause the philippines is a free country you can speak whatever you want
24 T: how about in korea how do men and women sound different when they speak↑
25 K: i think it is almost the same between men and women because in um when i

26 was young i think is i mean it was twenty years ago but i think men is strong
27 stronger than woman but now days it is no not equal i think women is more
28 strong
29 T: oh really↑ ((laughs))
30 K: in the conversation the woman say more directly to men
31 T: mm that is interesting
32 K: always men lost
33 C: ((class laughs))
34 T: hm
35 T: how about iran is there a difference↑
36 Ra: yeah there is a difference um (3.0) yeah people are usually both ah yeah it
37 depends on which part somehow its which part of iran you live i mean it
38 depends on it depends on which culture the people that lives in north or in
39 south or in west or in east ah they have different language
40 T: mm
41 L: or dialects
42 Ra: different dialects oh no different languages different accent somehow yeah
43 some parts of iran some accents are different than tehran so that's why you can
44 find many attitudes or difference between the genders
45 T: alright so imagine somebody says this in your language that's a pretty sweater
46 where did you get it↑ who would say that a man or a woman
47 Az: a man ((laughs))
48 Az: a man ((laughs))
49 T: a man would say that ↑ (2.0) really↑ in english it's a bit different cause men

50 don't usually call things pretty

51 Az: ohhh ((laughs))

52 T: unless you are talking about a woman usually women can be pretty but you

53 wouldn't say oh what a pretty sunset you would use other words like beautiful

54 nice but you wouldn't necessarily say pretty

55 Az: so now it depends on culture too right↑((laughs))

56 T: it always does doesn't it↑

57 Az: i think so

58 T: so different languages so men don't usually call objects pretty for example like

59 i wouldn't say this is a pretty table i would say it's solid it's strong i would say

60 those kinds of things

Example 2 begins with the teacher urging students to “think about your own culture.” In doing so, the teacher immediately signals to students that knowledge will be generated by forging connections. This strategy also provides a context for the upcoming question “do you think males and females have different ways of speaking.” This framing requires only a minimal yes or no answer. Such simplicity encourages all students to join the discussion. This opening could have generated a very different sort of interaction had he begun with, for example, ‘why do you think men and women have different ways of speaking’, a question that assumes that males and females *do* speak differently. The teacher leaves a two-second gap for self-selection and, when no one self-selects, he continues.

In line 2, the teacher expands on his question, and again leaves a lengthy four-second gap for self-selection before inviting self-selection with “what do you think↑.”

This type of open invitation to generate discussion is consistent with how Mercer (2000) suggests that exploratory talk, reasoning processes displayed in talk, gets started. This type of framing gently informs students that they are expected to take a position on the topic and contribute their ideas. These introductory remarks point to what the teacher did not do as much as what he did do. For example, the teacher did not begin by telling students what he thinks about the issue, nor did he waver in light of the extended pauses or self-select which would have changed flow of talk in the activity. Rather, the teacher set the stage and conditions for the activity (e.g., “what do you think”) and waited for students to contribute their ideas.

In line 5, R replies, “it is difference.” In line 6, the teacher both acknowledges and indirectly corrects R’s utterance to “it is different yeah.” In this instance, the teacher chooses to simply model a better structure rather than interrupt and slow the conversation by turning the error into a teaching moment. By proceeding in this manner, the teacher signals to his students that he is noticing their language but, at the same time, his main concern is the contribution of ideas. In line 7, R conveys he has nothing more to say by his “i don’t know.” My observation notes suggest that students seemed to be initially wary of their new instructor, perhaps because they did not know whether they were going to be evaluated on their English usage as they spoke.

In line 8, Az self-selects into a turn by stating that she thinks there is a difference in talk between the genders, but she does not go on to elaborate. Her short contribution may occur because the teacher has offered a simple yes-no discussion opener so students can participate with minimal expectation and commitment. In line 9, Au agrees and takes the first move to expand suggesting that males and females differ in tone. In line 10, the

teacher ratifies and clarifies her point by restating it in a slightly different way in the follow-up. This also offers a second listen to students who may not have heard or clearly understood Az. The teacher does not offer his own opinion nor does he choose a student to speak.

In lines 12-16, L takes the floor for an extended turn. L explains that in the Philippines the way people speak relates to their class. In line 17, the teacher acknowledges the point with “mm”, and restates L’s take-home point. Up to now, the teacher’s role has been observer and summarizer rather than informer. Neither has he asked jarring “why” questions that tend to induce fear in some students. In line 18, L seems to retreat from “class” to suggest that she is actually referring to “tone.”

In line 21, Az adds that she agrees with L’s point on tone and frames her reason for this agreement with “i believe that,” a marker for voicing authentic opinion. L then adds that in the Philippines citizens are free to say what they want. This expansion to her prior turn suggests that L means that lower classes generally have a different tone than do people of the middle and upper classes.

Before the conversation can take a political and potentially contentious turn, the teacher gently turns the conversation back to the original topic in line 24. The teacher also steers the conversation away from L and Az both of whom have held the floor for several turns. The teacher directs the talk back towards differences in talk between Korean men and women. His rotation of speakers maintains an open discussion (as opposed to a private conversation within a discussion) and ensures the discussion runs smoothly. Rather than selecting students, he facilitates a change in speakers by restating and personalizing the question, a strategy that invites any student from that country to

self-select. This is a potentially less threatening way to encourage speaking than is for example, ‘Kim tells us what you think.’

