

CHAPTER 3

THEORETICAL FRAMEWORK

3.1 Introduction

In this chapter, the theoretical underpinnings of this study are examined. The research proceeds from a Vygotskian understanding of development, and the chapter thus begins with a brief account of this frame. Integral to this study is a belief that this frame can be productively combined with a discourse account of human relations: that the social is encoded in the languages we use, and that it is this encoding which is mediated to the individual and which functions as the external locum of development. The chapter provides a brief overview of theory development in the discourse field, and then examines in more depth the understanding provided by Gee (e.g. 1990, 1992), whose specific account of discourse theory is adopted in this work. Finally, the compatibility of the two theories is examined.

3.2 Vygotskian perspectives

If cognition and development is an activity which is purely internal to the individual, then any form of teaching is an irrelevant activity. If development is purely the result of the individual interacting with the physical world, then at most, one could arrange the physical circumstances surrounding the individual in the hope that this may encourage development. For teaching to be seen as a meaningful activity, one has to ascribe a role for social interaction in the development of the individual: that the social plays such a role, and the manner in which it does so is the contribution made to developmental psychology by Lev Vygotsky (e.g. 1978 translation). The following discussion outlines the main tenets of Vygotsky's theory (for a more extensive discussion of Vygotsky's work see, for example,

Kozulin, 1990).

Vygotsky's theory is fundamentally a 'genetic', or process, account of human development (Wertsch, 1985a). Although his specific research interest was in ontogenesis (individual development), he specifically located ontogenesis with respect to human development more broadly. In this regard, Vygotsky distinguished between three genetic domains: phylogenesis (biological evolutionary development), socio-cultural history, and ontogenesis, and pointed to the fact that different explanatory principles must apply within each of these domains.

At the level of ontogenesis, Vygotsky distinguished between phenotypic (descriptive analysis based on "the object's current features and manifestations" (1978, p.62) and genotypic (developmental) analyses, and stated that his aim was to provide a "process analysis... that reveals real causal or dynamic relations... that is, explanatory, not descriptive, analysis" (p.65). Vygotsky's genotypic account relies on three underlying methodological principles (Wertsch, 1985a): that development must be seen in terms of qualitative shifts and cannot be accounted for by a single set of explanatory principles; rather, "the critical issue is how to account for the changing relationships among multiple forces of development and their corresponding sets of explanatory principles" (op cit, p.3); secondly, that the transition points between these qualitative shifts must be defined in terms of changes in the mediatory means available; and thirdly, that explanation must rely on an analysis of different genetic domains, since "ontogenesis can be properly understood only as part of a larger, integrated picture" (op cit, p.11).

Ontogenesis differs from the other genetic domains in that it involves the "simultaneous, interrelated operation of more than one force of development" (p.25). In particular, Vygotsky proposed two lines of development which converge in ontogenesis to form a new type of mental structure: the natural and the cultural. Vygotsky's main theoretical concern was with the cultural line of development, however, his belief was that "cultural development does not create anything over and above that

which exists in the natural development in the child's behaviour...it transforms nature to suit the ends of man" (1929, p.418). The natural line of development thus provides the constraints and possibilities within which cultural development can occur.

With regard to the cultural line of development, ontogenesis is "rooted in society and culture" (Cole and Scribner, 1978, p.7):

Every function of the child's cultural development appears twice: first, on the social level, and later, on the individual level; first between people (interpsychological), and then inside the child (intrapsychological)...All the higher functions originate as actual relations between human individuals. (Vygotsky, 1978, p.57)

Cognition thus, for Vygotsky, originates in the social sphere, and is transmitted to the psychological domain via the interpsychological sphere: "(s)ociety is the bearer of the cultural heritage without which the development of mind is impossible" (Cole and Wertsch, 1996, p.253) and development is a process of transition from a state of other-regulation to a state of self-regulation.

The process by which what is interpsychological becomes intrapsychological is termed by Vygotsky 'internalisation' (Vygotsky, 1978). According to him, what is internalised is the "specific structure of human interaction, mediated by cultural tools, among which language is the most powerful" (Arievitch and van der Veer, 1995, p.114). This process of internalisation was, in Vygotsky's view, not a simple transmission from the outside in, rather, the individual plays an active role in the "internal reconstruction of (the) external operation" (Vygotsky, 1978, p.56); internalisation is thus perhaps best seen as a 'constructive transformation' (Lawrence and Valsiner, 1993, cited in Arievitch and van der Veer, 1995) or 'co-construction' (Valsiner, 1994, cited in Toomela, 1996) on the part of the individual.

3.2.1 The relation of the individual and the social

The addition of the social level to individual development is undoubtedly one of Vygotsky's greatest contributions to the field of cognitive development. However, some readings of his work have tended to stress the primacy of the social domain in his work, to the detriment, perhaps, of a full understanding of the individual level (Moll 1994). Kirshner and Whitson (1997), for example, talk about the 'Vygotskian tradition' as being "weighted towards a deterministic social plane" and cite Wertsch (1985a) in claiming that Vygotsky's project was to show how "internal mental processes are *created* as a result of the child's exposure to 'mature cultural forms of behaviour'" (p.8). This implies a Durkheimian view of the social / individual relation, where social objects are "independent and coercive on the individual" (Miller, 1984, p.10). That this was not Vygotsky's intention is evident in his specific description of the 'merging of the natural and cultural lines of development' in ontogenesis, and his referral to the active construction by the subject of social knowledge (Moll, 1994).

This distinction between the two domains, however, is not intended to imply a "Cartesian duality" (Bidell, 1988) on a theoretical level between the two, but rather to suggest that in a methodological sense, the two are not reducible to each other. Bhaskar (1979) suggests that the individual and the social should not be seen as "two moments of the same process ... (rather) they refer to radically different kinds of thing" (cited in Miller, 1984, p.11). He proposes instead a 'transformational model', in which the levels are distinguishable but linked. Within this understanding, the different levels are related but not mutually determined: different explanatory principles may apply within each level. In my reading of Vygotsky's work, it is in this sense that the two levels cannot be reduced to one another, but are in development integrally linked.

Mouton (1993) cites Bhaskar (1979) and Keat and Urry (1980) in distinguishing the domains thus:

At the social level,

society must be regarded as an ensemble of structures, practices and conventions which individuals reproduce or transform, but which would not exist unless they did so. Society does not exist independently of human activity (the error of reification). But it is not the product of it (the error of voluntarism)... Society then, provides necessary conditions for intentional human action, and intentional human action is a necessary condition for it. (p.233).

At the individual level,

social relations are causally effective, but they do not fully determine the course of individual behaviour. Also crucial are the subjective meanings through which individuals assess, interpret and actively construct their patterns of action within the given structures. Such meanings are not simply individual. Their content is logically dependent upon the shared meanings, rules and conventions and their structural interrelationships, within the language at the societal level. (pp.230-231)

In order to appreciate the sense of the whole then, of fundamental importance in developmental theory is the relation between the levels. This relation is what the fundamental unit of analysis of developmental theory should attempt to capture.

3.2.2 Unit of analysis

Fundamental to the account of how the individual and the social are linked in ontogenesis is an understanding of what constitutes the fundamental unit of analysis of development. Vygotsky defines a unit of analysis as follows:

By unit we mean a product of analysis which, in distinction from elements, possesses all the basic properties of a whole. Further, these properties must be a living portion of the unified whole which cannot be broken down further ... A psychology that wishes to study complex units must understand this. Psychology must replace methods of analysis that decompose the whole into elements with a method that is based on units. It must discover the indissoluble units that preserve the properties inherent in the unified whole. It must find the units in which contradictory properties appear. It must use this kind of analysis to settle the questions that face us. (cited in Zinchenko, 1985, p.97)

Traditional accounts of cognition have tended to locate this unit strictly at the level of the individual (e.g. ‘sensations’ in associationism or ‘behavioural acts’ in behaviourism, Zinchenko, 1985). However, if, as has been posited, a full understanding of ontogenesis lies not so much at the individual level but rather in the relation between the individual and the social (manifest in culture, context and practice), it is clear that a unit located at the individual level would not retain “all the basic properties of a whole” within which ‘contradictory properties’ might appear. A new unit must be sought which adequately reflects this relationship.

