This paper addresses the interplay between the disciplines of psychology and sociolinguistics in second language acquisition. Psychology explains the process by which learners create their second language system, or interlanguage. Sociolinguistics examines the effects of social factors on learners' interlanguage. This paper focuses on an interactionist perspective to second language instructed development, highlighting the marriage between external (social) and internal (cognitive) factors. The first section introduces the cognitivist approach to learning and examines Vygotsky's socioconstructivism, contending that this is an interactional model. It also establishes parallels between the Zone of Proximal Development (ZPD) and interlanguage. The second section focuses interlanguage as a variable phenomenon due to the interplay between social and cognitive variables. The third section discusses Ellis' Variable Competence Model, looking at its shared mechanisms with Vygotsky's ZPD. The fourth section analyzes implications of this interactionist perspective to second language learning, arguing for the adoption of an interactionist perspective to second language teaching as well. (Contains 36 references.) (SM)
INTRODUCTION

Second Language Acquisition (SLA) theory has been influenced by a number of disciplines. This paper addresses the interplay between two disciplines: Psychology, whose contribution is explaining the processes by which learners create their second language system, or interlanguage, and Sociolinguistics, which has thrown light upon the effects social factors on learners' interlanguage.

The discussion will focus on an interactionist perspective to second (hereafter L2)/foreign language (hereafter FL) instructed development, more specifically on the marriage between external (social) and internal (cognitive) factors.

The first section briefly introduces the cognitivist approach to learning and then examines Vygotsky's socioconstructivism, contending that this is an interactionist model. It also establishes parallels between the Zone of Proximal Development (ZPD) and Interlanguage (hereafter IL).

The second section focuses IL as a variable phenomenon due to the interplay between social and cognitive variables.

The third section discusses Ellis' Variable Competence Model on the grounds of shared mechanisms with Vygotsky's ZPD.

The fourth section analyses some implications of this interactionist perspective to L2/FL learning, arguing for the coherence of adopting an interactionist perspective to L2/FL teaching, as well.

VYGOTSKY'S SOCIOCONSTRUCTIVISM: AN INTERACTIONIST PERSPECTIVE TO LANGUAGE DEVELOPMENT

Cognitivism attempts to explain the mental processes that learners employ during the learning process. Cognitive theories view knowledge as symbolic, mental constructions in the learners' minds, and learning as a process of "problem-solving, in which the learner, exposed to the data...attempts to create maps...by means of which he makes sense of the data." (Bell, 1981:105). Cognitive theories emphasise that the active mental processing on the part of the learners fosters the skills that will enable them to become lifelong learners (Ormrod, 1995).

Vygotsky's socioconstructivism is a cognitive theory. Although it has been approached as a psycholinguistic model (Frawley and Lantolf, 1985; Foley, 1991), Vygotsky's (1978) emphasis on the social context of learning and on the role of interaction allows us to view his theory as an interactionist model. As Frawley and Lantolf (1985:19) put it,

"Vygotsky believed that thought has a social, external origin and that language functions as a tool in the development of individual cognition from this external origin."
Vygotsky’s model applies not only to first language (L1) development, but also to the development of all types of knowledge (Ormrod, 1995). When interacting with adults, children are presented with concepts from the adult world; but to make these concepts their property, children will first link them to their own ideas and previous knowledge, and then establish generalisations about what has been introduced to them and use this constructed knowledge to act.

Regarding L1 development, Vygotsky (in Frawley and Lantolf, 1985) approaches language as a two-way two-step social regulatory process: (1) control of the environment (by objects and by other people) upon the child’s cognition – object_ and other-regulation; and (2) the child’s achievement of control over his/her cognitive abilities and control of the environment – self-regulation.

