METATHEORY FOR SECOND LANGUAGE TEACHING

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Outline

1. Theories in applied linguistics: SLA not SLT

There are many definitions of the term 'theory' (see e.g., Kantorovitch, 1988) but the three positions identified for our field by Stern (1983) still seem a particularly useful set. His first category (T1) carries the sense of 'organized body of knowledge'—"the systematic study of the thought related to a topic or activity" (Stern, 1983, p. 25), that is, a "conceptual scheme" (Blalock, 1969) or conceptual system (Bunge, 1967). The second (T2) refers to expositions of ESL Methods, as in the usage 'audiolingual theory'. This is, perhaps, really a subset of T1, in that it too is a conceptual system, which just happens to be specific to our field and has thus been separated out. It is related to the common usage (Ferman & Levin, 1975) of the term 'theory' as synonymous with 'idea'. (For this and even broader usages, see Richards, 1992; Richards & Freeman, 1993.) Stern's third usage (T3) covered "scientific theories", which he referred to as being more formal than the other two groups, depicted in terms of hypotheses and generalizations. Such theories tend to have explanation as their primary

function. In this paper, I will primarily be concerned with T1 and T3 (seeing T2 as generally subsumed in T1).

Prior to the 1960s, research and theorizing (primarily in the T1 sense) in applied linguistics was predominantly concerned with SL teaching, but since then the research emphasis has been on learning, or acquisition (Larsen-Freeman & Long, 1991) and theorizing has tended to be of Stern's third type—investigators who have attempted to construct theories of a formal and/or explanatory orientation have been primarily oriented to SL acquisition and learning (as noted by Hatch, Shirai, & Fantuzzi, 1990; Larsen-Freeman, 1990; Selinker & Tomlin, 1986; van Lier, 1991, inter alia). Recent conceptual and methodological developments concerning theories in applied linguistics (i.e., developments of metatheory) have addressed formal approaches to theorizing, and have been exclusively concerned with theories of learning/acquisition, rather than of teaching (e.g., Beretta, 1991; Beretta & Crookes, 1993; Crookes, 1992; Gregg, 1984, 1993; Long, 1985, 1993; Schumann, 1993).

However, although acquisition may be conceptually prior to teaching, in practice teaching goes on without waiting for a theory of learning (let alone teaching) to be fully developed (cf. Hatch, 1981). And in the absence of a theory of SLT, one of the problems partially caused by the emphasis on acquisition and learning in applied linguistics theories is the difficulty teachers have making connections to what they generally perceive as "theory"—SLA theory (cf. Flynn, 1990). It is, as Lightbown (1985; cf. Gass, 1987) has said, often perceived as distant from the problems that SL teachers would like solutions to. The difficulty teachers have applying "theory", some of which derive from its acquisition orientation, has led to the feeling among some SL professionals that theory is of no utility. And since for many, theory and research are synonymous, the failure to develop theories of SLT is widening the gap between theory and practice, which is also often the gap between researchers and practitioners. In addition, and more importantly, although SLA theory has many important implications for SLT, some aspects of SLT do not follow from SLA, and need separate attention. Furthermore, we not only need SLT theory, we need SLT theory fully informed by appropriate methodological and conceptual prescriptions and analyses, which (as applied linguists are increasingly aware) are often to be found within the domain of philosophy of science.

In this paper, I have two major objectives: (1) to apply recent improved understandings of "formal" theorizing to SLA and to SL teaching; (2) to extend applied linguistics metatheoretical discussion beyond formal explanatory theories to the commonly-used but rarely analyzed type of theory which is represented by an 'organized body of knowledge', both in an abstract form and in a personal form. Both of these two types of theory are important (cf. Bunge, 1967, p. 91) and ideally, both should be developed and mutually articulated. In the next section, I discuss some conceptual problems attending the development of explanatory theory. In Section 3, I make some proposals

concerning a central part of such an explanatory theory. In the fourth section, I briefly address the matter of systematization and indicate possible components of a conceptual system theory for SLT. Here I draw primarily on existing descriptions of SL learning but also on concepts from social psychology which, though they can perhaps be ignored in SLA, must be addressed in a theory of SLT. Finally, in Section 5 I consider the two main sources of input for theorizing about SL teaching, the ideas of teachers and those of researchers, in developing the position that a theory of SLT should be contributed to by both.

2. Concepts for explanatory theory

2.1 Explanatory theories

Most of the broader efforts in SLA theory, those which might have most potential as the bases for theories of SL teaching do not have explanatory intent, but are conceptual systems (e.g., Spolsky, 1989, esp. p. 215). Their format is like that of many theories in sociology: a combination of propositions or generalizations, allied to block diagrams in which the key concepts are depicted connected together, usually with arrows. Theories of this sort are known as path models, or sometimes factor theories, and are tested empirically using path analysis and structural equation modelling (Clark & O'Mara, 1991; de Leuw, 1985; Keeves, 1988; Keith, 1988; Simon & Burstein, 1985). However, they provide no explanation of how it is that the concepts they depict are related one to another (van Geert, 1987). The reader is presented either with assumed common-sense conceptual links or with correlation coefficients.