In this regard, Zinchenko (op cit) proposes the use of the unit ‘tool-mediated action’. He notes that this unit could be seen to imply a dichotomy between external material action and internal mental action, however he argues that although the two are not identical, they do derive from a common structure. Furthermore, “structures of external and internal activity share not only a common genesis, but a common functional nature as well” (p.112). It is by this means that the distinction is overcome. In a similar vein, Wertsch (1997) proposes the unit ‘mediated action’. In his words, “(t)he task of a sociocultural approach is to explicate the relationships between human actions on the one hand, and the cultural, institutional and historical contexts in which this action occurs, on the other” (p.23). These contexts function as, and/or circumscribe, the mediational means or cultural tools of the

individual action.

Wertsch acknowledges that the unit ‘mediated action’ privileges the ‘agent / instrument ratio’ at the expense of other aspects of context (op cit). This observation is also made by Engestrom and Cole (1997), who believe that this focus would have “difficult(y) in constructing the perspective of a community” (p.304). They suggest two alternatives: the first is the use of the concept of activity, which is both broader than and includes the notion of action, and which links the domains interacting in ontogenesis in a manner that maintains a sense of the ‘wholeness’ of the interaction. The use of ‘activity’ as a central concept in developmental theory is critiqued below. The second possibility is in the use of ‘discourse’ as a fundamental unit of analysis. Discourse, seen as a semiotic- cultural meaning system (or systems), allows for an understanding of how social relations may be realised in interaction, and for an understanding of individual situation within the social. It is this perspective that is adopted in this work.

3.2.3 Activity and situation

Central to Vygotsky's theory was the belief that

“(i)n order to explain the highly complex forms of human consciousness one must go beyond the human organism. One must seek the origins of conscious activity and ‘categorical’ behaviour not in the recesses of the human brain or in the depths of the spirit, but in the external conditions of life. Above all, this means that one must seek these origins in the external processes of social life, in the social and historical forms of human existence.” (Luria, 1982, cited in Wertsch et al, 1984, p.153)

This focus was continued in the work of his followers (the “Karkov Group”, Daniels, 1993, p.48). Following Vygotsky, this group saw practical action as being the general explanatory principle for the

development of human mind (Davydov and Radzikhovskii, 1985). Central to their work was a characterisation of activity that describes three “distinct but interrelated units of analysis” comprising the analysis of action (Leont’ev 1981, cited in Wertsch et al, 1984). At the first level is the unit of activity; this is the socially defined (constructed) level of action and is “a concept connotating the function of the individual in his interaction with the surroundings” (Tolman, 1988). At this level, the object (or aim) of an activity is a ‘motive’, which includes the contextual understanding of the meaning that an action has for a participant (Leont’ev, 1981, cited in Hundeide, 1985). The second level of analysis is that of the specific goal-directed action. This is the particular ‘means-end relationship’ that exists within the level of the activity, and is a conceptually different level of analysis since “an action can vary independently of an activity”, and can have different motives (Wertsch et al, 1984, p.155). The third level of analysis is that of operations, which describe the conditions (‘objective circumstances’, op cit, p.156) under which an action is carried out. Wertsch et al show how “(t)he ultimate goal of the theory of activity is to understand the interrelationships among the three levels of analysis - activity, action and operation” (p.159).

Although Vygotsky placed fundamental importance on the role of the structures of social interaction in development (eg. Wertsch and Stone, 1985), relatively unexplored within his work was an account of the principles of organisation of the social domain, and how these function at the level of the individuals acting in a particular context (Wertsch, 1985a, see also Daniels, 1993, and Daniels, 1995). Activity theory, by distinguishing between the levels of activity and action, and by relating individual action not just to broadly defined cultural activities, but to socially-defined action-in-context, and to “organisation(s) of systems of activity at the societal level” (Wertsch et al, 1984, p.171), thus introduces into the analysis the possibility of an understanding of how social relations may function within the level of interaction.

Whilst this inclusion may be vital to a full understanding of the social-individual relation in ontogenesis, activity theory itself has been subject to criticism. Although initially derived as theory

for the development of mind, ‘activity’ in this theory became the central focus of analysis (Davydov and Radzikhovskii, 1985, p.61): “(in) the characterisation of (action), its intentional aspects, rather than those aspects related to the use of tools, began to predominate” (Zinchenko, 1985, p.104). The focus thus became action, rather than ‘mediated action’. Activity theory may thus be seen to “(fall) foul of one of Vygotsky's own methodological cautions: the activity theorists were trying to explain activity through the analysis of activity” (op cit). This focus downplays the role of semiotic means in development, and meant that for the activity theorists, “the structure of cognitive processes mirrored the structure of external activity and operations” (Daniels, 1993, p.49). This would not be supported within Vygotsky's understanding: “(e)very determination in psychology (in particular the determination of historically developed activity) of the structure and genesis of the human mind, according to Vygotsky, must be of a mediated nature” (Davydov and Radzikhovskii, 1985, p.61). Within a Vygotskian framework then, rather than a central focus on activity, the task must be to provide an account of mediation which encompasses the socially determined aspects of that mediation.

3.2.4 Semiotic mediation

Mediation, in Vygotsky's work, is the means through which the individual relates to the environment, and includes not only the activity of the individual, but also the role of tools and signs which have a “mediating function” (Vygotsky, 1978, p.54) in human activity, and in providing possibilities for action. Development, for Vygotsky, is fundamentally determined by this “internalisation of culturally produced sign systems” (Cole and Scribner, 1978, p.7). Signs, like tools, provide a means for actively engaging with the world. They are distinguished from tools (external activity) in that they are “a means of internal activity aimed at mastering oneself” (Vygotsky, 1978, p.55). In the higher psychological functions, there is a “combination of tool and sign in psychological activity” (op cit). In this regard, the role of language (as a sign system) in mediation is particularly important in Vygotsky's theory: for him, “the most significant moment in the course of intellectual development,

which gives birth to the purely human forms of practical and abstract intelligence, occurs when speech and practical activity, two previously completely independent lines of development, converge” (op cit, p.24). Thus, within the higher psychological functions, language may serve both as a tool for externally oriented activity and as a sign, functioning to mediate internal activity.

For Vygotsky, “a child’s speech is as important as the role of action in attaining the goal. Children not only speak about what they are doing; their speech and action are part of one and the same complex psychological function, directed towards the solution of the problem at hand”(1978, p.25). Vygotsky further points out that speech not only acts as a tool in action, but also serves a regulatory function (“controls the child’s behaviour”, p.26). Here, speech can be seen to serve two purposes: “to direct the listener’s attention through indication, and (to) abstrac(t) the aspects of the environment involved in a concept” (Wertsch, 1981, p.189). These initially other-regulations become, during the course of development, internalised as self-regulations (Wertsch, 1979).

As a sign system, language carries the socially created cultural meanings that, in development, become internalised as individual meaning systems. Communication between the inter- and intrapsychological levels is thus possible, since, for Vygotsky, “the means used to mediate social interaction are the same means used to mediate the cognitive processes of the individual acting as an independent cognitive agent” (Wertsch, 1981, p.190). Thus, “(t)hought development is determined by language, i.e. by the linguistic tools of thought and by the sociocultural experience of the child... The child’s intellectual growth is contingent on his mastering the social means of thought, that is, language” (op cit).

3.2.5 The Zone of Proximal Development

Vygotsky provides for an understanding of how development arises from the interaction between the social and individual levels in his description of the interpsychological category (relations “between

people”, 1978, p.57), actualised within any task through the concept of the Zone of Proximal Development (ZPD) of a learner. This he defines as the “difference between the child's actual level of development and the level of performance that he achieves in collaboration with the adult” (Vygotsky, 1987b, p. 209). The actual level of development can be determined by the capacity that the child has for independent problem solving, and the level of potential development can be determined through the problem-solving capacity of the child “under adult guidance or in collaboration with more capable peers” (Wertsch, 1984, p.8). An individual, thus, has greater capacities interpsychologically than intrapsychologically. The relation between learning and development in this view is that “the process of development does not coincide with the process of learning, the process of development follows on the process of learning which creates the zone of potential development”(Vygotsky, 1963, p.33).