Again, in line 25, K begins with “i think” and states that when he was a youngster, men had a stronger speaking style. These days, however, he believes women have the stronger style. In line 29, the teacher orients to this telling as new knowledge as evidenced by his change of state token “oh really↑.” This change of state token is most likely in response to discrepancy between K’s assertion and the teacher’s traditional view of Korean men as chauvinistic. The teacher could either reject this new insight outright (ignoring the perturbation) in order to retain his view or he can accommodate thereby changing the overall structure of what it is to be a Korean man. The teacher’s line 31 “mm that’s interesting” provides further evidence that K’s assertion is a new perspective for the teacher. K supports his assertion based on his observations of his social environment; that is, because women speak more directly to men and men lose arguments. The teacher then opens the floor to Ra, the student from Iran.

In line 36, Ra begins by clearly stating there is a difference between men’s and women’s talk. Ra then takes a three second pause followed by a series of hedges, “yeah people are usually both ah yeah it”, before settling on an “it depends” approach. My observation of this exchange suggests that he may have been uncomfortable talking about how Iranian men speak because Iran is a traditional patriarchal society. Ra had the linguistic and interactional ability to get around this issue by asserting that these differences depend on what part of Iran a person comes from, as may be the case in any country. Moreover, this geographical distinction also related the dialect of Farsi to the

political attitudes held by the speakers of that dialect and region; that is, region and dialect determines attitudes.

The teacher then indicates that the present activity is complete and projects an upcoming activity shift, “alright so”. He then moves from an individual speaking-listening activity to a group activity where he brings the class together by having everyone imagine the same thing, “that’s a pretty sweater”. In this same instance, he also generates individual ideas by getting everyone to think about the pretty sweater in his or her own language. This simple but sophisticated activity facilitates perspective taking since it directs students’ attention to their own culture and language. His skill at facilitation and the positive response he receives (i.e., students take turns and there are no “i dunno’s which act as turndowns) goes some way toward constructing his own identity as someone who is a skilled teacher.

In line 48, Az quickly responds by responding that “a man” would say pretty sweater. In line 49, the teacher responds with surprise, “a man would say that ↑ (2.0) really↑” before making a comparison between this response and what would be a common response from the perspective of Western culture. This comparison tells Az and others something about the differences in talk between men and women in Western culture. In lines 52-54, the teacher elaborates on this difference with “pretty versus beautiful” without saying anything specific about why and when each term might be used. It is acknowledged that because such usages are cultural they are often difficult to explain, a point that Az makes in the next turn and which the teacher agrees with in line 56. The teacher then goes on to expand on the point giving more examples.

My analysis of Example 2 focused on the facilitation techniques of this particular TOEFL teacher. These techniques included a well-ordered roundtable discussion that allowed several speakers to take part, an introductory question to generate authentic interest and initiate perspective taking, a limited amount of teacher talk, acknowledgement of and feedback on student responses, and promotion of an overall classroom climate of cooperation where new ideas are available to everyone, including the teacher.

Example 3 involves peer talk at the advanced level. In this segment, K is telling L about the differences between Korean and Chinese and English. The exchange has a noticeable tension and this tension poses a form of constraint on the interaction. Specifically, because K gets rather upset, his responses are closed to other viewpoints or to any negotiation. The features in talk that construct this constraint are the bald on record “no,” K’s extended turns, a weak apology by L, and K’s “telling” in order to correct L’s assumption. This segment also illustrates the social nature of equilibration.

June 21, 2007

Example 3, TOEFL

(Kim is talking to Loreena from the Philippines about language differences).

- 1 K: cause we have to use our tongue um make long
- 2 L: mm yah
- 3 K: and then just stop um after um say the one word
- 4 L: yeah yeah
- 5 K: stop and just start start again stop start again like that

- 6 L: you have a similarity with the the chinese language
- 7 K: no it's too different
- 8 L how how do you pronounce it↑
- 9 K: it's totally different
- 10 L: but their pronounce seems like it's long too or something ((laughs))
- 11 K: no it's it's it's different languagee different character and different languagee
- 12 we have our own languagee for five thousand years
- 13 L: oh::: oh::: okay
- 14 K: that's right so also the structure is so different english is subject and verb and
- 15 object
- 16 L: yeah
- 17 K: but our language is always subject and object and verb verb is always last
- 18 L: oh i see
- 19 K: yes that's why it's so difficult
- 20 L: i shouldn't feel so bad because english has become part of our education
- 21 system

In line 1, K is explaining an aspect of the Korean language to L. K begins by drawing some comparisons between Korean and English noting that these differences are what make it difficult for him to learn English. In response, L responds to K's turns with backchannels indicating her involvement or that she is listening.

In line 6, L then states, rather than queries, that the Korean language is derived from Chinese. In response, K treats this assertion as a perturbation. To correct this assumption K counters with a direct and unhesitant "no." This direct rejection is unusual

between individuals who do not each other well. It seems that K is interpreting L's assertion as an unintentional insult. (Note that there is a historical tension between the Chinese and Koreans). Since L responds by going back to a general linguistic issue, it clear that she does not interpret K as having been insulted, directly or otherwise. In line 9, K again emphatically counters that Chinese and Korean are "totally different." In this way, K draws a cultural distinction between Koreans and the Chinese. He is also closing down any potential counter arguments from L.

In line 10, L displays her lack of knowledge about the Korean language and offers the reason "it's long too or something" for why she would make the mistake. She follows her reason with laughter. In revealing her ignorance and structuring it this way, L is issuing a weak apology.