In the first phase, the child’s attention is initially fixed on objects (object-regulation) and then is also guided by other people - parents, relatives, teachers, and peers (other-regulation). Object_ and other-regulation are not mutually exclusive, and continuous access to these two types of regulation enables the child to relate input with previous concepts, thus learning how to deal with the difficulties posed by new knowledge and new types of tasks. This tutored assistance fosters the development of self-regulation – or “strategic activity”, as defined by Wertsch (1980, in Frawley and Lantolf, 1985:20).

During the transition from other_ to self-regulation children re-examine and reconstruct previous knowledge in the light of the new, and eventually appropriate new concepts by extrapolating the input. Having become his/her property, concepts will be used to regulate his/her behaviour and the behaviour of other people and objects.

Each new appropriation constitutes a scaffold for following appropriations. A parallel may then be established with Bruner’s (1983) concept of scaffold, which is by nature a social and cognitive concept. The origin of this strategic function (appropriation) is social, but its activity goes beyond other-regulation. When realising appropriation (self-regulation), the learner adds to, transforms, and reconstructs his/her cognitive scaffold, which is gradually removed as new scaffolds are built.

Vygotsky’s views on the transition from other_ to self-regulation, which lies in social interaction, may thus be seen as a synonymous concept to Bruner’s concept of scaffold.

As Frawley and Lantolf (1985:20) remark, “self-regulation [or independent strategic functioning] is a relative phenomenon ... and the attaining of self-regulation is not an absolute ... [that] is achieved at a certain point in ontogenetic maturation”. Adults have continuous access to, and in fact rely on object_ and other-regulation to “cognize tasks that are difficult ... and utilize earlier knowing strategies in situations which cannot be dealt with by self-regulation alone.” (ibid., p. 22).

One of these strategic activities is Vygotsky’s concept of ‘speech for oneself’ (Foley, 1991). ‘Speech for oneself’ is a device that children use to solve problems (about language and other types of knowledge), and which has been observed to be externalised during the transition from object_ and other-regulation to self-regulation. Children use this device to communicate interpersonally, as a way to test the hypotheses they have formed (about language and other types of knowledge).

Regarding L1 development, this device is used as of months of age, expanding gradually as more meaning is constructed (and related to sounds, words, expressions, isolated sentences, and strings of sentences). Children seem to use this device to construct, at the same time, their ‘core grammar’ about the language (Chomsky, in Savignon, 1983, and Ellis, 1997) and their core knowledge about the world, the latter facilitated by language. ‘Speech for oneself’ tends to gradually disappear until it becomes a form of verbal thinking, as children mature cognitively. However, externalised ‘speech for oneself’ has been observed at all ages whenever the task to be performed presents some difficulty to the performer (Frawley and Lantolf, 1985).
'Speech for oneself' is influenced by a number of social factors: social class, age, gender, ethnic identity, particular task, topic, setting, roles, and ultimately, attitudes and motivation. It comprehends a number or cognitive processes (or 'strategic' activities): attention, perception, short and long-term memories, parallel/serial and top-down/bottom-up processing, planning, problem-solving, decision-making, and monitoring.

Vygotsky's 'speech for oneself' bears some similarities with Chomsky's (1969, in Ellis, 1997:433) Language Acquisition Device, given its innate, therefore universal, attributed characteristic. However, the former caters for broader learning: not only for language development - L1, L2, and FL -, but also for the development of all types of knowledge and for the social relations one establishes with society.

The terms used in Vygotsky's theory (‘regulation’ and ‘control’) denote a political view of language as a tool that fosters critical thinking. Therefore, 'speech for oneself' may be seen not only as a cognitive strategic activity during interactions, but also as a regulatory device in the service of the development of the 'self' as a socio-political being. ‘Speech for oneself’ is triggered by interaction with the social milieu and is used by people (as lifelong learners) to place themselves in the social milieu and to negotiate with it.

Regarding L2/FL development, much of the “problematic structure of ... discourse can be understood as reflective of the attempts by the producers to gain self-regulation in the task ... instead of inadequate mastery of the language” (Frawley and Lantolf, 1985:23). Both in natural and in instructed settings, much of L2/FL learners' discourse variability may be attributed to different expressions of 'speech for oneself', in the sense that learners are testing hypotheses they have formed to (re) construct their knowledge of the language.