Vygotsky, in his theory, did not provide a specific description of how functioning within the ZPD occurs. Wertsch (1984) provides a more detailed account of this functioning through the concepts of situation definition (individual definition of the task), intersubjectivity (joint construction of meaning) and semiotic mediation. He distinguishes, through the concept of ‘situation definition’, between the different understandings of the teaching / learning context held by the ‘adult’ or teacher and by the learner: “A situation definition is the way in which a setting or context is represented - that is defined - by those who are operating in that setting”(p.8). Wertsch shows how different actors in a task setting may hold different representations of the object involved in a task. These different object definitions are intrinsically connected to the respective action patterns related to the objects that the actors hold. These two factors - object definition and related action pattern - comprise the individual's situation definition.

In order to work with this concept empirically, Wertsch proposes the use of a task analysis, which is an “explicit account of the action pattern” required to complete the task. Clearly, since actors hold different object definitions and action patterns, different actors will hold different task analyses, and the task itself may be fundamentally misrepresented by a learner at the outset of instruction (actual

level of ZPD), holding a different action pattern to the teacher in the situation. Wertsch aims, in his article, to show how a learner may, with teacher or adult mediation, move from this initial task analysis and situation definition at the ‘actual’ level of the ZPD, to a qualitatively different conception of the task analysis and situation definition (potential level of ZPD). In order to do this, Wertsch introduces a third situation definition operating in the teaching / learning situation; this third situation definition exists on the inter-, rather than intra-, psychological level, and is an intersubjective situation definition negotiated, through semiotic mediation, between the teacher and the learner. Whilst this intersubjective situation definition is, for the teacher, temporary, for the learner, the negotiation leading to the new intersubjective situation definition involves a qualitative shift in the intrapsychological situation definition. Thus the negotiated, intersubjectively created situation definition will become the learner's new situation definition and new actualised level of ZPD.

For Wertsch then, potential development does not reside within the individual but, rather, is an intersubjective creation, which, once negotiated, becomes actualised on the intrapsychological level of the learner. Vital to the creation of this intersubjectively is language, or the type of semiotic mediation provided by the teacher: for Wertsch, this mediation is the ‘concrete mechanism’ (op cit, p.13) by means of which intersubjectivity is created.

3.2.6 Concept development

Vygotsky suggests that what is crucial to understanding of concept development (microgenesis) is an understanding of the “functional condition of the concept’s origins” (1987a, p.123) or how the concept is developed through the need for its use or function in ‘communication, reasoning, understanding or problem solving’ (op cit). He stresses that the development of concepts does not occur through association or the addition of related meanings, rather, this development occurs only in relation to a specific task or function that the concept must perform. Furthermore, the task itself is insufficient for the development of a true concept, since adults and children interpret the task, or

rather, the goal of the task, in similar ways but use different means to achieving this goal. For Vygotsky, it is the social environment, through mediation, that provides the driving force for this development:

all the higher mental functions are mediated processes. A central and basic aspect of their structure is the use of the sign as a means of directing and mastering mental processes. In the problem of interest to us, the problem of concept formation, this sign is the word. The word functions as the means for the formation of the concept. Later it becomes its symbol. Only the investigation of the functional use of the word and its development from one age to the next (a development where the various uses of the word are genetically linked with one another) provides the key to the formation of concepts.
(op cit, p.126)

Vygotsky distinguishes between spontaneous concepts, the development of which occurs with an upward movement towards abstraction and generalization, and scientific concepts, which differ in that their development “begins with the verbal definition ... (and) descends to the concrete” (1987b, p. 168). The two types of concepts can be distinguished in the extent to which they exist as part of a system. Spontaneous concepts exist outside of a system. To the extent that relationships between such concepts occur, these are at the level of empirical connections. Thus “syncretism, insensitivity to contradiction, and the tendency to place things alongside one another, stem from the extra-systemic nature of (spontaneous) concepts” (op cit, p.234). Scientific concepts, on the other hand, “are born through relationships of generality among concepts that are established in the process of instruction” (op cit, p.236); these relationships “mediate the concept’s relationship to the object through its relationship to other concepts ... supra-empirical connections between concepts become possible” (op cit, p. 234). The strength of the one type of concept (connection to the concrete in the case of the spontaneous concept, and abstraction and the ability to operate on the concept in a voluntary manner in the case of scientific concepts) is thus the weakness of the other.

The two types of concept do not exist in isolation however, and there is mutual influence between them. The development of scientific concepts depends on the level of maturation of the spontaneous concept. The development of the scientific concept, on the other hand, will cause changes in the structure of the spontaneous concept. In Vygotsky's view, this process of influence of the scientific concept over the spontaneous concept is not limited to the domain of the specific spontaneous concept related to that scientific concept, rather, "once a new structure of generalization has arisen in one sphere of thought, it can - like any structure - be transferred without training to all remaining domains of concepts and thought. Thus, conscious awareness enters through the gate opened up by the scientific concept."(op cit, p.191).

Crucial to the development of scientific concepts is an understanding of activity in the ZPD: it is through instruction that development occurs, and instruction always precedes development (op cit, p. 198). It is in this regard that the significance of the zone of proximal development, as an indicator of functions which are in the process of maturing, becomes evident: "the zone of proximal development has more significance for the dynamics of intellectual development and for the success of instruction than does the actual level of development" (op cit, p. 209). To reiterate:

The development of scientific concepts begins in the domain of conscious awareness and volition. It grows downward into the domain of the concrete, into the domain of personal experience. In contrast, the development of spontaneous concepts begins in the domain of the concrete and empirical. It moves towards the higher characteristics of concepts, towards conscious awareness and volition. The link between these two lines of development reflects their true nature. This is the link of the zone of proximal and actual development. (op cit, p.220)

3.2.7 Situated cognition

Recent work deriving from the understandings of the social / individual relations provided by Vygotsky has placed particular emphasis on the role of the social within the development process. Lave (1991), however, points to the dangers of an approach, in which “social factors become conditions whose effects on individual cognition are then explored. But cognition, if seen as the result of social processes, is not itself the subject of reconceptualisation in social terms”(p.66). This perspective would maintain a dualism between the social and the individual. Rather, Lave suggests that a situated cognition approach be adopted, which

“emphasises the relational interdependency of agent and word, activity, meaning, cognition, learning and knowing. It emphasises the inherently socially negotiated quality of meaning and the interested, concerned character of the thought and action of persons engaged in activity.... (L)earning, thinking and knowing are relations among people engaged in activity in, with, and arising from the socially and culturally structured world” (1991, p.67).

In this view, the individual is both constituted by, and is an active constructing agent in, social relations. This understanding highlights a further unexplored aspect of Vygotsky's description of semiotic mediation: his account appears to assume an unproblematic internalisation process through the ZPD. Rather, in a situated cognition approach, where the individual is located within the social domain, and the types of practices to which the individual is exposed, may determine the individual's capacity to perform certain cultural tasks at either the psychological or interpsychological (actual or potential) level. The question thus becomes “understanding how apparently discrete contexts are complexly interlinked, and how particular individuals, through multiple positionings in multiple communities, do or do not participate in those linkages” (Kirshner and Whitson, 1997, p.9).

In addition, Lave's 'situated cognition' account adds an understanding of the social at the level of the individuals acting in context, not only in terms of negotiated meaning, but also, and fundamentally, at the level of structure. In Lave's view, "in practice, structure and experience together generate each other. In so doing they constitute characteristic substantive relations among persons acting, settings, situations, systems of activity, and institutions" (1991, p.80).

The sections above have provided a quick overview of the fundamental Vygotskian concepts which provide the foundations for this study. It has been suggested that it is through an understanding of functioning in the ZDP, and specifically the role of semiotic mediation, that the link between the psychological and the social can be established. The following section of this chapter examines the semiotic aspect of this link further.