In lines 11-12, K again begins with an unhesitant "no" and follows this by using the word "different" to make unambiguous distinctions between Korean and the Chinese and, thus, Korean culture from Chinese culture. To strengthen his claim K also states that the Koreans have had their own language for five thousand years. Presumably, this is new knowledge for L who in line 13, responds with a change of state token "oh::: o::: okay." Similar to the TOEFL teacher, in order to have a new conception of Korean men, L must accommodate/assimilate this new information. The way that K has made this change come about is an initial negative reaction that is softened somewhat when he tries to give L the reasons why Korean is distinct.

K responds to L's change of state token with "that's right" which can be interpreted to mean, 'i hear that you now understand the differences and I am satisfied'. K then notes the differences in grammatical structure between Korean and English. In

line 18, again L manifestly displays another learning moment “oh i see”, before ending the sequence by comparing K’s struggles with her own.

In this last example below, the class discusses the unpredictable nature of idiomatic expressions. Such expressions feature in the TOEFL test and are usually a concern for students because of their cultural and subjective nature. The notable features of this excerpt are the teacher’s facilitation techniques and the way that individuals together construct ideas.

June 21, 2007

Example 4, TOEFL

(Azeday (A), the teacher (T), Robin (R), Kim (K) and Loreena (L) discuss the oddities of English).

- 1 T: so what happens if you hit an idiom they usually use one or two idiomatic
- 2 expressions in the toefl and they’ll ask you questions about them one or two
- 3 questions so idioms are words and phrases that the literal meaning of each
- 4 word does not help you understand the meaning of the word in a particular
- 5 context so if i say john really looks blue today (2.0) what does blue mean↑
- 6 A: sick
- 7 R: depressed
- 8 T: yeah so if you’ve heard that before then you know
- 9 A: why it should be black ((laughs))
- 10 T: so whe-
- 11 A: -because when you say blue the sky it’s like clear right like the sky is blue

12 T: ah but these are cultural

13 A: yeah blue

14 T: associations with words with colours so blue is sad so what does blue mean

15 if you're not certain but you know that john lost his job you can infer

16 its meaning you can guess you can start to figure it out if i say john really

17 looks green what does that mean he's a different colour mean↓ does that mean

18 his skin colour has just changed from blue to green↑ no

19 R: sick

20 T: he's sick so if you're not certain but john just got off the world's fastest

21 rollercoaster and as soon as he got off he was sick then you infer the meaning

22 he's sick so you need to look at the context of these idioms and then you can

23 think about it and figure it out

24 A: i will never figure it out can you explain the reason why is the green colour is

25 represent thick

26 L: yeah sick

27 T: sick

28 K: yeah because green colour is looks like it is positive

29 T: no i can't explain that to you but it just is that way

30 K: because you cross across the walk after green colour the people is can cross↑

31 A: is this american↑ ((laughs))

32 T: yes this is just you know::: the connotations that come up with words and the

33 the the frustrating part about that it is that it's different in every single culture

34 right↑ so for example the colour red what do you associate with the colour red↑

35 A it could be:: wa::r
36 L: wa::r
37 R: angry
38 T: so people from china red is lucky they get lucky money in little red envelopes
39 right red is is good for luck on valentine's day in canada your boyfriend or
40 husband should bring you red roses why because red is for love he gives you a
41 red box of chocolates right↑ or sometimes though people say i'm seeing red
42 does that mean they're in love no it means they're very angry why↑ ((sound))
43 don't know it just does
44 A: so:: this one is american idiom↑
45 T: yeah or it probably works that way in britain too
46 K: so in the i don't know when is saint patrick days everybody wears the green
47 clothes and hat and everything change to green
48 ((turns missing))
49 R: actually it mostly represents emotions just for emotions you use the colour this
50 means that it makes sense just in emotions red represents aggression green
51 represents sick blue represents sad white represent calm that's all
52 L but in every country there is meaning-
53 R: -usually but i mean usually as long as i mean as long as i heard of
54 L: for me ahh that's why i know blue and green i like cause i work in a
55 hospital
56 T: mhm
57 L: blue if you don't have oxygen what happened your fingernails are going to be

58 blue and if you have no sunshine you're going to be pale and like ah right↑ you
59 look green or blue you're sick
60 T: any way you can to remember these colours

In TOEFL Example 4, the teacher talks about what the students can expect on the TOEFL test. To test students' understanding and use of everyday talk, creative uses of language, including idiomatic expressions, metaphors, and colloquialisms, are common within TOEFL narratives. The teacher begins by informing students that there will be idiomatic words and expressions on the test. He then defines what an idiom is. (Although it is not stated, students are well versed on idioms based on prior instruction). The teacher provides an example of an idiom, "john really looks blue today", and then opens the floor to self-selection.

Without hesitation, A self-selects into the first response with "sick" followed by R with "depressed." The teacher does not correct A, but instead reminds students that those who have heard the term "blue" before share a common understanding and would know the correct meaning. This strategy shifts the responsibility of the error away from A and avoids singling her out in any way. Because the two answers are different, A would not know whether it is she or R who is incorrect. Due to students talking around her, which is a perturbation, A recognizes that she is in error. This realization is manifest in A's line 9, "why it should be black" which fits with depression. In line 10, the teacher begins to speak but is cut-off by A to whom he gives way. Student A then supplies a reason for why she was mistaken. Supplying a reason minimizes the severity of the error. Although A's reasoning is logical, the teacher reminds everyone that idioms have a cultural basis and, therefore, can appear to be illogical. The teacher then takes the floor for an extended

turn. He takes the expert role when he explains to students that to figure out an idiom they should look at the context in which it is used. Student A then states that she will “never figure it out” a claim that positions her in the novice role.