A major means by which theory can give its users a sense that the phenomena of interest have been explained is to depict the generative mechanisms which link them (Crookes, 1992; Harré, 1979). It will do this particularly by embodying the mechanisms which lead to the transition from one state of a system to another in a model of the system the theory refers to. Although there are many kinds of explanation, if we are trying to understand how a system (such as a learner's interlanguage) moves from one state to another (i.e., develops) then one of the best ways to arrive at such an understanding is first to build our picture, or model, of the unknown system on one which is known, making adjustments and creating new concepts where necessary (cf. Collins & Gentner, 1986). Then in addition we need to know how the system moves from one state to the next. The means by which this happens is known as a "mechanism". As individuals trying to understand how a phenomenon of interest comes about, we develop our idea of a mechanism and the unknown system in which it exists by building on the data we observe, the generalizations we develop, and, most importantly, on our preexisting knowledge of similar structures or systems to be found elsewhere. As the last element suggests, the process of analogy is crucial in the construction of explanatory theories. Analogical relations hold between the system under investigation, including its differing states at different times, and the model we are working with. The source of the model will be different from the system being modelled because

the thing to be modelled is at least in part unknown. The theory supports some generalizations, which are expressed in linguistic terms, but it provides explanatory force from the partial analogy it embodies, which can be thought of as iconic or pictorial in nature ("this looks a bit like that"; cf. Harré, 1979, 1985a, b, Manicas, 1987, p. 252) and is primarily a cognitive not linguistic object (Giere, 1988; Harré, 1970).

2.2 Multiple causality and open systems

One of the problems in attempting to develop a theory of SL teaching of the basis of explaining how SL learning comes about, and particularly the role of teaching in this, is that in the real world, many factors acting at the same time affect SLA. Because in the real world learning often does not emerge as a direct result of teaching, it may at first be difficult to see how one could construct an explanatory theory dealing with learning as a consequence of teaching. A first step in solving this problem is to explore the matter of multiple causality.

Typically, when a quantitative approach is used to find out whether some factor X causes SL learning, the investigator tries to control or eliminate all possible causal factors other than the one being researched, so as to be able to produce a singular explanation. At the level of theory this may result in focusing on just one of many possible levels, and demoting all other levels (under a concern for unicausal explanation) to the role of conditions (cf. Mackie, 1965). This shows up to some extent in at least one major theory of SL learning (Spolsky, 1989), in which Spolsky states that he is presenting a set of hypotheses that relate to conditions which must be satisfied if learning is to take place.

One way of accommodating the common-sense idea that all these "conditions" are actively involved in learning which follows from SL teaching is to see them as some sort of weak variety of cause, as follows:

> An INUS cause is (roughly) defined as an Insufficient but Nonredundant condition that is part of a set of conditions that is Unnecessary but Sufficient for its effect. An INUP cause, in contrast, is similar in every way with the exception that when conjoined with the other INUP conditions, it forms a set of conditions that merely confers a certain probability of the occurrence of the effect.... Typically, then, student efforts and teaching activities are INUS (or INUP) causes of student learning. (Ericson & Ellet, 1987, p. 289)

This categorization, though it presents a way of looking at multiple causality, is still linked to the outmoded conception of causality as simply a deterministic or probabalistic connection between events. However, we have to know about the mechanism that connects the events if we are to understand how one, or many, causes result in an effect. Consequently, a more preferable and satisfying conception of causality, which allows for multiple causality,

stems from the positions of Harré (e.g., Harré & Madden, 1975) and of Bhaskar (e.g., 1975). On this view, as indicated before, explanations first require a generative mechanism inherent in structures (which have causal powers):

> The ineliminable but non-mysterious powers and abilities of particular things, then, are the ontological 'ties that bind' causes and effects together and are what the conceptual necessity of causal statements reflects.... An important aspect of this concept of power is that it catches what might be called the strong sense of potentiality or potency, namely, 'what would happen, as a matter of course, if interfering conditions were absent or taken away'.... For us, efficient causes comprise both the presence of stimuli which activate a quiescent individual and the absence or removal of constraint upon an individual already in a state of activity. (Harré & Madden, 1975, pp. 11-12)

Next we must add to this a differentiation between controlled conditions (such as the laboratory) and the real world. The former are "closed systems" (Bhaskar, 1975; Znaniecki, 1934/1968), the latter, open—and though it is only in the former that causal mechanisms can be seen to result in particular effects, this is not to say that they are not in play in the appropriate open case as well. Though one can never be sure what will happen in the real world, our understanding of the causal powers of social structures and mechanisms provides a guide to action in the real world.

> Put roughly, we can say that the causal properties of structures defined by theory never operate in total isolation from other potentially non-constant, effective structures having causal properties. Indeed, what we called above 'appropriate conditions' are but other causes at work in the world. (Manicas, 1989, p. 187)

Or, to speak in terms of the familiar *ceteris paribus* clause, whereas for closed or almost closed systems (typical of the laboratory, and of the natural sciences) the things which are to be equal are known, which is to say the conditions under which the phenomenon occurs can be specified, in open systems (typical of the real, and particularly social world) the ceteris paribus clause can never be fully specified (Secord, 1986b).