3.3 Language: form and meaning

Minick (1985, cited in Daniels, 1993) claims that in Vygotsky's later work he stressed that "the analysis of the development of word meaning should begin with the analysis of the function of the word in communication" (op. cit., p.46). According to Daniels,

(h)ere was the connection between the analysis of social and psychological systems. The intended analysis proceeds from that of specific forms of social practice through an analysis of the function of the word in mediating specific types of social interaction and communication, to an understanding of the development of the word (1993, p.46).

A rich understanding of the three domains (social practice, interactional, psychological) is thus necessary. Minick et al (1993, cited in Daniels, 1995) propose a "four element conception of development in post-Vygotskian research". This requires

. ...close attention to the way in which (institutions) structure interaction between people and artefacts ... (an understanding that language) should be treated as ‘a multitude of distinct speech genres and semiotic devices that are tightly linked with particular social institutions and practices’ ... (an understanding that) ‘educationally significant human interactions do not involve abstract bearers of cognitive structures but real people who develop a variety of interpersonal relationships with one another in the course of their shared activity in a given institutional context’ ... and (an understanding that) ‘modes of thinking evolve as integral systems of motives, goals, values, and beliefs that are closely tied to concrete forms of social practice’. (Daniels, 1995, p.518)

These insights are crucial to this study: the theoretical focus of this research is an attempt to construct, empirically, the role of the social domain in individual development. It is an attempt to do this by means of an understanding that signs, most particularly language, are the fundamental means both of relation to the world, and of relation to others (communication). The research thus sought a means of describing language that would enhance an understanding of the relation between the social domain and the individuals acting within it. Moreover this approach should emphasise, not determination at the individual level, but rather the possibilities and constraints acting at that level. A pure linguistic analysis of language, or a reading of grammar divorced from its context, would not provide the connection between these levels in a manner that would elucidate the complexity of their inter-relations. Rather, the understandings provided by the field of socio-linguistics, and most particularly those within the broad domain of discourse theory, were felt to provide a more productive account. For the purposes of this research, the work of Gee (e.g. 1990, 1992) was chosen as a representative of this field of study. Prior to an examination of his theory, the following section provides a brief history of developments in the sociolinguistic field.

3.3.1 Models of understanding language

Graddol (1994) provides a useful three-model framework for understanding developments within the field of linguistics, which, for the purposes of sketching a brief history of the domain, is reproduced here. The first model that Graddol outlines is essentially a structural model which focuses on the grammatical features of language. The second model of understanding retains some of the structural features of model one, but suggests that context, rather than structure, is the primary determinant of meaning. In model three theories, context and subjectivity are deconstructed: it is indeterminacy and multiplicity which govern human relations.

A clear example of a model one theory is that provided by Saussure (1966), who is “often regarded as the father of modern linguistics” (Hodge and Kress, 1993, p.10). Fundamental to Saussure’s work was the notion that the study of signs, semiology, was a critical project, and that language must be seen as one instance of a sign system. Graddol (1994) describes how, prior to Saussure, language description was focussed on the historical development of language. Saussure introduced into the study of language the distinction between diachronic analysis, which studies the history and development of a language, and synchronic analysis, which focuses on language use at a particular time. Contrary to established practice at the time, Saussure’s understanding was that it is the latter approach which is fundamental to understanding how language functions to convey meaning within a speech community. This focus was crucial to the development of the field of socio-linguistics.

Saussure also introduced a distinction between the rules of language which formulate a ‘social contract’ regarding the broad meanings attached to language elements (*langue*), and the instances of language use (*parole*), which generate specific meanings within the specific context of use, and which rely not only on the social convention regarding meaning, but also on the specific choice of elements in the utterance. Saussure’s contribution in this regard was to focus attention on *langue*, or the relation of elements in system, since language can be viewed independently of its referents (e.g.

Phillips 2000, a view which is criticised by Fairclough, 1989). Instances of parole are based on choices between contrasting meanings which are ‘arbitrarily’ assigned to elements (Graddol, 1994, p.5). These choices are based on two axes: the syntagmatic axis shows the choices made with regard to the actual elements of the utterance, the paradigmatic axis plots the way in which the utterance is connected to the system. On the syntagmatic axis, elements are related contiguously: all are present as parole. The paradigmatic axis looks at absences: the utterance “thus encodes meaning through selection from the paradigmatic axis and combination on the syntagmatic one” (op cit, p.135).

Phillips shows how this understanding of language based on difference and choice provided a stumbling block for early structuralism: it provides a system of difference with no positive terms” (op cit, p.120). Since one cannot isolate elements based on difference, structuralism can never get beyond signifiers. However, the understanding of the role of choice and contrast in language use that derives from this theory was fundamental to the later development of discourse theory.

Model two theories criticise the focus in model one studies on the study of form, and the account that follows of language as an unproblematic means of information communication. For these theorists, language must be seen as action, and must be analysed functionally (in terms of what language does). As an early model two theorist, Malinowsky introduced the notion of ‘context of situation’: the understanding that “utterances become comprehensible only in the context of the whole way of life of which they form a part. The focus of analysis is not a sentence but a ‘speech event in a context of situation’.” (Graddol, 1994, p.13).

Other theorists have built on this understanding of the relevance of context in meaning: Graddol shows how Labov established the importance of context in language production empirically and Firth built further on the understanding that meaning is not independent of context, and opened the field for the development of socio-linguistics (op cit, p.14). Halliday, as a student of both Malinowski and Firth, provided a ‘functional account’ of language use which stresses that function influences

structure; that language is both a product of the social process and a construal of reality: an “intersubjective interpretation of experience” (Halliday, 1978, pp.1 - 2). Halliday puts it thus:

In the development of the child as a social being, language has the central role. Language is the main channel through which the patterns of living are transmitted to him, through which he learns to act as a member of a ‘society’ - in and through the various social groups, the family, the neighbourhood and so on - and to adopt its values. This does not happen by instruction, at least not in the pre-school years; nobody teaches him the principles on which social groups are organised, or their systems of beliefs, nor would he understand it if they tried. It happens indirectly, through the accumulated experience of numerous small events, in which his behaviour is guided and controlled, and in the course of which he contracts and develops personal relationships of all kinds. All this takes place through the medium of language. (op cit, p.9)

Early critical discourse analysis work similarly could be classified as model two. Hodge and Kress, for example, in their seminal work first published in 1979 had the following to say:

The theory that is required for the new situation must have a reconstituted scope, abandoning the equation theoretical linguistics = syntactic theory, while retaining both syntax and theory. The requisite theory must encompass the study of syntax and the basic rule systems of the language along with the social uses of language, that is, the relations between language and society and between language and mind, in a single integrated enterprise. (1993, p.3)

It is difficult to draw the line, other than historically, between model two and model three theories. Many writers, including Halliday and Hodge and Kress, whose earlier works appear consistent with model two theories, in more recent writings suggest understandings not at odds with model three

theories.

Model three theories are post-modern: they do not deny existence of structure, but interpret it in line with new ways of understanding science and the universe (Graddol, 1994, p.17). The focus in this model is on signs, not just on words, and the text in any situation is thus more than simply the language used in its production, and may comprise multiple semiotic systems. Texts are historicised: “produced by processes in which relations of social power and role apply” and cognition is “socially and jointly constructed” (op cit, p.18).

Thus:

Subjectivity is not given by ... membership of well defined social groups but is constructed through discourse - the everyday experience of social interaction. But because texts are themselves so diverse and internally inconsistent, the subjectivities which they construct are similarly incoherent. The ‘self’ which, in model 1 theories is idealised and homogenous, and in model 2 theories unified, rational, and in control of its own identity becomes in postmodern theory an internally contradictory, seemingly irrational, and discursively constructed subject. (op cit, p.19).

Language in this model is a social semiotic, which provides “a resource for meaning, centrally involved in the processes by which human beings negotiate, construct and change the nature of social experience” (Martin, 1989, p.vi). It is this complex understanding that discourse theory attempts to build from.