The next series of turns illustrates how turns are coordinated in order to build a point of view. Student A asks for an explanation as to why “green” is associated with “thick” which is revised by both L and T as “sick.” In line 28, K agrees with A and notes that green is a positive colour. The teacher again implies that knowledge is fluid and subjective. He states that he cannot explain this oddity, which gives credence to his point that students need to examine the context for meaning. Like student A, K also gives a reason for thinking green should be positive. Both A and K believe it is necessary to let the teacher know that their respective confusion has a rational reason. Student A then invokes culture by asking if this idiom is American, after which she laughs. In doing this, A attempts to draw a distinction between Canadian and American culture, letting everyone know that she does not care for American culture. The teacher once again steers clear of any political issues by not orienting to this comment and instead focuses on the idea that idioms are “frustrating” since they vary between cultures. This strategy lets the teacher appear as though he is at once empathizing with students while also implicitly avoiding a potential divisive distraction. The teacher accomplishes this avoidance by stating that it is not because it is American or any other culture’s fault. In line 34, the teacher uses the tag “right↑” to prompt agreement and by doing so further avoids any divisive issues.

In order to make his point that colours as idiomatic expression are arbitrary, the teacher asks students to consider the colour red and once again opens the floor to self-

selection. What follows is three short concise responses (A, L, R), a display of motivated participation. In lines 38-42, the teacher goes on to show how red represents different cultural values. For example, red represents luck in China but love and anger in Canada. This is a lesson on perspective taking in the sense that values are cultural and hence people have different points of view on the same thing.

In saying, “i don’t know it just does”, the teacher also admits to not knowing why certain words represent the idioms they do. Rather than diminishing his authority and expertise, this admission bolsters his claim that certain forms of knowledge are unexplainable. The teacher makes the point that every member of a particular culture will have a large advantage as those members grow up with a certain set of idiomatic expressions. In particular, rather than being nonsensical these forms come to be synonymous with certain meanings.

Again in line 44, A inquires whether the colour red, representing love or anger, is American. The teacher avoids any cultural bias by casually affirming the fact as well as stating that the roots may also be in British English.

In line 46, K brings up Saint Patrick’s Day in reference to “green”, but note that the conversation soon goes back to idioms. The rest of the conversation takes place between students while the teacher remains silent. In these turns, the students rotate turns in a way that model the organization set forth by the teacher. In lines 49-51, R takes the floor and becomes the momentary expert explaining that colour represents emotion. R then goes on to offer some examples. Thereafter, L repeats what the teacher has previously stated; namely, that idioms are cultural and therefore are culturally distinct. Student L goes on to make the connection between working in a hospital and colours.

The teacher closes the sequence by advocating some memory device in order to remember difficult idioms. In sum, this example vividly supports the contention that knowledge is co-constructed across turns. It reveals the way that participants coordinate their perspectives in order to construct new meaning.

The way that TOEFL classes were taught differs in several ways from the teaching methods seen at Beginner, Intermediate, and Intermediate High classes. The starting point for these differences was the way Liam facilitated this knowledge construction through discussion. Liam did not dominate the floor. His turns consisted of insights that would help prepare students for the test. His turns also were also designed to get conversation off the ground amongst students. Furthermore, he used different strategies for perspective taking. Recall that he elicited individual opinion and then asked the whole class to come together to think about a single item. Since there was no group work in these particular classes, an organized and concise way of sharing ideas was necessary. This teacher also gently steered the conversation by giving weight to certain points while downplaying others. By using this strategy, he avoided digression and potential conflicts, which can arise in a culturally mixed class. He refrained from putting students on the spot to answer “why” questions; rather he consistently opened the floor for students to self-select and students readily complied. In opening the floor to self-selection, the conversation was not forced or awkward. This teacher also emphasized the link between cultural differences and different perspectives. In addition, the classroom climate was one of cooperation, and this could also be due to the fact that Liam was very calm. My observations led me to believe that he well trained and part of this training

gave him the confidence to know how to comport himself in the class. He seemed to have a good sense about how his facilitation strategies would benefit his students.

Chapter 8

Discussion

In this dissertation, I drew on Piaget's ideas on development to learning in the ESL classroom. The methodology entailed observing the manifest actions taken in talk and determining whether these actions described the social nature of the equilibration process. In effect, this dissertation served as an exploration of, or first look at, what goes on in the ESL classroom at an interpersonal level. To be clear, I should point out that when I collected and first observed this data I did not have Piaget's theory in mind. However, I drew on Piaget's relational epistemology as a viable way to integrate social and cognitive approaches to SLA. Put differently, observation of the data led me to conclude that a Piagetian framework was appropriate for organizing and describing the activities occurring in classroom talk rather than the other way round (i.e., fitting data to a theory). Furthermore, Piaget's insights on social interaction accurately described the cooperative, reciprocal relationships manifest in classroom talk; in addition, the ways that students' knowledge develops over time fit with Piaget's abstract description of development as involving equilibration. My initial analyses lead me to adopt Piaget's specific theoretical position and to conclude that individual processes are also social processes, that is, that a solely cognitive theoretical orientation could not be supported.

In relation to this point, traditional experimental methods deal with causal explanations, while this dissertation does not. For example, an experimental researcher could set up a training study whereby students are assigned to instructional conditions that either do or do not promote perspective taking. A linguistic post-test could determine if perspective taking to resolve perturbations was responsible for advances in

language learning. Although experimental methods can admittedly address causal questions, such methods are more difficult to apply to questions of a *developmental* nature. In this dissertation, my research questions pertain to the development of knowledge and how perspective taking, perturbations, and equilibration present themselves as they unfold sequentially in episodes of interaction. I have described these processes in terms of an emerging system and have therefore used a commensurate and valid form of explanation. This method includes a historical explanation of theoretical assumptions based on an underlying premise that the roots of such competing assumptions must be first observed in order to be later reconciled.