As the principle of 'speech for oneself' is observed in both natural and instructed settings, we may argue that Vygotsky's model also addresses another important part of the learning process: Krashen's (1981, in Ellis, 1997: 14,356) distinction between acquisition and learning.

As mentioned before, interaction triggers any learning process and each new learning can be seen as a scaffold for following learning. Vygotsky attributes special weight to responsible teaching for its direct scaffolding effect upon the distance between the learners' current proficiency and their capacity to perform with assistance.

In discussing variation and universality in communicative competence, Shaw (1992:20) argues for careful analysis of learners’ IL level of development, "because the difficulties involved in managing a new language code [may] cause a Vygotskyan regression to a more primitive level of intellectual functioning", as has also been observed by Frawley and Lantolf (1985:22) when discussing the adult's reverting "to child-like knowing strategies to control the situation and gain self-control." Shaw’s concern relates directly to the scaffolding mechanism proposed by Vygotsky.

Vygotsky would answer the question posed above saying that

---

Ellis (1997:156-157) definition of ‘proficiency’: the “ability to use knowledge in specific contexts” resonates with Widdowson’s (ibid.) use of ‘capacity’ as “the ability to produce and understand utterances by using the resources of the grammar in association with features of context to make meaning”...
"the distance between the actual developmental level as determined by individual problem-solving and the level of potential development as determined through problem-solving under adult guidance or in collaboration with more capable peers. The Zone of Proximal Development (ZPD) defines those functions that have not yet matured, but are currently in an embryonic state. These functions could be termed the buds or flowers of development rather than the fruits of development." (1978: 86, emphasis his)

Ellis (1997:30) would say that
"Learners form hypotheses about what the rules of the target language are and then set about testing them, confirming them if they find supportive evidence in the input and rejecting them if they receive negative evidence."

"It follows that L2 acquisition involves a recreation rather than a restructuring continuum" (ibid., p.352, emphasis his).

The transition between other_ and self-regulation, that is, the development of independent strategic functions, takes place in the ZPD. To appropriate these functions, learners will test the hypotheses they have formed (problems that have to be solved) about the rules of the target language. Therefore, these hypotheses constitute embryos of L2/FL development. Once input (mediated by object_ and other_ regulation) provides learners with the tools to solve language problems (to confirm or disconfirm their hypotheses), these "buds" of knowledge will develop into language proficiency — the "fruits" of development. "Recreation" of form-function rules is part of appropriacy of language: self-regulation.

As Frawley and Lantolf (1985:25) remark, "discourse ... must be sensitive to variable performance, since strategic information can have any number of sources".

We may conclude that Vygotsky and Ellis are speaking the same words when the former defines the Zone of Proximal Development (ZPD) and the latter, Interlanguage (IL).

THE INTERLANGUAGE CONTINUUM

Interlanguage (IL), a term coined by Selinker (1972, in Ellis, 1997:30, 350), "is used to refer to both the internal system that a learner has constructed at a single point in time (an interlanguage) and to the series of interconnected systems that characterise the learner's progress over time (interlanguage or the interlanguage continuum)." (Ellis, 1997:350).

Selinker and Lamendella (1981) claim that each new feature necessitates adjustments, for rules may be in a state of flux.

'Rules' and 'systems' are not limited to the form-function concept, but rather comprehend sociolinguistic, discourse and strategic competence. It follows that IL refers to learners' developing their communicative competence as a whole2.2

Proponents of the sociolinguistic and the psycholinguistic approaches to IL (Larsen-Freeman, 1991; Ellis, 1993, 1997; Long, 1990; Shaw, 1992; Tarone, 1988) consider IL variability a major phenomenon that has to be described and explained. The very terms 'constructed' and 'progress', used to define IL, point to its variability, and thus IL should best be approached as a dynamic and open process rather than a product.