2.3 Active agents interacting

I should stress that although the term 'mechanism' has been used, this is not intended to indicate that the causal connection between teacher and learner is deterministic (though I do think that one must address causality even in educational contexts—cf. Ennis, 1973). Again, in the real world, i.e., under open conditions, many factors besides the instructor influence whether or not learning takes place. In addition, over any even slightly extended interaction, the teacher and learner have mutual effects one upon the other (Bar-Tal & Bar-Tal, 1986; Brophy & Good, 1974; Bruner, 1986). As Strevens (1976, p. 148) says,

"however much the teacher may wish to persuade [her/]himself that the learner learns only because the teacher teaches, we much also accept that people learn languages at least partly by themselves." Nevertheless, when we focus on one strand of this multicausal phenomenon of learning, that involving teacher and learner (or learners), we are implying that there is in a general sense (rather than in any particular instance) a carry through of the causal impetus provided by the teachers' actions to the learners' own actions. Or, to put it more in Bhaskar's terms, we recognize that the structures inherent in the formal learning situation embody generative mechanisms which have the power to bring about learning, even though this effect may not manifest itself in open systems, because they also contain social structures which work against such mechanisms. Since the demands of SL learning are so considerable, the unaided learner can be seen as under conditions of "constraint" (Harré & Madden, 1975, above) within which the teacher can still be conceived of as one (of many) simultaneously acting causes.

Note furthermore that this conception does not imply that the learner is passive. After all, SL research to date has clearly demonstrated the active capacities of the learner. Nevertheless, in focusing on the action of one side of a mutually interactive and causative dyad it is hard to avoid giving the impression that the other side, in this case, the learner, is being ignored. We should not shrink from criticizing the fundamentally reactionary tendency of positivist social science to consider whatever is the subject of investigation as "the passive outcomes of antecedent forces" or "judgmental dupes", as opposed to "intentional, self-initiating and self-monitoring, imaginative agents, who are morally responsible for their actions" (Bhaskar, 1990, p. 5). In order to allow for the possibility that human actions can be explained by reference to generative mechanisms without implying that humans are purely passive respondents to their environments, we must be careful in our choice of explanatory analogy. Harré (1979; Harré& Secord, 1972) has argued for the broad utility of a model of humans as role-taking, rule-following actors in explaining human action in many complex circumstances. Terming this the anthropomorphic model of humankind, Harré and Secord (1972, pp. 88-9) remark, "the only possible solution is to use our understanding of ourselves as the basis for the understanding of others". Consequently, we may wish to see learner behavior, particularly that which follows upon the instigation of a teacher, as depending upon an individual's taking on the role of student, with its various requirements, foremost one of in general conforming to the wishes of the instructor with regard to studying a certain amount of material, using a SL in certain ways, reading or attending to certain aspects of the SL, and so on. In Harré & Secord's (1972, p. 169) terminology, an instance of taught learning would be a sequence of happenings (or episode) intermediate between a 'causal episode' and a 'formal episode'. Whereas a causal episode is explained solely by reference to mechanism and model (as discussed earlier) a formal episode is explained by reference to the role taken and the rules followed by an active

agent. In a sense, here the teacher is conceived of as an actor, causing another actor, the learner, to act.

2.4 Levels of theory

In order to deal with the relationship between SLA and SLT theory, it will be useful to recognize the concept of levels of theory (cf. Manicas, 1982a; Secord, 1986a; Wimsatt, 1976). Possible domains of concern to SLA theory can be seen as hierarchically arranged within social science, ranging from the neuropsychological, the lowest or most internal (e.g., Lamendella, 1977; Schumann, 1993), through various psycholinguistic levels (some related to UG, some not) all the way up to the sociological, the highest or most external to the learner (e.g., Schumann, 1978). Much, though not all SLA theory thus far has tended to give priority to what goes on within the learner's mind (Halliday, 1978, cf. Ellis, 1981), and the closely related matter of the linguistic material the learner is exposed to. It has thus been cognitive or developmental in nature. By contrast, a theory of SL learning that is concerned with the links between learning and teaching is at least one step away from the level at which explanation in many theories of SL acquisition has been placed—the internal cognitive system (cf. Long, 1990). There is no reason, particularly once we take a multicausal perspective, why a theory has to exist at only one conceptual level or privilege one explanatory level over others. SLA theories at present can be seen as located primarily at the psychological end of social psychology, though it might be desirable for them to extend through more social aspects of social psychology, as eventually teacher-group aspects of second language instruction are considered.