One of the perennial questions in SLA theory deals with the relationship between the formal aspects of language, on the one hand, and pragmatic competence, on the other. Although cognitive approaches have several lines of theory and research, there is a general consensus that acquisition is fundamentally separate from use. In this dissertation, cognitive approaches were described as following from a nativist worldview, whereby acquisition is associated with the unconscious mental processes, while use is associated with conscious processes (i.e., teaching and learning). Cognitive approaches focus on the linguistic features of the learned language, treating those features as a linguistic prism reflecting mental functioning. Unconscious mental processing can be sped up or slowed down by constraints such as age, aptitude, and interference stemming from the grammatical system of one's native language.

In contrast, social theorists such as Firth and Wagner (1998, 2007) argue that SLA research should follow a social, communicative view. Here the focus is on teaching and learning, as well as on the pragmatic rather than formal aspects of language. Generally,

social approaches make no distinction between acquisition and use of an L2 because so-called inner mental processes largely occur within social interaction (e.g., Resnick, 1991). The characteristics of the learned language reflect the extent to which the individual has successfully used those forms to engage in interaction in order to accomplish everyday goals. Similarly, the degree to which the characteristics of a learned language interfere with these goals reflects the extent to which additional learning is required. Additional language skills will occur as adjustments that facilitate increased understanding as speakers interact. Thus, as Firth and Wagner suggest, language use makes acquisition possible. There is no clear distinction between acquisition and use since both are intertwined with social interaction.

The characterization of individual processes as social processes is consistent with the central point in this dissertation, namely that equilibration, usually considered an individual enterprise, can also be conceptualised as a social process. In this dissertation, I claim equilibration occurs in response to the awareness that current understandings are not able to address perturbations (that is, gaps in knowledge or contradictions in varying claims). In response to such problems, new information is either transformed so as to fit with existing thinking (i.e., assimilation) or existing thinking is adapted to fit new information (i.e., accommodation). Perturbations were a central focus of the analysis in this dissertation because they are a pathway by which individuals become aware of their own or others' gaps in knowledge. Perturbations act as agitators instigating the equilibration process. Although perturbations were observed to occur at each level in the corpus, their content varied in the different classroom environments.

Given this variance, a general description of what was and was not treated as a perturbation is called for. In the TOEFL classes, some students' speech displayed gaps in linguistic knowledge (e.g., "if you're writing program it's ah algorithm so first you write algorithm how it should like if"). Such gaps characterized speech as non-native. Yet, if these utterances were instead written sentences, most of these students could not only correct such sentences, but could also provide grammatical explanations for those corrections. However, TOEFL students and their teachers carried on *as if* there were no perturbations despite some clearly confusing utterance constructions. In Piagetian terms, students proceeded as though they were in the *alpha* stage wherein perturbations are ignored, leaving structures unchanged. This usually occurs because the organism is at such a low level of differentiation that perturbations are not recognized or because they are recognized but the system is unable to respond. However, an explanation along these lines does not fit this scenario, given that these TOEFL students are advanced; as such, they possess substantial knowledge of the particulars of grammar and are competent enough English language speakers to talk about abstract concepts and to express their feelings. They are preparing to take a challenging, standardized English comprehension test. It seems unlikely that such students would be unaware of the formal particulars interfering with their own or others' native-like proficiency and display such self-awareness.

Two explanations for why TOEFL students do not seem to orient to linguistic perturbations seem likely and may in fact operate together. The first idea, supported by Firth and Wagner, is that these students are interpreting the intentions of others (i.e., intersubjectivity is achieved) so there is no urgent need to tend to minor deficits. Another

possible explanation is that both speakers and addressees have access to a wider range of resources for meaning making and interpretation than do beginners. Advanced students use these resources to compensate for any linguistic deficits. Greater facility with the language is more than correct grammatical usage—it also involves greater pragmatic knowledge. That is, these students are better than beginners at overcoming ambiguity by appealing to their pragmatic competence. They have a better sense of the indexical nature of talk; that is, they use as interpretational resources the position, time, and place of an utterance, the manner in which an utterance is articulated, the particular people saying it, and so forth. Advanced students are better able to infer meaning and therefore to overcome issues that might waylay beginners. The ability to move away from conventional meanings by understanding the total speech situation (e.g., a situation where yes actually means no) is central to compensating for vocabulary and grammatical deficits and is one of the defining features of development.

The pathway to such pragmatic competence is perhaps best observed in the interactions of Enzo and Martha since they spent a significant amount of time attending to vocabulary use. Enzo often struggled with heteronyms such as a ‘reservation.’ However, he treated ‘reservation’ as a contextual perturbation rather than one of literal meaning, that is, dictionary meaning. (Indeed, he had looked up the word in the dictionary to sort out the matter, but found this to be an unsatisfactory resolution). He then came to class prepared to ask Martha to construct the various contexts of use for the word. As explicit orientations to context, Enzo’s actions exemplify pragmatic development in situ. In this case, the perturbation of ‘reservation’ was resolved by building different narratives around the word which was the subject of the perturbation.