2 "Communicative Competence is functional language proficiency; the expression, interpretation and negotiation of meaning involving interaction between two or more persons, or between one person and a written or oral text." (Savignon, 1983:303). She also elaborates on Canale and Swain's 1980 four components of communicative competence: grammatical, sociolinguistic, discourse, and strategic competence (ibid., pp. 35-46).
IL variability is supported by two well-established facts: (1) all natural languages have institutionalised varieties (Bell, 1981; Crystal, 1988; Shaw, 1992; etc.); and (2) speakers of all natural languages exhibit stylistic variation (in form-function, lexicon, text length and format, etc.) that is directly dependent on their views of the adjustments they have to make according to audience and context (Ellis, 1997:129; Gumperz's 1982; Schiffrin, 1997; Shaw, 1992; Wolfson, and Judd, 1983, etc.).

Long (1990:654) argues that any SLA theory "needs to propose mechanisms to account for change" and defines mechanisms as "devices that specify how cognitive functions operate on input to move a grammar at Time 1 to its new representation in Time 2." (ibid.). Among these mechanisms, he mentions the interplay between environmental factors (like social variables, access to input and comprehensibility of input) and affective and cognitive factors (conscious and unconscious learning, developmental features, differential access to mechanisms, and development over a continuum) (ibid., pp. 659-660). Ellis (1993, 1997), Larsen-Freeman (1991), Hattie, Shirai and Fantuzzi (1990), and Tarone (1988) support Long's claim.

Sociolinguistic models [e.g., Labov's paradigm, (1970, in Ellis, 1997:121-125), Bickerton's dynamic paradigm (1975, in Ellis, 125-127); Giles (1971, in Ellis: 1997:127-129)] explain, to a certain extent, IL variability by the interplay between social (social class, age, and gender, particular task, topic, setting, roles, and ethnic identity) and cognitive factors (attention, developmental stage, (un)stability of language rules).

Although psycholinguistic models (Ellis, 1997:130-133) concentrate more on the learner's planning and monitoring (attention), pre and post-output adjustments are clearly subject to the operation of social and cognitive factors.

Ellis' Variable Competence Model (Ellis, 1997:465-366) complies with Long, Larsen-Freeman, Hattie, Shirai and Fantuzzi, and Tarone's claims about SLA theories in that it provides mechanisms that explain how the interplay between social and cognitive factors accounts for IL variation. Ellis also addresses a controversial issue - systematic and free variation (Ellis, 1997:136-156; Gregg, 1993; Tarone, 1988)—in a way that resonates with Vygotsky's explanations about the learners' mental processes in the ZPD.

VARIABLE COMPETENCE IN THE ZPD

Ellis draws on Tarone's argument that variable competence underpins language production (1983, in Ellis, 1997:363-365) and on Bialystok's relationship between different types of knowledge and of language use (1978, in Ellis, 1997:356-359, and 1982, in Ellis, 1993:94). Ellis (1997:365-366) argues that knowledge is represented and stored differently in the minds of the learners according to how +analysed or how +automatic it is. Knowledge is then activated by primary processes (when learners engage in unplanned discourse) or by secondary processes (for planned discourse).

The learner's L2/FL developmental stage and the context of use determine these processes. Initially learners activate knowledge that is available from the +analysed form of storage (which requires a substantial amount of cognitive processing). As they participate in different types of discourse, this knowledge becomes available from the +automatic storage (processes that do not require a substantial amount of cognitive processing), while new rules are learned and stored in the +analysed form of storage. This means that the storage and the activation processes are open and operate dynamically along a continuum, as if recycling rules – in Vygotskyan terms, re-constructing knowledge.

Ellis also argues that the IL progressive and regressive variability is developmentally and context abiding, for in some cases these competing and unstable rules (regarding the form-function networks) are used systematically, whereas in other cases rules are used arbitrarily.
in free variation. Learners try to eliminate free variation by several sortings of the formfunction correlations, but their rates of success depend on the social and cognitive factors presented previously (p.4).