3.4 Gee's theory of discourse

It has been suggested above that Discourse, as a semiotic cultural meaning system, provides a possible

unit for the analysis of development. In the broadest sense, discourses are “sets of statements which constitute an object... (they) do not simply describe the social world, but categorise it, they bring phenomena into sight.” (Parker, 1992, pp.1: 4 - 5). At a minimum, three basic properties of discourse can be discerned: discourse forms structures; conveys meanings; and accomplishes actions (Schiffrin, 1987). Further, discourse is always related to its context, and is always communicative. However, the field of discourse theory is “vast and ambiguous”, and there is “no one coherent theory of what discourse is”: different theorists adopt different perspectives and different units of analysis (op cit). It is therefore necessary, when working in this field, to adopt a particular approach. For the purpose of this study, the work of Gee has been selected.

Gee (1990) draws a distinction in language between form and meaning. Language is, “in the first place, a form or pattern” (p.76), which can be seen to exist both at the level of words themselves (combinations of morphemes which make up words), and at the level of the overall structure of the language (the patterns or ‘grammars’ of language use). One language may have many forms, depending on the number of dialects within it, or the number of genre uses to which it is put. This form establishes the constraints (p.86) within which meaning is constructed, however, form and meaning are “partly autonomous from each other, obey somewhat different principles, have somewhat separate lives”(p.75).

Meaning, for Gee, does not reside at the level of the word (or phrase) itself. Rather, meaning is defined in the use, and context of this use, of the word. Thus, “(w)ords have no meaning in and of themselves and by themselves apart from other words. They have meaning only relative to choices (by speakers and writers) and guesses (by hearers and readers) about other words, and assumptions about contexts” (p.84). Gee formulates this in terms of three principles involved in meaning: the exclusion principle that states that the meaning of a word (or phrase) is

... a matter of what other words (or phrases) my use of a given word (or phrase) in a

given situation is intended to exclude or not exclude as also possibly applicable... These exclusions and inclusions are always made against the background of a set of other words or phrases, what I will call a 'semantic field', that are considered relevant in the situation (1990, p.82).

The second principle is the guessing principle: “we can only make judgements about what others (and ourselves) mean by a word used on a given occasion by guessing (however conventionalised or not, however conscious or unconscious the guess may be) what other words the word is meant to exclude or not exclude” (p.83). The third principle, or context principle, states that

guesses about what words mean (what other words they are intended to exclude or not as applicable) are always relative to assumptions about what the relevant context is, and thus change with (assumptions about) the context. The assumed context functions to direct the guesses on the part of the hearer (reader) about the semantic field against which exclusions and inclusions are made by the speaker” (p.84).

In short, within the formal constraints of language, meaning is about choices made on the part of the producer from semantic fields assumed from the context, and guesses made on the part of the interpreter regarding these choices and assumptions.

In order that communication may occur, underlying these choices, assumptions and guesses on the part of the participants must be a common view of the world, a common set of beliefs and values, which Gee refers to as a ‘cultural model’. Multiple cultural models exist in society, and an individual may subscribe to any number of these. These cultural models are always ideological, in the sense that they are determined by social theories about the nature of the world and its relations, held, very often, at a tacit level. They define what is “normal and expected” (p.89) within a particular situation. According to Gee, “the fact that we are usually unaware of using these cultural models, of their social

variability, and of their full implications, means that the assumptions they embody about the distribution of social goods appear to us ‘natural’, ‘obvious’, ‘just the way things are’, ‘inevitable’, even ‘appropriate’, despite the fact that cultural models vary across both different cultures and different social groups in a single society, and change with time and with changes in the society” (p.88).

Gee adds one further level to his analysis of meaning. This meaning does not reside so much at the level of the words as at the level of the action performed by the words, or ‘speech acts’. In the same way as meaning at the level of words is dependent on choices, assumptions and guesses, speech acts also can be seen to be dependent on choices on the part of the producer from fields of possibility assumed from the context, and on assumptions with regard to that context on the part of the interpreter. The basis for the choices made with regard to speech acts again relates to cultural models, and to the social theories underlying them.

It is through this understanding of language as a ‘speech act’ that the social activity of language production can be studied. Gee and Green (1998) highlight the importance of an understanding of reflexivity in this regard. This they define as “the way in which language always takes on a specific meaning from the actual context in which it is used, while, simultaneously, helping to construct what we take that context to mean and be in the first place” (p.127). They point to different ways in which reflexivity can be understood, and which provide different frames for an understanding of language and social activity, and adopt the understanding provided by Bakhtin of the dialogical relation between speaker and hearer. In this perspective, “speakers and hearers are not separate entities. Rather each is implicated in the actions (speaking and hearing) of the other” (p.130). Thus:

Language is realised in the form of individual concrete utterances (oral and written) by participants in the various areas of human activity. These utterances reflect the specific conditions and goals of each such area not only through their content (thematic) and

linguistic style, that is the selection of lexical, phraseological, and grammatical resources of the language, but above all through their compositional structure. All three of these aspects - thematic content, style, and compositional structure - are inseparably linked to the whole of the utterance and are equally determined by the specific nature of the particular sphere of communication. (op cit, p.130)

3.4.1 Discourse

Gee defines discourse (or 'a discourse') as "any stretch of language (spoken, written, signed) which hangs together to make sense to some community of people who use that discourse" (p.103). However, he connects the notion of discourse to the concept of cultural models by distinguishing between discourse in the general sense and 'Discourse', which he defines as

a socially accepted association among ways of using language, of thinking, feeling, believing, valuing, and of acting that can be used to identify oneself as a member of a socially meaningful group or 'social network', or to signal (that one is playing) a socially meaningful role. (op cit, p.143)

As such, Discourses are multiple, ideological, conflicting, resistant to criticism, and always related to the distribution of power and goods in society.

Gee distinguishes between an individual's primary Discourse, which is the discourse acquired through initial socialisation into the family and its community, and their secondary Discourses, which are developed outside of the family in secondary institutions (schools, churches etc.). In contrast to the primary Discourse, to which one has free access and membership status, secondary Discourses must be acquired through socialisation into the discourse group. This process may be smooth or

conflictual, depending on the overlap or relationship between the primary and the secondary Discourse:

(t)wo Discourses can *interfere* with one another, like two languages; aspects of one Discourse can be *transferred* to another Discourse, as one can transfer a grammatical feature from one language to another. For instance, the primary Discourse of many middle-class homes has been influenced by secondary Discourses like those used in schools and businesses. This is much less true of the primary Discourse in many lower socioeconomic black homes... (1990, pp.152 - 153), and

There is no doubt that many minority and lower socioeconomic students have great difficulty accommodating to, or adapting to, certain ‘mainstream’ Discourses, in particular, many school-based Discourses. These Discourses often conflict seriously (in values, attitudes, ways of acting, thinking, talking) with their own home and community-based Discourses. (1990, p.148)

3.4.2 Discourse acquisition

Since Discourse, for Gee, is fundamentally a cultural phenomenon (i.e. based on cultural models connected to ideologies and social theories), Discourse acquisition is, in effect, a process of acculturation: “(o)ne learns cultural models by being acculturated, by being open to and having experiences with a culture, by practising language and interaction in natural and meaningful contexts” (1990, p.90). In this regard, Gee draws a distinction between ‘acquisition’, as “a process of acquiring something subconsciously by exposure to models”, and ‘learning’, which he sees to be “a process that involves conscious knowledge gained through teaching ... or through certain life-experiences that trigger conscious reflection” (p.146). Discourses, thus, are fundamentally “mastered through acquisition, not learning. That is, Discourses are not mastered by overt instruction... but by

enculturation (apprenticeship) into social practices through scaffolded and supported interaction with people who have already mastered the Discourse” (pp.146-147). Learning, on the other hand, facilitates the development of ‘meta-knowledge’ about the discourse, and usually follows, rather than precedes, some degree of acquisition.