3. Generative mechanisms relating SL learning and teaching

There are many ways to understand the relationship between learning and teaching, but in this section I am concerned to explore the use of primarily a causal mechanism to link what SL teachers do in the development of learning in SL students, as a way to understand the teaching-learning connection. The mechanism is to be conceptualized as acting within some model system which reflects or incorporates key elements of teachers and learners or of teaching and learning, and this model system must be created by a process of analogy from some system we already partially comprehend. It seems likely that the mechanism must in general concern what a teacher might do with learners as they engage with the second language. The particular aspect of the learner that I want to focus on is the mind, understood as a cognitive-affective system. And by "engage with language", I refer to what the teacher induces the learner to do in terms of comprehending, producing, and thinking about the target language, both alone and with others.

3.1 The teacher-learner system

Modelling one system on another is a standard means in constructing explanatory theory, and it is not uncommon for theorists to take their models from within their home discipline or one close to it. Theorists in SL studies do this—the second language learner as first language learner, for example (cf. Krashen's [1985] use of the concept 'LAD'). So it is possible to take one somewhat understood cognitive system as the model for a related but less understood system, and that will be one strategy proposed here.

The main thing that the teacher does to the mind of the learner is to stand in for part of it, and perform various functions that the learner would otherwise have to initiate and perform on his/her own. The cognitive, behavioral and affective systems engaged in learning can in an instructional context be seen as a joint construction of teacher and learner, or as an extension of the learner's current capacities. The teacher has many roles, as commonly conceived, ranging from directive or executive (Berliner, 1983), through encouraging, to simply facilitative. In each of these functions, the teacher is supporting or standing in for some aspect of the student's cognitive, motivational, and affective systems, and the two (or more) individuals are engaging in this joint activity in the context of, and mediated by, the social interaction taking place in the social context and structure of the classroom. Focusing on the learner end of the dyad, one might also say that the learner is allowing him/herself to be directed, by virtue of taking on or maintaining the role of student. This constitutes the social explanation (by reference to role and associated rules) which must be borne in mind along with the cognitive one.

In considering an explanatory theory of SL learning with reference to a joint learner-teacher system, the social interaction implied draws us to Vygotsky (e.g., 1932/1962), who was centrally concerned with the social dynamics of psychological development, with a strong orientation to the analysis of formal instruction (Moll, 1990). Banned under Stalin and thus almost unknown in the West until the 1960s (cf. Bruner, 1986), his translated work, though somewhat fragmentary, has been increasingly valued in education and psychology (cf. Ratner, 1991). Attention has been given to Vygotsky's ideas concerning the role of social interaction and language in the development of children's thinking, particularly the concept of the "zone of proximal development" (e.g., Cazden, 1981; Wertsch, 1979, 1985; cf. also his "microgenetic analysis" methodology — Siegler & Crowley, 1991). These ideas have begun to be applied to first language acquisition and to some extent used in analyses of SLA, as well as teacher development (Au, 1990; Au & Kawakami, 1984; Foley, 1991; Lantolf & Ahmed, 1989). Van Lier (1991, p. 30) describes them as potentially "our closest guide" in developing "an L2 learning theory of practice".

Regardless of innate endowments in this domain, there is no question that the task of learning a SL is extremely difficult without help. Many authorities in

applied linguistics would recognize that while SL learning overall is sufficiently difficult that most fail, unaided SL learning is less productive than is instructed SL learning, for most students (cf. Ellis, 1990; Long, 1983; Pavesi, 1986). With instruction, the capacities of the aided learner are expanded over those of the unaided learner, and the task is made more simple for the learner who has help. The teacher, it might be said, provides what Bruner (1986, p. 132, discussing Vygotsky's ideas) has called a "loan of consciousness"—s/he is surrogate problem-identifier, problem-solver, memory, selection process, noticer, and performer of a host of other cognitive and motivational processes which the learner needs to bring to bear on the problem of SL learning. And compare Foley (1991, p. 66) who refers to the "the tutelage of an adult" as providing a "vicarious form of consciousness". He notes that

> the caretaker in effect performs the critical function of scaffolding the learning task to make it possible for the child to internalize external knowledge and convert it into a tool of conscious control. (p. 67)

We can explain taught, or externally-caused learning (i.e., in SLA terms, formal or instructed learning as opposed to informal learning), by modelling the teacher-learner system on the already established human cognitive and affective systems. Evidence accumulated in SLA studies thus far suggests that the initially-existing (learner-only) system (in adults) has difficulty handling the task of learning a second language, and that the aided (teacher+learner) system has greater success with it (see e.g., discussion in Larsen-Freeman & Long, 1991, Ch. 8). It seems likely that that the difficulty of the task is such that the learner is likely to experience frustration and that this may cause a failure to engage with the task (cf. Crookes & Schmidt, 1991). The comparative success of the instructed learner can be explained if we see the aided cognitive/affective system as a more powerful, more extensive learning system than that of the learner alone. Thus, in general, we can see what it is the teacher must do. However, the analogy does not give us an exhaustive list of the processes the teacher must aid or substitute for, because we do not fully understand the unaided SL learning process, nor do we know exactly what the SL learner's cognitive mechanisms and affective needs are. On the other hand, it provides a basis for beginning to construct such a list, which would be made up of a structured set of elements of an SLT theory of the systematic type.