Regarding these form-function sortings, Ellis (1993) argues that noticing, noticing-the-gap, and monitoring are mental processes used by learners in their IL continuum. Ellis (ibid., p. 99) refers to Schmidt’s (1990) argument that “the process of noticing is frequently (and perhaps necessarily) a conscious one”.

This form-function sorting process constitutes, in fact, the learners’ attempt at gaining self-regulation (Vygotsky’s verbal thinking), and, as mentioned earlier, is externalised by learners (‘speech for oneself) as a resource to confirm hypotheses. We may conclude that the difference between the developmental (what the learner can do alone) and the proximal (what the learner is capable of doing with assistance) levels – in other words, the ZPD – is determined by tutored management of the social and cognitive factors that influence this form-function sortings.

Responsible tutoring on the ZPD may be considered synonymous to Ellis’ (1993:91) “learnability” concept: “learners are often unable to learn the structural properties they are taught because the manner in which they are taught does not correspond to the way learners acquire them.” Ellis argues for a type of instruction that “entails some form of comparison between what learners typically do in their output and what is present in the input [they receive] ... under fairly stringent conditions related to the learner’s stage of development” (ibid., p. 99).

Responsible tutoring is then directly related to assessing the learners’ stage of development, their readiness to establish the comparisons Ellis argues for, and determining the types of tasks that will entail these comparisons. If this is not done, the difficulties that lead to the Vygotskyan regression to more primitive levels of intellectual functioning (mentioned on page 5 of this paper) may arise. These difficulties are the same that account for variable competence regarding regression or fossilisation, and are caused by the mismatch between social factors and the learners’ cognitive variables.

It follows that the Vygotskyan transition from other to self-regulation is fostered by Ellis’ consideration of learnability. This consideration leads to gradual mastery of new rules (Ellis, 1993) when the learning environment provides learners with meaningful and purposeful interaction opportunities that enable them to use the cognitive processes mentioned on page 4 of this paper, thus enabling them to continuously compare input and output, eventually reconstructing their ILs.

Although Ellis (1997:366) states that his earlier work drew on psycholinguistic models and his latter work belongs to a “functional account of interlanguage”, he claims that “the way language is learnt is a reflection of the way it is used” (ibid., p. 365): that is an assumption of an interactionist perspective. This perspective also allows for another parallel: that with Vygotsky’s socio-political view of language.

The discussion above leads me to conclude that Vygotsky’s and Ellis’ models use basically the same mechanisms to explain the interplay between social and cognitive variables, adopting a clearly interactionist perspective to L2/FL learning. However, a detailed analysis of social and cognitive variables is beyond the scope of this paper.

IMPLICATIONS OF VYGOTSKY’S AND ELLIS’ INTERACTIONIST MODELS

L2/FL development is fostered by contexts that are supportive and motivating, communicative and referential, developmentally appropriate, and feedback-rich, and that supply comprehensible and developmentally appropriate input (Holt, 1993).
Therefore, research studies are needed which track developing ILs over time as learners use their ILs in social contexts; such studies can show the degree to which the cognitive development of interlanguage is affected by social/contextual factors.

This research implies a collaborative perspective to learning, in that teacher-researchers and learner-researchers become actively involved in investigating which social/contextual factors have direct impact upon their individual cognitive variables. Works on learner engagement in curriculum and syllabus design (Holt, 1993; Hutchinson and Waters, 1991; Nunan, 1988), have, unfortunately, only hinted at this perspective: the full potential and dimension of empowering both teachers and learners as researchers has only been scraped on the surface.

The perspective of collaborative teacher and learner researchers presents several positive characteristics.