On the surface, this perturbation presents as resolved by the teacher, Martha. However, the student Enzo, by means of his questions addressed to Martha, in fact directed and shaped the resolution. This was also the case with ‘ocean museum.’ The beginner class sought to resolve the perturbation by trying to build context and did this by questioning (e.g., Are there fish↑ Is there green space↑). There was no firm resolution until Ana’s story about going to the aquarium provided enough context so that Enzo was able to connect his aqua museum to aquarium, and together with Ana resolve the perturbation. This was an example of student-student collaboration, resulting in the resolution of an ongoing perturbation. On occasion, terms such as ‘middle asia’ and ‘meteorologist,’ which initially appeared to have been adequately dealt with, resurfaced some weeks later. In both situations, Enzo understood the concept but could not recall the words that arbitrarily represent those concepts. Although Enzo was not questioned about the use of ‘middle asia’ in a later class, this along with ‘meteorologist’ could be treated as a perturbation in future conversation.

The analysis of the four levels suggests that in order for perturbations to be addressed, a classroom climate that supports inquiry must be in place. At the Beginner level, many of these perturbations manifested in response to discussion about vocabulary words (which beginners are usually eager to clarify). At the Intermediate and High Intermediate levels, opportunities to talk arose because the students were able to use a greater variety of linguistic and pragmatic skills. For example, Enzo was able to take longer turns and discuss content in a more detailed manner using a variety of interactional skills. Perturbations not only arose because of vocabulary issues, but also because of the increases in students’ opportunities to engage in issues that required perspective taking

(either by selection or self-selection). As Enzo progressed from Beginner to Intermediate High, so too did his need to describe concepts, explain events, and give his personal opinion.

With respect to changes over time, given increasing proficiency, my analysis points to longer turns, and fewer hesitations and repetitions. Vocabulary became more complex (e.g., “flow charts” and “algorithms” in TOEFL as compared to “green space” in Beginner and “aquarium” in Intermediate). By the time Enzo advanced to the Intermediate level, he was able to use language figuratively, make jokes, criticise, and describe details; in short, he was generally able to accomplish his intended goals, with greater ease and sophistication. Increases in language competence were found to be inseparable from increases in interactional competence.

Exploratory talk enables students to make the types of inquiry needed for development in a second or additional language (Mercer, 2000). Exploratory talk in the ESL classroom is important because such inquiry-based talk allows for various types of content (e.g., vocabulary, grammar, abstract concepts) to be treated as perturbations. Mercer’s conception of exploratory talk offers a way to treat perturbations as something that can be reasoned about because such talk generates questions about who, what, how, and where, issues that need to be resolved in order to fill in the context for meaning. Exploratory talk, defined as the mutual exploration of differences using reasoning and critical evaluation, characterizes the way perturbations were generally dealt with by the students at each level in this corpus. This exploratory process drew on the same what, why, where, and how questions but addressed different aspects of the language. For

example, beginners attended to vocabulary and broad questions of meaning across turns, whereas TOEFL students attended more to the meaning of abstract concepts.

Perspective taking plays a crucial role in exploratory talk and in how perturbations are dealt with. This is not surprising, as consensus and verification require coordinating one's own view with that of others. Perspective taking is required in order to get exploratory talk off the ground. To achieve this, students enter into a dynamic 'shared zone' where they sort out the issue through turns taken at talk. This characterization is similar to Mercer's (2006) Intermental Development Zone (IDZ), which can be considered in terms of all the organized practical actions taken in order to come to mutual understanding. On this view, A needs to put himself in B's shoes rather than in B's mind. Overcoming a perturbation encompasses all the actions (seen as compensations) that A takes to understand B's intended meaning or to work out ambiguities in the language itself. Perspective taking is thus a dynamic process that unfolds by turns at talk (i.e., addressing what, why, and how questions), compensatory moves used to obtain mutual understanding. This, I propose, is equilibration in action.

If it is indeed the case that perspective taking occurs in response to perturbations, then this analysis could be extended to examine more closely each instance of a perturbation which occurred at each level of the corpus. Each instance of a perturbation could then be related to what occurs in the process of equilibration. Such an analysis would provide a more precise account of the relationship between perturbations and equilibration. It might also advance the understanding of the relationships amongst types of talk, cooperation and constraint, and conversational structures (such as assertion-disagree, question-answer, challenge-defend), since each plays a role in resolving

perturbations, thereby constituting the equilibration process. This orientation to future research would provide a further description of how each system relates to the other. Furthermore, future research could include longitudinal comparisons between classroom and other nested environments, shedding light on whether there are differences in the equilibration process across learning environments. Analysis from the present study could be compared to talk that takes place in social events and the workplace. Again, this talk could be broadly characterized and perturbations identified within specific structures of talk.

Returning to the subject matter of this dissertation, increases in proficiency can be described in terms of opportunities to engage in exploratory talk; in the course of such opportunities a range of pragmatic issues can be examined, the resolution of which furthers learning. In this corpus, there were few instances of the standard IRF sequence pattern as described by Sinclair and Coulthard (1975). This may have been the result of a communicative mandate set by the school or a reflection of teaching style. Students were generally given the opportunity to speak throughout most of the classes observed. However, it is important to distinguish quantity from quality. That is, the mere fact that students are given the floor does not mean there is orientation to reasoned inquiry and perspective taking. This is partly why characterizing talk is important: it distinguishes entertainment and chatter from talking for the purposes of furthering knowledge. That is not to say that informal talk and talk for the purposes of furthering knowledge cannot be mixed, but only that it takes a skilled teacher to successfully manage such fluidity of talk.

For the most part, students at the Beginner, Intermediate, and TOEFL level worked under cooperative conditions conducive to exploratory talk. Cooperative

conditions are those where teachers set conditions on both the length and content of the turn. That is, turns are used to practice skills and deal with questions that will generate perturbations across a relevant problem space. The type of knowledge generated from exploratory talk is grounded on the weighing of multiple viewpoints. Teachers at these three levels generally focused on generating this type of talk. For example, at the Beginner level, Dan, Enzo, and Hosan were required to talk at length about a childhood memory of going to a park. At the Intermediate level, students shared their perspectives on a series of ethical situations. In the TOEFL course, students discussed idioms and algorithms. In each case, perturbations arose that were in line with the proficiency level of the students.