4 Elements of a systematic theory of SLT

4.1 Good systematics is that which reflects explanatory theory

There seems to have been comparatively little discussion of what is legitimate in the area of systematization, with the exception of the study of procedures for developing plant and animal categorization systems (biological

taxonomics), which is not appropriate for our needs. There are, however, some brief but useful suggestions in Bunge (1967) which find support in the more abstract discussion of Rescher (1979).

Bunge makes the following remarks:

> The deepest and consequently most fruitful groupings in science are... what we shall call systematic classifications, in which one or more relations link classes together, these relation concepts denoting objective relations.... [T]he best systematic classification is ... the one which effects the most natural—least arbitrary, least subjective—of groupings. (Bunge, 1967, p. 77)

> A systematic classification, then, consists in the organization of a bunch of concepts... into a hierarchy.... Like partitions, hierarchies involve groupings. Unlike partitions, they impose a partial ordering upon the units (sets) resulting from the partitions, in such a way that the units are made to hang together in a precise way. (Bunge, 1967, p. 80)

> Systematization is brought about by a combination of partition, ordering, and if possible, measurement in the light of [explanatory] theory... [Explanatory] theory, an end in itself, is also the means for advancing to deeper and deeper systematics.... Any such systematics, far from being external to the theory, will summarize, illustrate and help theory... Should the theory be found defective... the systematics accompanying it may have to be mended or abandoned. Systematics, in short, is an aspect of scientific systematization: it will be proto-scientific if backed by no theory, scientific proper if some testable theory underlies it. (Bunge, 1967, p. 86)

Applying these strictures to the body of existing SLA theory should facilitate the distinction between 'SLA theory' (a T1) and 'a theory of SLA' (a T3) implied in Stern's distinctions cited earlier. SLA theory, as the term is generally used, is simply whatever information some authority in the field is prepared to collect together. Since there is no organizing principle (other than 'this is what we know or have to explain so far'—cf. Long, 1990) it is hard to see where the boundaries of 'SLA theory' are. Investigators in various fields from time to time express regret that a given area of investigation has many theories, often called "micro-theories" and no single, overarching theory (e.g., Staats, 1985; cf. Beretta, 1991). An acceptance that SLA is a multicausal, multilevel phenomenon means that there will always be multiple microtheories, but it does not mean that we cannot systematize the domain. Indeed, a failure to do so makes it hard for researchers to map out new terrain or see what important matters have been left unresearched. It also makes it hard, I believe, for teachers and would-be researchers to internalize this information. It is not my intent here to

provide a final systematization. However, the most important of Bunge's points is the idea that systematization can be informed by explanatory theory. It is the factors that cause SLA which provide the justification for the systematization of SLA. Thus Krashen's theory of SLA specifies two causes of SLA: comprehensible input and positive affect. If his position were to be taken as fully correct, a consequence would be that the body of knowledge known as SLA would constitute two domains: information about comprehensible input (what it is, how input is made comprehensible, to whom, under what conditions, etc.) and information about affect (what exactly is an affective filter, what mechanisms raise or lower it, and so on).

4.2 Elements of SLT theory derived from SLA theory

There are in the SLA literature several compatible theoretically-based compilations of the processes involved in second language acquisition (e.g., Chaudron, 1985; Gass, 1987; and cf. Klein, 1986). In a recent reworking of this material, van Lier (1991) identifies four major stages: exposure (Gass's "apperceived input"), input (Gass's "comprehended input"), intake (used across all three formulations, but centrally in Chaudron's), and uptake (Gass's "integration"), followed by proficiency. Adapting and extending this a bit, we have a fairly familiar set of components. Whether any one of these components is actually a partial cause for SLA is not at issue here, though arguments can be made that all of them are, to varying degrees, important. The processes are the following (at least):

(1) attending to input (Schmidt, 1990, 1993);
(2) organizing language into discrete elements of whatever size (cf. Abney, 1991);
(3) using metalinguistic knowledge (Sharwood Smith, 1981, or "input enhancement", Sharwood Smith, 1991) ;
(4) using "language learning awareness" (van Lier's 1991 term)—that is, learning strategies as they apply to SL learning (cf. O'Malley & Chamot, 1990; Cohen, 1990; Skehan, 1989). (These might be divided into those used for attention focusing, and those used for figuring out—Schmidt, p.c., and cf. Pintrich, 1989.)
(5) using "motivational control strategies" (the term from McCombs, 1984; cf. Crookes & Schmidt, 1991) to deal with the motivational context for learning, which should be supportive (Krashen, 1985); and
(6) actually using the language (Swain, 1985).