Firstly, it addresses Ellis' issue of learnability: when teachers and learners collaboratively determine the tasks and topics that are relevant to learners' needs, wants and lacks (Hutchinson and Waters, 1991), they are forced to reflect upon the relationship between tasks and learners' cognitive level of development - both prior to and during instruction. Working together to determine the input may also smooth the transition from other_to self-regulation, thus acting upon the learners' ZPD and stimulating progress to the next stage of language development.

The collaborative design of task-based syllabi supplies a universe of opportunities for interactions to negotiate meanings about the world and also about the use of language (Capocchi Ribeiro, 2000). In thus addressing the issue of learnability, this perspective also fosters positive learning attitudes, thus contributing to the development of what O'Malley and Chamot (1990) and Oxford (1990) define as the good language learner: one who actively participates in the learning process, who is willing to learn and to consciously use learning strategies.

Supporting arguments are also found in Freire's (1970, 1973) approach to adult literacy, which has been widely used in ESL programmes in the US (Simichi-Dudgeon, 1989; Wallerstein, 1983), and whose key features are problem posing and solving through negotiation of meaning. Freire's approach can be said to be socioconstructivist and interactionist in that learners' knowledge is constructed upon their cognitive variables, their reality and culture, with the teacher's tutoring upon the learners' ZPD by mediating collaborative problem solving.

Secondly, this perspective addresses the "limitless variation among language learners" (Larsen-Freeman, 1991:337), in what refers to the various cognitive determinants mentioned earlier. Among these cognitive variants, it is worth mentioning Gardner's (1983) Multiple Intelligences, Learning Styles and Language Learning Strategies (O'Malley and Chamot, 1990; Oxford, 1990), that are used concurrently and typically complement each other as individuals develop skills or solve problems.

CONCLUSION

The objective of teacher and student researchers should not only be the learners' attainment of higher levels of proficiency. They should also test hypotheses that have risen in the classroom. In producing new ideas, teachers and learners will also be co-operatively contributing to theory construction and reconstruction. To achieve this double-folded aim, teachers and learners should continuously investigate the learners' developing ILs in the light of the interplay between social and cognitive variables. For, as Beretta and Crookes (1993:250) claim, "reasoning in discovery ... [should] accept the need for social mechanisms appealing to the interests of individual scientists in order to explain how rationality flourishes."
This can be defined as an interactionist perspective to second and foreign language teaching.

An interactionist perspective that adopts collaborative task-based syllabus design can be applied to all instructed settings. It presupposes the concepts of responsible and reflective teaching and learning, which eventually lead to resourceful autonomy both for teachers and learners.

Developing one’s resourcefulness, besides having become essential to any member of a rapidly changing globalised world, is the true objective of education. It frees individuals from subservient and passive reception of ideas and knowledge, thus being socially and politically empowering (Freire, 1970, 1973; Kincheloe, 1993; Zeichner and Liston, 1996).

REFERENCES


III. DOCUMENT AVAILABILITY INFORMATION (FROM NON-ERIC SOURCE):
If permission to reproduce is not granted to ERIC, or, if you wish ERIC to cite the availability of the document from another source, please provide the following information regarding the availability of the document. (ERIC will not announce a document unless it is publicly available, and a dependable source can be specified. Contributors should also be aware that ERIC selection criteria are significantly more stringent for documents that cannot be made available through EDRS).

Publisher/Distributor: __________________________

Address: __________________________

Price Per Copy: __________________________

Quantity Price: __________________________

IV. REFERRAL OF ERIC TO COPYRIGHT/REPRODUCTION RIGHTS HOLDER:
If the right to grant a reproduction release is held by someone other than the addressee, please provide the appropriate name and address:

Name: __________________________

Address: __________________________

V. WHERE TO SEND THIS FORM:
You can send this form and your document to the ERIC Clearinghouse on Languages and Linguistics, which will forward your materials to the appropriate ERIC Clearinghouse.

Acquisitions Coordinator
ERIC Clearinghouse on Languages and Linguistics
4646 40th Street NW
Washington, DC 20016-1859

(800) 276-9834/ (202) 362-0700
e-mail: eric@cal.org