Gee elaborates further on the process of ‘acquisition’ in his account of how children acquire concepts (1997). This account is based strongly on theories of connectionism, and an understanding that much of human cognition is based on pattern recognition. This pattern recognition is not passive, but is rather an active process of action, reflection-in-action and reflection-on-action. Thus, the child, through action and experience with the world uncovers patterns in the use of word meaning (the contexts in which a word is used, p.239). These patterns are both sought after and confirmed (guided and explained) on the basis of the cultural model which the child holds and is developing. On the basis of the understandings thus generated, new and deeper patterns of meaning may be sought. The process is not linear, but mutually interactive: “(a)ctions can change patterns that, in turn, change cultural models; cultural models can modify patterns that, in turn, cause us to act in certain ways, ways that may change patterns and, in turn, cultural models”(p.241).

A concept, for Gee, is not a single meaning or pattern associated with a word, and concept meaning does not reside at an abstract or decontextualised level. Rather, a concept is seen as a collection of “specific patterns of experience tied to particular sorts of contexts.... These patterns represent midlevel generalisations, not too specific and not too general, not totally contextualised, and not totally decontextualised” (p.243). Gee terms these midlevel generalisation patterns ‘situated meanings’. A concept is thus a collection of situated meanings made meaningful (explicated, evaluated and organised) by a cultural model and which, in turn, influences the cultural model (which is “ultimately formed by and out of (situated meanings)”, p.255). Although not specifically addressed by Gee, this provides an indication of how an individual may acquire a secondary Discourse: a concept may be understood in different ways in different cultural models, depending on the collection and

organisation of the situated meanings associated with that concept. Through altering the situated meanings (patterns of experience) associated with a concept, the organising framework or cultural model itself may change. Since cultural models themselves “exist only through the active work of ... Discourses” (p.255), a change in a cultural model which reflects a different system of practices and values should, ultimately, indicate a Discourse shift. This process is not necessarily unproblematic though; Gee shows how discourse acquisition may fail because the learners

either have some induction into the cultural model (theory) without any real feeling for the situated meanings connected to it (this is too general), or they have some feeling for the situated meanings and ability to work with and recognise them in situ, but do not really have much feeling for the larger cultural model that connects and explicates them (this is too specific). (op cit, p.243)

To some extent, this failure may be related to other, contradictory Discourses to which an individual may belong: the degree of the conflict between the familiar practices and cultural models held in the primary and target Discourse may determine the ease of the acquisition of the secondary discourse (Gee, 1990, p.158). Furthermore, acquisition, or conflict in acquisition, is not pre-determined at the individual level:

the mind is social (really cultural) in the sense that sociocultural practices and settings guide the patterns in terms of which the learner thinks, acts, talks, values and interacts.... This need not, however, mitigate each learner's own agency - because each individual belongs to multiple sociocultural groups, the cultural models and patterns associated with each group can influence the others in unique ways, depending on the different mix for different individuals.... And, of course, each individual is biologically, and, in particular, neurally quite different from every other one (and the patterns are stored in networks of neurons...) (1997, p.240)

3.5 Theory compatibility

Accounts of the basic understandings provided through the Vygotskian and Geeian approaches have been outlined above. This section looks at the compatibility of the two theories on issues crucial to this study. In particular, the aim of this section is to show that the two theories are not fundamentally discordant: rather, where there are differences, this tends to result from an under-theorisation of the relevant concept in one of the two theories (unsurprising given the different fields of study of the theories). The theories can thus be seen to complement, rather than contradict, each other.

3.5.1 Mind

Vygotsky provides a theory of the social origin of mind through the mechanism of semiotic mediation. It has been suggested that this account perhaps lacks a full description of the social relations acting in the context, and of how the individual both constructs and is constructed by these relations. Wersch (1985b), for example, suggests that although Vygotsky “focussed on the linguistically created context immediately surrounding a word or expression” and may have been “suggesting that the notion of context could be extended to include larger texts...he never dealt with it in anything approaching a comprehensive manner” (p.63). Gee provides a social account of situated language practice which appears to contribute to a post-Vygotskian understanding by enabling this description. The accounts are compatible to the extent that they both stress the role of language as a ‘culture-bearer’ and as the foundation of individual thought. Both point to the regulatory function of, or constraints imposed by, language. In addition, both stress the role of activity or action on the part of the individual in language acquisition. The accounts differ in their understanding of the role of the social in mind: for Vygotsky, the social is the *origin* of mind, and *creates* the mind. For Gee, the social is the *basis* for mind, which is never fully independent of the social. Thus, for Gee,

(t)he cultural model resides within the social practice in the sense that we can induce

what the model is by observing the practice... However, no-one in the practice need have the cultural model in his or her head, consciously or unconsciously, in full or in part. (1992, p.12)

In his early writings, Gee adopted a 'connectionist' view of mind (1992). In this conception, the mind is conceived as a set of neural networks which comprise input and output 'activation vectors', as well as intermediate, 'hidden', units which function to "mediate between the world (the effects the world has on input units) and mental or physical action (the result that the output units cause, whether thoughts, words or deeds)" (p.29). These 'hidden units' provide a representation of the world, not through storing knowledge or schemas, but through their specific patterns of activation (p.43). Activation patterns are developed through repeated corrections of outputs; it is here that cultural models may, to some extent, determine mind, as "social practice serves as the correcting device" (p.49) for this development.

Although perhaps not entirely discordant with some aspects of Vygotsky's view of the functioning of mind, this account does not provide for an understanding of the qualitative difference between lower mental functions (natural perception, attention and memory) and higher mental functions ("voluntary attention, logical memory, the formation of concepts, and the development of volition", Vygotsky, 1981, p.63) that Vygotsky proposed. To some extent, then, although more complex than associationism, connectionism can be seen to be subject to the same criticism levelled against associationism by Vygotsky. In his view, this "simple sum of elementary processes" (1978, p.65) cannot provide an account of thinking as "a higher and unique form of activity" (Vygotsky, 1987b, p.232). For Vygotsky, a system of relating concepts is necessary, such that "each concept presupposes the presence of a certain system of concepts. Outside such a system, it cannot exist" (1987b, p.224). This system, for Vygotsky, is provided for in relationships of generality between concepts (p.225).

More fundamentally, for Vygotsky, higher mental functions do not arise as a natural function of the organism itself in interaction with its environment. Rather,

the very mechanism underlying higher mental functions is a copy from social interaction; all higher mental functions are internalised social relationships. These higher mental functions are the basis of the individual's social structure. Their composition, genetic structure, and means of action - in a word, their whole nature - is social. Even when we turn to mental processes, their nature remains quasi-social. (Vygotsky, 1981, p.164)

Vygotsky's account thus stresses the internalisation of interaction, not simply as a 'corrective device', but as the means whereby the internal plane is formed.

In Gee's more recent work, the link between socio-cultural theory and his own understandings have been made explicit. In a text on Discourse analysis in 1998, for example, he uses socio-cultural theory to provide an explanatory dimension to his methodological framework. In his words, "(g)iven the common view of the social construction of knowledge and the focus on material, activity, semiotic, and sociocultural aspects of this process (learning), we view these theories as mutually informing" (Gee and Green, 1998, p.146) and

the approach to learning that is most compatible with an ethnographically grounded perspective on discourse analysis is one that defines learning as changing patterns of participation in specific social practices within communities of practices (p.147).

In this regard he cites the work of Lave (1988, 1996), Lave and Wenger (1991), and Wertsch (1981, 1991). More recently (2001, in seminar; see also Gee, 1999a), Gee has endorsed the view of concept development put forward by Vygotsky, in all aspects apart from Vygotsky's belief that scientific concepts, once formed, take over the general plane of spontaneous concepts. In Gee's view, the field

of operation for the ‘downward growth’ effect of scientific concepts is more specific.

At the cognitive level then, Vygotskian understandings provide a richer account than that provided by Gee. Gee’s recent adoption of a cultural-historical frame of understanding of mind, however, suggests that any differences between the two do not arise from fundamentally different perspectives, but rather that the understandings of cognition and mind that a Vygotskian model brings can contribute positively to his approach.