Recasting these in terms of SLT, then, it can be argued that, ideally, the SL teacher should provide the learner with language, ensure that the learner will

focus attention on it (or arrange matters so it is easy for the learner to focus on it), then set things up so the learner can and will "invest effort (cognitive, emotional, physical) so that the input will be processed" (van Lier, 1991, p. 33). The latter part may involve the teaching of metalinguistic awareness through direct instruction as well as consciousness-raising concerning aspects of language (understood broadly as running the entire gamut from voice setting to pragmatics), or simply the directing of attention to form by way of the tasks chosen for or by learners (cf. Long, 1988). With both learning strategies and motivational control strategies, learners are not necessarily aware of or make use of these, and again, direct instruction seems to be implied (cf. Wittrock, 1991). In the subsequent stage of "uptake", new SL material is brought under control, and requires from the learner "memory work, motor control, schematic networking, pragmatic matching (involving norms of appropriateness and rules of use) and more. These processes occur through practice." (van Lier, 1991, p. 33). This position does not, of course, imply that all such knowledge is conscious (cf. Schmidt, 1993). SLT aspects of such a position would recognize the importance of output in developing command over a second language generally (e.g., Bialystok, 1982; Crookes, 1989; Ellis, 1990; Swain, 1985), as well as the role of the interlocutor in providing scaffolding (Hatch, 1978) and feedback (Long, 1983; Pica, 1983), and address the kinds of activities provided and what (language) gets practiced in them (e.g., Crookes, 1986). There are also hints in SLA theory as to the potential utility of an affectively positive climate (e.g., Krashen, 1985; cf. mainstream education studies of classroom climate reviewed in Crookes & Chaudron, 1991), something generally recognized as having implications for SLT.

Now the mechanism specified at the end of Section 3 can be fleshed out. Arguably then, a teacher has the power to affect learning by standing in for parts of the learner's unaided cognitive-affective system. For example, instead of the learner acting on an unmodified stream of speech, and attempting to set pieces of it against meaning (cf. Klein, 1986), the teacher can be said to stand in place of that part of the decoding process when s/he explains, translates, or otherwise uses the target language in a manner comprehensible to the student, leaving the student's cognitive system to concentrate on, for example, entering the element in memory. Or alternatively, rather than the learner having to motivate him/herself to seek out appropriate contexts for the social use of the target language, the teacher together with the classroom context supports this, again freeing up processing capacity and preventing motivational interference with the actual movement of elements of the second language from, say, passive comprehension to active use status. And again, although learners may develop for themselves useful ways of acting on material to be learned, the teacher may initially talk the learner through use of such strategies, and then, by providing contexts for their use, facilitate their internalization, and so on. If an image is needed (and indeed, to provide a psychologically-satisfying explanation, something iconic may well be required), then one involving

temporary slot-filling (of "gaps" in learners' cognitive-affective systems) followed by removal leaving a replacement image, might be suggested. Vygotsky's term, "internalization", may be advanced as a place-holder, in a statement such as "the teacher stands in for the missing parts of SL proficiency and learning strategies, until the learner has internalized these things".

If the question 'But how does the learner internalize them?' is then put forward, theoretical explanation must move down to the next lower level (not in itself implying theoretical weakness: cf. Gregg, 1993). And then if a teacher asks, 'How do I induce learners to internalize them?' we have arrived at the domain which states how a teacher gets the real world to embody the mechanisms which will result in internalization—by, amongst other things, utilizing a body of knowledge which is systematized according to an explanatory theory.

4.3 Elements of SLT theory not based on SLA theory: teaching learners as opposed to teaching a learner

Because of the kind of source analogy which I have posited (learner-teacher dyad modelled on the single learner), and so as to deal with simple before complex, the discussion thus far has been largely implied the abstract case of a teacher interacting with a single student. However, the step from conceptions of dyadic interaction to individual-group interaction must be taken. As Schmuck (1978, p. 231) notes,

> the popular and conventional view of the educational process among educators seems to be that teaching and learning occur in two-person units involving the teacher and each individual student. The group dynamics within the classroom are often de-emphasized.... A simple, dyadic view of teaching and learning is shortsighted and grossly simplified when one recognizes the power of other social dynamics that regularly occur in the classroom.

Although teachers are trying to cause (or facilitate) learning in the individual, they must do it in large measure through acting on (and with) the group, or class. This is clear in teachers' phrases: "I got the class to see...", "I couldn't get the class going this morning", etc. Under favorable circumstances in highly teacher-fronted classes, the teacher has the full attention of each individual in the class, and is acting as an aid, or add-on, to each individual's cognitive system. But more generally, the teacher must act on and with the learner through the mediation of the group. Some SL learners acquire some aspects of language in classrooms primarily as a result of how other students use the language, regardless of what the teacher does (Slimani, 1992). And of course, current pedagogic practice heavily involves teacher-guided student-student group use of the SL to be learned. Consequently, successful teachers must be efficient orchestrators of social group processes. In some situations,

this need diminishes the potential of teaching: It is much more difficult to deliver instruction finely tuned to support a particular stage of cognitive development to 30 students than to one (cf. Glass, Cahen, Smith, & Filby, 1982)! In other aspects, it can be facilitative: the development of esprit de corps may be a far more powerful motivator than that which can be engendered by one teacher with one student.