One exception was the Intermediate High class in which opportunities to speak were limited by the way the turn taking was managed by the teacher. (To put this preponderance of teacher talk into perspective, consider that the examples of teacher talk in the dissertation comprise about one half hour of talk out of roughly 70 hours of recording of this class). This particular teacher tended to engage in extended discussions with individual students rather than facilitate a rotation of speakers. One-sided turn taking resulted in cut-offs both by the teacher of students and by students of the teacher. Moreover, lack of speaker rotation resulted in boredom for listeners and compromised the type of knowledge produced since it tended to be constrained by one or two points of view.

The fact that students in the Intermediate High class did not participate in group work limited their prospective perspective taking and hence their opportunities for exploratory talk. Group work has important benefits that are difficult to generate from an

overall class rotation of turns. In Piaget's view, perspective taking is more likely to occur in peer talk because peers with similar status and abilities are free to negotiate rules and meanings as well as to resolve perturbations without judgement. (This is obvious for any teacher who has rotated around groups only to find everyone stops talking or asks a question they should be working out themselves).

In the TOEFL class, the teacher's (Liam's) facilitation skills included organized rotation, some self-selection into a turn, limited teacher talk, and a set of nested questions designed to stimulate discussion. Students had the opportunity to describe and explain concepts as well as to express opinions. The point, however, is that Liam was in control. Although Liam was an excellent facilitator, lack of group work within a teacher-fronted class risks imposing limitations on the type of knowledge that will be produced.

Learning opportunities may be limited to receptive rather than productive knowledge. Students may be impeded or prevented from practicing a range of linguistic, pragmatic, and social skills. At the TOEFL level, the senior teacher's facilitation skills meant that the class was treated as a group with rotating turns for the explicit purpose of sharing viewpoints. On the other hand, structured group work is one way to ensure students get the opportunity for peer learning when the teacher lacks adequate facilitation skills. This was shown to be the case in the Intermediate class, as the Intermediate students showed a willingness to simultaneously orient to ethical issues and to perturbations having to do with the language.

The opportunities students take and are given to develop their language skills were found to follow a developmental trajectory. For example, in order to keep the potential for ambiguity low, beginners generally start off with a small problem space,

discussing concrete topics related to their own experience (e.g., childhood memories, likes and dislikes, vacations, maps). It was observed that the turn taking was noticeably slow as students oriented to a ‘dual level’ of issues. That is, on the macro level, students worked to understand overall intention and meaning (e.g., describing a park and why E likes it) while on the micro level they tried to resolve vocabulary and meaning. In both instances, students turned to the structure of exploratory talk (e.g., what is an ocean museum↑, what do you mean↑, i don’t think so because).

At the Intermediate level, the teacher widened the problem space by setting up discussions on issues pertaining to moral and ethical issues. This shift to more abstract topics broadened the nature of the perspective taking and increased the likelihood of exploratory talk. For example, Dan, asked to explain his views on Chinese foot binding, was led to self-reflect on his own attitude. In the course of justifying their views on the Iraq war, Enzo and his partner found they had to clarify the meaning of “in the woods” and “out of the woods.” The fact that they attempted to characterize ‘safe’ and ‘not safe’ by using metaphorical language is a nice display of their pragmatic know-how. Groups discussed ethical dilemmas that resulted in reasoned argument. A discussion between Ana and Enzo about partying eventually led to Enzo learning the word “aquarium.” Although trouble spots in the language were still plentiful, students were better than beginners at attending to the topics at hand, expressing their opinions and querying others. They used language in a more playful way.

In the TOEFL classes, an even larger problem space was introduced. As previously mentioned, TOEFL students did not orient so much to the details of language as to concepts. This was fitting, since they were preparing for an examination requiring

them to make inferences about idioms and metaphors, as well as about expert terminology via attending to contextual clues in written text and oral speech. They practiced asking and answering questions and getting details from each other with little intervention from the instructor. Consistent with these tasks, the teacher turned the floor over to the students, giving them responsibility for working out abstract meanings (e.g., algorithms). Students attended to the idiosyncratic nature of idioms, but observed the inexplicable, conventional nature of such idioms in terms of topic rather than in observing their own errors. At this level, students mostly just conversed rather than attended to their own language use.

Methods utilized in this dissertation can be applied as practical tools for teacher training or for ongoing teaching assessment. Consider this proposal in terms of the Intermediate High teacher in this corpus. If this teacher received feedback that called attention to the fact that she dominates the floor, she or her supervisors could record and use a brief transcription technique in order to provide feedback on the turn taking structure prevalent in the class. Likewise, teachers may recognize that there are problems in the classroom as reflected in levels of participation, but have no way of ascertaining what the nature of those problems are. Recording and transcribing a lesson could be a useful feedback tool for teachers interested in observing their strengths and weaknesses when interacting with their students. Likewise, examining the transcripts of highly successful teachers could function as a useful tool for professional development. Such a recording could provide a more empirical way to observe the quantity and quality of teacher talk. For example, teachers may believe that their classes are more participatory than is in fact the case. Recording and transcribing provides information on the character

of the dominant talk in the classroom, on whether students are in fact engaging in authentic inquiry (question design and feedback patterns), and on how activities are structured and carried out. Small actions taken in talk such as cutting off students' turns, the type of disagrees used, tone, and the type of feedback, all contribute to participation and overall classroom climate.