3.5.2 Learning

A significant divergence between the two theories resulting from these different understandings of the relation between the social and the mind is found in the lack of clarity, in Gee’s theory, on the role of the interpsychological in individual development. Although he does suggest that enculturation may occur through “scaffolded and supported interaction with people who have already mastered the discourse”(1990, p.147), in his description of word development it is the trial-and-error actions and reflections on the part of the individual that determine development. It is through these actions, guided by tacitly held cultural modes that are “rooted in the practices of the sociocultural groups to which the learner belongs” (1997, p.240), that the learner comes to “share with his or her community”(op. cit.) an understanding of a word or concept. The ‘interpsychological’ in this description appears to be more a goal of development than a means. As such, the description may be seen to be subject to a form of learning paradox (e.g. Miller, 1984): in this account, the learner must have access to the meaning (tacit cultural model to guide action) in order to develop the meaning (understanding of word or concept). In this regard, the understanding of the role of the interpsychological in development is vital to a Vygotskian account: for Vygotsky, “(t)he path from object to child and from child to object passes through another person. This complex human structure is the product of a developmental process deeply rooted in the links between individual and social history” (1978, p. 30). It is by this

means (externally guided action) that the learning paradox is resolved (Miller, 1984). For the purposes of applying Gee's understanding of discourse within a Vygotskian framework then, it is important that an account of ZPD functioning in discourse acquisition be provided, such that “the zone is considered both in terms of an individual’s developmental history and in terms of the support structure created by the other people and cultural tools in the setting” (Newman et al, 1989, cited in Kirshner and Whitson, 1997, p.6).

For this purpose, the following section highlights some aspects of Wertsch’s (1984) description of functioning in the ZPD that may require clarification in order that this account may be used as a basis for an understanding of the functioning of the interpsychological in discourse acquisition. Three assumptions underlie this sketch: firstly, that the task itself is (always) fundamentally some form of Discourse acquisition. Secondly, that the learner is a proficient user of his / her own primary discourse and may have some experience of the secondary Discourse relevant to the context. The actual level of development of the learner with regard to the task will be determined by the extent to which this secondary discourse has already been acquired, and by the conflict or overlap between the primary and secondary discourse (and any other Discourses which the learner may hold). Thirdly, that the ZPD is formed in relation to a particular task, the ‘expert’ understanding of which includes a particular definition, rooted in a particular cultural model, of task competency.

a) Acquisition and learning

In distinguishing between ‘learning’ and ‘acquisition’, Gee differentiates between aspects of teaching / learning that are explicit, and those that are tacit or ‘subconscious’ (1990, p.146). In his view, it is predominately at the second (tacit) level that Discourses are acquired. [It is important to note that the term ‘acquisition’ is used in different ways by different theories. Lave (1997), for example, provides an argument against an understanding of learning as acquisition, where such learning is conceptualised as explicit, decontextualised, compartmentalised and generalisable. She argues instead

in favour of a view of learning as ‘understanding in practice’, and where “processes of learning and understanding are socially and culturally constituted, and (where) what is to be learned is integrally implicated in the forms in which it is appropriated” (pp.18 – 19). Her ‘understanding in practice’ model thus appears closer to Gee’s use of the term ‘acquisition’.]

The distinction between acquisition and learning is not foregrounded in Wertsch’s (1984) account of ZPD functioning, however, this account does not necessarily preclude a focus on the tacit dimensions of the task and of the situations definitions of the participants. For example, working within the Vygotskian paradigm, Hundeide (1985) writes:

one needs a framework that takes into account the historical and cultural basis of individual minds: the collective institutionalised knowledge and routines, categorisation of reality with its typifications, world view, normative expectations as to how people, situations, and the world are and should be, and so forth. All this is tacit knowledge that has its origin beyond the individual, and it is this sociocultural basis that forms the interpretive background of our individual minds. It seems to me that this is exactly what the Vygotskian tradition is trying to take into account. (p.311)

In an acquisition account of ZPD functioning, what is necessary is an understanding that it is through changing the choices and fields of possibility connected to participants’ cultural models that situation definitions may be modified. These choices may be influenced less by the explicit dimension of ‘teaching’ than by the more tacit dimension of exposure to models and to patterns of situated experience.

That this is crucial to an understanding based in an academic context is argued by Becher (1989). He cites Gerholm (1985) in this regard:

A graduate student, as part of his or her socialisation into an academic discipline, will come into contact with two main categories of tacit knowledge. One of them is the knowledge that has grown out of long experience in the discipline. It is a practical, almost subconscious, knowledge or competence that the department elite fully masters. The most important ingredient is the knowledge and command of the repertoire of scientific discourses. The other category of tacit knowledge is generated by the students themselves as they try to make sense of what they are experiencing in the graduate studies program. Like the former type, it is likely to be used as a guide for action. And for an understanding of what goes on in Academia they are both of great importance.

(p.26)

Becher further follows Rorty (1979) in suggesting that, in addition to appropriate language form and style, what is crucial is the ability to recognise “what counts as a relevant contribution, what counts as answering a question, what counts as having a good argument for that answer or a good criticism of it” (op cit).

b) Situation definition

Fundamental to Wertsch's account is the notion of the differing situation definitions brought to the task by the adult and child. A situation definition, for Wertsch, is “the way in which a setting or context is represented - that is defined - by those who are operating in that setting” (1984, p.8). These situation definitions could be seen to reside at the level of activity (“how the participants structure the task setting in terms of socio-culturally defined situations” (Wertsch et al, 1984, p.160). Necessary to this account, therefore, is an understanding that these differing situation definitions will arise as a result of and will reflect differing cultural models subscribed to by the participants. Since cultural models are very often tacit, all aspects of the situation definitions held will not necessarily be explicit. Whilst this is true both at the levels of object definition and action pattern described by Wertsch, there

may, in addition, be other aspects of context (structural relations) and affect (interpersonal relations) operating to comprise an individual's situation definition.

c) Object definitions, action patterns and task analyses

Wertsch suggests that the situation definitions of the participants on a task are not directly accessible: the function of the task analysis is to reveal the participants' respective action patterns with regard to the task (which may not always be explicitly formulated, but which can be assumed from the actions of the participants on the task); it is through this means that the participant's object definition, and, by inference, situation definition, can be constructed. Since the object definition is inferred through the action pattern, objects are defined in terms of their function within the task (as this is defined by the participant).

Within the particular empirical study cited by Wertsch (1984), this functional definition of the object does not take into account aspects of the object definition which may relate to the meanings which the object might hold for the participant outside of the task, and thus does not allow for an understanding of how these object meanings may themselves play a role in the participant's understanding of the relation of object to task. Whilst this understanding may not have been relevant to the particular study cited (mothers working with very young children), in any study in which the participants are of a sufficient age to have formed 'multiple selves', and particularly in a study of secondary Discourse acquisition (where the 'learner' is already fluent in a primary Discourse), this understanding is crucial to a description of how the individual relates to the task through their location with regard to cultural model beliefs held at the outset of the task (actual level of ZPD). Necessary, in this account, is a definition of object in terms of meaning-independent-of-task and an understanding of how this connects to definitions of object-function-in-task in order that an understanding of how the task itself is represented (situation definition) may be constructed.

More specifically, what is necessary is an account which views the object definition of a participant as a particular organisation of situated meanings, fundamentally tied to particular patterns of experience. How the action pattern of the participant with regard to the task is determined by these patterns of previous experience will provide an indication of the participant's situation definition. It is through modification of these action patterns (enculturation into new practices) that situated meanings, and thus situation definitions may be changed, and new cultural models acquired.

d) Intersubjectivity

Intersubjectivity, for Wertsch, is the means of structuring the interpsychological task. This intersubjectivity may exist at various levels on the task and is determined by the 'semiotic flexibility' (1984a) of the adult with regard to the task. Wertsch defines 'intersubjectivity' as being that "intersubjectivity exists between two interlocutors in a task setting when they share the same situation definition and know that they share the same situation definition"(p.12). It is through the linking of situation definitions to action patterns that avoidance of the learning paradox is provided for, since it is through externally-guided action that learning may occur: "(t)he child does not act because he / she understands but comes to understand because he / she acts" (Miller, 1984, p.20).