This aspect of teaching is to some extent implied under point (5) in Section 4.1, in the view that the social context of instruction must be affectively supportive. Yet the teacher to group aspects of instruction (teacher as communicator to group, teacher as motivator of group, teacher as balancer of group dynamics, etc.) have hardly been integrated into previous SL theorizing. This is at least partly to do with the individualist, internalist, and solely cognitive (rather than socio-cognitive) aspects of SLA theory. Nevertheless, teacher-group concepts relate to a substantial part of whatever it is that teachers (particularly beginning teachers) consider good teaching, and what they wish to improve in themselves. Many essential parts of being a good teacher (e.g., lesson planning) are conducted outside the classroom, but if their implications (in terms of language or tasks selected, error correction techniques, motivating interactional strategies, etc.) cannot be delivered in the classroom, the teacher is less likely to be successful. And delivered, in this context, means delivered to a group of students whose needs and interests in each of these areas are often notably non-homogeneous. That part of teaching which requires the moment-to-moment trading-off of somewhat conflicting objectives while orchestrating a social event containing elements of leadership and performance which supports instruction in front of or with a group, is that which from a SL theoretical point of view has hardly been addressed. At the very least, we are in a realm where concepts of performance, communication, and small group theory should all apply. From the point of view of academic disciplines, besides the obvious area of communication studies (e.g., Seiler, Schuelke, & Lieb-Brilhart, 1984) the primary area encompassing these issues is the social psychology of education, a field which has only recently begun to achieve prominence (Bar-Tal & Bar-Tal, 1986; Feldman, 1986), and which has rarely been brought to bear on research on teaching (Doyle, 1986; Lindgren, 1978; cf. Goodenow, 1992), let alone on ideas of SL teaching. The social psychology of education constitutes the most important contributor to SLT theory under discussion here which is not implied from the SLA research discussed previously. That it is not implied from SLA research is because within a hierarchy of levels running from intrapersonal to social, the considerations of the present section lie above, rather than below the level of individual to individual interaction. Nevertheless, they constitute a body of knowledge which it is important to have both connected to an explanatory theory of SLT and worked out in detail in terms of its implications for the SL classroom.

5. Individual theories and scientific theories

Discussion in the foregoing sections has tended to refer to theory or theories as abstract objects, developed by researchers. Within the philosophy of science tradition of analysis of scientific theories, originally (in logical positivist times) theories were conceived of as linguistic objects—sets of sentences, or of logical propositions. One of the features of the change in perspective in this tradition has been a willingness to recognize that science is a social and psychological process, and thus, as Giere (1988) and Harré (1970) say, theories are cognitive objects before they take any other more concrete manifestation. What exactly this means has not been explored by scholars working in that tradition. Theories are, however, cognitive objects which belong to particular cultures, and so one can bring to bear a cognitive understanding of the knowledge and world views of cultures, as developed in cultural anthropology (e.g., Holland & Quinn, 1987). From this perspective, theories may be termed 'cultural models'. Referring now to the (sub-)culture of teachers, we can say that teachers, either individually or collectively possess theories of teaching at least in the sense that cultures and members of cultures possess cultural models. For theories of teaching, it is possible to make a connection between that abstract knowledge and teachers' knowledge—indeed, in some views the two are isomorphic, with theories as they turn up in books and journal articles being only more explicit versions of what teachers know. Within the domain of inquiry sometimes referred to as 'teacher thinking', the study of teachers' "craft knowledge" (Zeichner, Tabachnik, & Densmore, 1987) has moved in recent years from a concern with general beliefs to sets of concepts quite closely connected with day-to-day practice. Calderhead (1987, p. 15) comments that

> how this knowledge is conceptualized varies considerably amongst the researchers, from a network of 'implicit theories' [Zeichner, Tabachnik, & Densmore, 1987] to a series of knowledge bases covering different educational phenomena, or a repertoire of schemas each focused upon a particular type of practical situation.

Sanders & McCutcheon (1986, p. 54; cf. Brindley, 1990) refer to teachers' knowledge as "practical theories of teaching ... the conceptual structures and visions that provide teachers with reasons for acting as they do". These may or may not be conscious and are more or less equivalent to "professional knowledge" (ibid.). Another equivalent formulation which is also in play is 'teacher personal theorizing' (Ross, Cornett, & McCutcheon, 1992).

Although Sanders & McCutcheon (1986, p. 57) indicate that such objects "are not scientific theories" in the sense that they may not be "conceptually precise [or] specifically explicated", Krause (1986, p. 160) states "we conceive of [teachers'] subjective theories as having similar qualities as scientific theories; that is, they can be adequately represented as having an argumentative

structure" (but cf. Bromme, 1984). Although "argumentative structure" is undefined it appears to match up with Fenstermacher's (1986) concern for teacher's use of theoretical knowledge in the form of "practical arguments". This conception in turn connects with European discussions of the practical role of knowledge, such as that of Bourdieu (1977), who takes issue with structuralist conceptions (such as those of Harré utilized earlier) of conceptual models as primarily composed of rules, and fully accessible to members of a given culture, preferring to see them as incompletely specified sets of strategies of a tacit knowledge character. It is noteworthy that within the line of research associated with the idea of a conceptual model (Holland & Quinn, 1986), it is notable that a level of explicitness and clarity intermediate between common sense and the 'expert system' is posited: the 'explanatory system', which is a "semiexpert system" or a "popularized" version of an expert system (Linde, 1986, p. 352). Given also Spolsky's (1989) characterization of his theory of SL learning as analogous to an expert system, this intermediate level concept may be a helpful way to refer to some teachers' practical theories.