Observation of the teacher-dominated Intermediate High class reinforces the point that a transmission approach can be used in *any* situation where an expert is responsible for making sure novices internalize specific content. Transmission methods have been used to convey information ranging from the highly theoretical to how to re-sole an old boot. This seems to be the case despite the disconnection between approach and practical objective and despite the fact that such approaches have not been found to be as effective in terms of learning outcomes than are activity based approaches (Struyven, Dochy, & Janssens, 2010). Early studies and the considerable research done since overwhelmingly suggest that lectures are not as effective as discussion and other more active methods of teaching. Measuring learning outcomes is a complex business and perhaps this is why outcome has been tied to modes of teaching from a relatively early time (i.e., since the 1920s). As McKeachie (1990, p. 197) notes, "the variables influencing learning are almost numberless." In contrast to the multitude of variables influencing learning, general factors affecting approaches to teaching have been identified: gender, culture, status, experience, and training. In addition, practical considerations such as ease, time, student expectations, administrative requirements, grades, and so forth also influence this important decision. Despite this roster of contributing factors, the best predictor of an

individual's approach to teaching is to ask that individual the way he or she was taught (Struyven et al., 2010).

Another factor that plays a role in determining the most preferable approach is what the intended outcome is for that particular lesson or course. Transmission approaches are more effective if the intention is for students to recall information immediately. Because material can be repeated over several lectures this method is also suitable for courses where students must memorize facts. Lectures are ill-suited, however, to the presentation of complex information which must then be applied to different domains. It is also less than optimal for examining different attitudes (Hulse, 1975).

Constructivist methods are associated with learning that is active, conceptual, and transitive (Struyven et al., 2010). This approach is preferred over transmission if the intention is for students to recall information at some future date because the completion of the type of tasks advocated by the approach result in elaboration and deep processing (McKeachie, 1990). Tasks and assignments are practical, based on real-life problems (i.e., case-related) and are completed either individually or in groups using interpretive and analytical skills (Struyven et al., 2010). As compared to transmission approaches, under constructivism, there is a shift in responsibility for learning from the teacher to the students. It is not that the teacher does not teach; rather, the teacher sets up the conditions in which learning occurs and students use the teacher as a resource to further their own understanding. This shift to the students explains why peer learning is a valued avenue for learning. Consistent with Piaget's ideas on the benefits of peer interaction, peer learning offers the opportunity for students to not only formulate their own

questions, discuss issues, and share their perspectives, but also to admit to confusions and reveal their misconceptions. Problems sorted out between students (rather than by teacher telling) are more effective for deep understanding (Cooper, 1995). The shift to peer learning is to embrace the adage: “To determine whether you know something, try teaching it to someone else.” Peer teaching can put this idea into practice, even in a large lecture hall.

A related reason that some instructors are turning to constructivist approaches is that transmission approaches are not consistent with teaching technologies (Saville, Zinn, & Elliot, 2005; Gier & Kreiner, 2009). Technology and transmission (i.e., the lecture) are ill-suited partners since technology in the service of a one-way, non-active, informational model tends to function as a glossy attempt to modernize a traditional and somewhat tired method (e.g., putting lectures on-line, PowerPoint). Transmission models attempting to use technology meant for more interactive approaches pit teachers not only against the technology itself, but also against students. This is because using technology to support passive learning becomes another avenue for even greater passivity (Gier & Kreiner, 2009). For example, Cornelius and Owen-DeSchryver (2008) found that when students are supplied with full notes (akin to lectures online), they tended to skip classes, not do their readings, and take fewer notes, all of which practices have been found to support deep processing. Furthermore, PowerPoint slides without an activity component are related to increased passivity and a drop in attendance (Gier & Kreiner, 2009).

Technology can be used in ways that are best suited to constructivist approaches since activity is a fundamental cornerstone of the approach (Gier & Kreiner, 2009). As mentioned, constructivist approaches to learning emphasize conceptual understanding,

hands-on activities, and peer teaching. The use of technology can enhance these face-to-face activities as well as support interaction between class members outside of class time. For example, class websites can be used to track student participation, post questions, check student answers, and provide links to course related materials.

In conclusion, this analysis supports my general thesis that equilibration is a social process observable in talk. I have been able to show Piaget's relatively abstract concept of equilibration as it unfolds sequentially in interaction. Equilibration was observed to take place in talk not only by change of state tokens (e.g., "wow, i see"), but also by the turn-by-turn co-production of meaning and by the activities involved in taking another's perspective so as to change or influence that perspective. Assimilation and accommodation also arose in light of perturbations. At the Beginner level, these perturbations concerned mostly vocabulary. As students progressed and their knowledge of English became more differentiated, perturbations were resolved in a noticeably more sophisticated manner. Increases in skills meant that students could resolve perturbations concerning abstract issues and ideas that required perspective taking. Perturbations initiated perspective taking since in order for students to understand and/or change the opinions of others, students first had to interpret those opinions from the others' points of view. This is more likely to occur between peers and within a cooperative classroom dynamic.

This process also applied to interpreting meaning. Several kinds of perturbations and their resolutions were identified (for example, teacher correction, student-student collaborative correction, student as expert correction, and student correction of teacher). However, on occasion, terms that were supposedly corrected and equilibrated (e.g.,

Enzo's "middle asia") resurfaced weeks later. Similarly, Enzo could not recall the word "meteorologist" several weeks later. As noted frequently by other researchers, caution must be taken before making any claims that individual learning has taken place.

However, such justified caution should not prevent serious consideration of my claim that the equilibration is indeed observable in talk and that this process relates to the social processes involved in learning.

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