However, an account that places emphasis on the tacit dimensions of acquisition requires a description of intersubjectivity such that the consciousness of the shared situation definition is de-emphasised. An understanding that new action patterns may be formed, not only through explicit sharing of situation definitions (cultural model understandings), but also through implicit modelling and imitation, is necessary. Since the shared situation definition (at any level) is ultimately the aim, rather than the means, of interpsychological functioning, and since it is through the modification of action patterns that new situation definitions will ultimately be formed, a definition of intersubjectivity

which foregrounds the creation of mutual action patterns, rather than situation definitions, may provide greater flexibility with regard to tacit acquisition.

e) Regulation and negotiation

In Wertsch's account, intersubjectivity is created through 'negotiation' between the participants in the setting. Although, for Wertsch, regulation is an important aspect of ZPD functioning (cf. Wertsch, 1979), the relation between negotiation and regulation is not directly addressed. An interpretation of this relation might be that the transfer of regulation (from other to self-regulation) is implicit within the concept of negotiation. This understanding is important to an account which attempts to describe the implicit structuring, not only of the task itself, but also of the structural relations of the context, and of the cultural meaning of the task. An examination of the regulatory aspects of intersubjectivity such that an analysis is provided not only of the possibilities and constraints in interaction, but also of the form and contexts of that interaction (structural component of regulation) is thus necessary.

3.5.3 Meaning

The account presented in this chapter describes Vygotsky's view of word meaning as cultural meanings which have been internalised. This understanding is elaborated further by Wersch (1985b), who suggests that Vygotsky distinguished between decontextualized word meaning, which refers to the capacity of language to be abstracted from its immediate context and used in decontextualised reflection, and the contextual meaning: "the ways in which the structure and interpretation of utterances depend on their relationships with their extralingual and intralinguistic contexts" (op cit, p.53). These two aspects of word meaning operate simultaneously in any context of utterance. However, according to Wertsch,

Vygotsky saw the context-specific, indexical aspects of signification as predominating over the decontextualised, stable aspects. That is, the signification of a word is more a function of the stream of mental functioning and the context in which it appears than it is a function of a stable, cross-contextual meaning system. (op cit, p.61)

It is in this sense that Gee's view is compatible with that of Vygotsky's. For Gee, fundamental to meaning are the principles of exclusion, guessing and context: word choice and interpretation is always related to context, and meaning is never context-free. Moreover, for Gee, meaning, and its development, is fundamentally connected to cultural models, or 'theories of the world', which are inherently ideological.

Wertch notes that in Vygotsky's work he never took an analysis of meaning beyond the word and suggests that this element of Vygotsky's theory is one that needs revision: the word in its linguistic context (propositional form or context) should serve as the unit of analysis (op cit, p.55).

Word (or content) meaning is not all that is negotiated in the ZPD: Vygotsky (1978) provides an understanding of how interpsychological relations function as a source of (initially other-) regulation, which is internalised in the course of development to become self-regulation. That this is possible is provided for by his linking of the development of word meaning to the *function* of the word in communication (Daniels, 1993). Gee (1997) provides a means of incorporating both word meaning (content) and function (regulation) into an analysis by distinguishing, in language, between meaning and form. He follows Kress (1998) in asserting that "(s)igns are motivated conjunctions of meaning and form, in which the meanings of the sign-maker lead him or her to the apt, plausible, motivated expression of meaning in the most apt form" (p.237). Form, in language, thus provides the constraints within which meaning is constructed. Since "development is based on mastery of *defined modes* of speaking, thinking and acting" (Minick et al, 1993 reported in Daniels 1995, p518, italics added), form provides a regulatory mechanism within which structural relations may function. The link

between these structural-relations-expressed-in-form and meaning is provided for by Gee (1990) in his description of speech acts: whilst a speech act is an act signifying meaning, it is fundamentally a 'form' or 'grammar' appropriate to the context of that act. This he describes as "grammar 2":

the rules by which grammatical units like nouns and verbs, phrases and clauses, are used to create patterns which signal or 'index' characteristic whos-doing-whats-within-Discourses. That is, we speakers and writers design our oral or written utterances to have patterns in them in virtue of which interpreters can attribute situated identities and specific activities to us and our utterances.... Linguists call them 'collocational patterns'. This means that various sorts of grammatical devices 'co-locate' with each other. The patterns I am trying to name here are co-relations (correlations) among many grammatical devices, from different levels of grammar one. These correlations, in turn, also co-relate to (coordinate with) other non-language 'stuff' to constitute (for historical, i.e. conventional reasons) whos-doing-whats-within-Discourses" (1998, p. 29)

The meaning / form relation thus is distinguishable analytically, but in practice constitutes a 'whole'. In a sense it could be said that meaning integrally comprises both denotative meaning (word / content) and regulative meaning (form / function). Expressed another way, it could be said that situated meaning includes both of the cultural-historical meanings of the word, as well as the activity that the word is performing in context. This connects to the two dimensions of meaning outlined by Wittgenstein (1971): meaning as object (referring to entity of mind or world); and meaning as act, which in his later writings Wittgenstein saw as constructed by and dependent on context, leading to his formulation of the notion of a 'speech act' (see Danet, 1980, pp.455 - 456).

This understanding of the relation is crucial: it is through negotiation not only of denotative meaning, but of meaning in the larger sense, in the interpsychological sphere that a participant's task definition, and thus situation definition can be changed. Situated meanings thus include the regulations

associated with them, and it is through modification of these situated meanings that the cultural models to which the individual has ascribed, as well as cultural models themselves, can be transformed.

3.5.4 In summary

The section above suggests that, although there are differences in emphasis in the two theories, they are not fundamentally incompatible. Particularly given the recent shift by Gee to a socio-cultural understanding of development, the two appear to complement each other, and together provide a richer account than either theory alone.

From Vygotsky has been drawn the understanding that the social plays a critical role in ontogenesis. It is through mediation, most specifically semiotic mediation, that the social, through interpsychological collaboration, becomes internalised. This internalisation process occurs in what Vygotsky describes as the ZPD: a concept which has been further explored through the work of Wertsch. Additional concepts that aid in clarifying action in the ZPD include situation definition (individual definition of the task), and intersubjectivity (joint construction of meaning).

The concept of socially-defined action-in-context is important to understanding how principles of organisation of the social domain act at the level of the individual and position individuals in context. That this positioning is historical, multiple, non-deterministic and mutually constructed and constructing, is the contribution made to the theoretical field by Lave. Consistent with this understanding, it has been suggested that in a Vygotskian framework, a possible unit of analysis which retains aspects of both the social and the individual domains, and the reflexive relation between them, is Discourse. Gee's work on Discourse, it has been suggested, provides a valuable means of exploring this possibility.

For Gee, meaning is fundamentally related to context and does not exist independently of the choices available in that context. He brings to the picture the notion of cultural models which, as ideological frames, determine the situated meanings which a participant connects with the task-in-context. The inclusion of Gee's work to a Vygotskian framework allows for an account of functioning in the ZPD to be created appropriate to the task in this study (concept acquisition by university students): he allows us to see that that situation definitions arise from and reflect differing cultural models; and that object definitions are tied to particular sets of (not necessarily explicit) situated meanings determined by these cultural models. This provides a sense of what is necessary for description of microgenesis in a ZPD / Discourse account: since learning requires a cultural model shift, evidence of this shift must be sought. Examination of the situation definitions brought to the task by the individual provides an indication of the situated meanings (object definitions and action patterns) that the individual holds. The extent to which the situation definition with regard to the particular task under study becomes, in a genetic account, congruent with that of the 'expert' or insider provides an indication of cultural model shifts, and therefore of development. This understanding provides, in addition, an insight into the cause of failure in many instances: where primary and target Discourse interfere, acquisition conflict arises.

Missing in the account given above is a sense of the relation between the scientific and spontaneous concepts that Vygotsky proposes. In this study, the understanding adopted is that the scientific concept is that which is defined and located within academic Discourse; that concept understandings held by students prior to their acquisition of this discourse are 'spontaneous', that is that they are informed by "scriptlike knowledge that develops spontaneously from everyday experiences" (Panofsky et al, 1990, following Nelson, 1983). Whether 'scientific' versions of the concept under study exist in the students' primary Discourses (which becomes a possibility in a Discourse understanding of development) is not examined.