While recognizing that conceptions in this area may not as yet be convergent, the idea of individual theories, along with the idea that it is in common sense that much scientific knowledge begins (Bunge, 1967; Thomas, 1979), enables us to relate the shared cognitive object of a scientific theory of SLT to its potential individual exemplars: individual teachers' understandings or "philosophies" of SLT. The two must match up to some degree if a theory of SLT is to have any practical force or utility to teachers, and also if it is to be permeable to or corrigible by teacher's own investigations of practice. (This sort of position has been sketched but not developed in discussions of SLA: e.g., Ellis, 1985, pp. 2-3, 1990, p. 204; cf. Stern, 1983, p. 43.)

This domain of educational research overall is not well-developed (Feiman-Nemser & Floden, 1986). The most extensive discussion of this concept as it applies to SL teaching is provided by Grotjahn (1991), who refers to the “research programme [in] subjective theories" (RPST; cf. Krause, 1986). Grotjahn observes that

> the advocates of RPST work on the basis of the assumption that subjective theories on the one hand and objective (scientific) theories on the other are structurally and functionally parallel or analogous to each other. As numerous empirical studies on the basis of RPST demonstrate, this is a fruitful and justified assumption. (p. 191)

Subjective theories, or practical theories of teaching, are obviously valid and important for practice. In particular, like much practical knowledge they can provide the common-sense source for ideas which, reformulated and tested, become part of the "scientific" knowledge base for practice. Although the political realities of teaching in current cultures tend at present to separate teachers from those who generate the forms of knowledge most privileged by

society, there is no logical reason why this should be so. And in particular, if we insist on the importance of the concept of teacher as action researcher (Crookes, 1993) or even the less demanding teacher-researcher partnership, then we may think of a cycle of transition and transmission. This would flow from teachers' individual subjective theories, to the more shared, perhaps more generalized and more widely tested forms of "scientific" theory (still allowing for individual variation, cf. Keesing, 1986) and then back to the individual teacher for test, utilization, modification and internalization (or discard) as subjective theory again. To further develop the cyclical, or spiral nature of this process—if we allow for an understanding of the teacher role as one typified by continuing growth and deepening understanding, we must be prepared to accept that teachers will not arrive at a single, final theory, and that indeed to ask for such a thing would be both counterproductive, and constitute a failure to understand the nature of meaning. What instead we must hope for is a teacher theory which is transformative in nature, reflecting a continuing "engagement in self-critical reasoning" (Stone, 1992, p. 33).

6. Summary

The argument has been as follows. There is a need for SLT theory as something distinct from, though related to SLA theory, and there is as yet very little. This is not surprising, as our understanding of the nature of theory in "applied linguistics" has not been particularly great, and continues to develop. A primary function of theory is to explain. One of the most important aspects of SLA theory for SLT is that which explains SL learning as the result of SL teaching. A theory which does an adequate job of explaining SL learning as a result of SL teaching must develop and present the means by which the former results from the latter. It must also operate across a number of levels within social science, at least from cognitive to social psychological.

Besides explanatory theory, a kind of theory which has been traditionally important in our field but neglected in philosophical discussions of theory is the idea of theory as a body of knowledge—systematic theory. If theory is to be seen as useful by SL teachers, this understanding should not be ignored. Indeed, its cognitive aspect—theory as what one knows, as opposed to what is written in books, is what constitutes teachers (often tacit) working theories of instruction. It is necessary, then, to ask what a systematic theory of SL teaching might look like. I argued that many of its components could be derived from and supported by SLA theory, but that because of the individualist orientation of SLA as counterposed to the social nature of SL teaching, such a systematic theory of SL teaching should also contain components derived from the social psychology of education. Research on the social psychology of SLA at the small group or classroom level would equally well serve.

Finally, returning to the conception of theory as a cognitive object, I suggested that insofar as the somewhat structured, partially tacit bodies of

knowledge with which professionals work are recognized as theories, there is a connection to be drawn between theories of SL teaching developed by researchers and theories of SL teaching developed by teachers. The key point is that although in practice these two groups of individuals are largely distinct, this need not be the case, as we are speaking of roles that members of either group can take on. Action research, in particular, is a conception of research which overlays these two roles. Through SL teachers conceptualizing their understanding of SL teaching in theoretical terms, and developing them not only on the basis of their own experience reflected upon but also with input from the research of others, it should be possible to create a link between SLT theory and practice supported by a feedback loop of teacher-researchers embodied in the social practices of science and teaching.

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