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### **Introduction**

Whether listening to a talk at a seminar or chatting with someone on a bus, we seem to be involved in an apparently simple activity of converting words of the discourse into representations of meaning. But a close look at the linguistic form used in any text and the resulting meaning constructed from it will underline the fact that language is grossly underdetermined. Listeners (and readers) are not only required to bridge gaps within texts, they also have to choose from among several possible meanings and to draw different types of inferences from the same text.

Speech is supposed to take place within a shared situation context, and therefore spoken language, it is claimed gets embedded, in informal dialogues, between speaker and hearer, providing opportunity for feedback, repair and adjustment between partners (see Schegloff 1987). Thus information does not have to be explicit by linguistic means. If the communicative partner is known to the speaker, background information may in addition to what is said, be presupposed as shared knowledge for comprehending what is mediated linguistically. The simple assumption is that when it comes to written texts where the recipient is not available to initiate repair and seek clarification, as should occur in the co-operative enterprises that conversations are, the linguistic form should be determinate enough to make interpretation easy. But this is far from the reality. Written texts are as indeterminate as spoken texts.

Rastall (1997) notes that readers have to use their intuitions to make connections in order

to successfully understand a text. Readers are constantly called upon to monitor logic, correspondence to fact, relation to observable physical processes, and social attitudes. Intuitions, he explains, are overtly aided by world knowledge, linguistic context and situation of communication. By intuition, he means a non-linguistic, (non-conventional) form of cognition in which two variables are connected and appropriately related to create a specific meaning. These non linguistic judgements are mainly cross cultural and allow inter cultural understanding. They involve universal patterns of reasoning and relations with the real world, which while expressible, are presented as non-linguistic components of texts, which must be accessed for the text to be understood. However some non-linguistic judgements are purely culture specific and allow full understanding only to those who share that culture. Givon (1989) proposes that at the intersection of linguistics and anthropology stands cultural world view, which constitutes the bulk of background knowledge against which inter personal communication takes place. In the literature, background knowledge in discourse has been investigated under the headings "common", "shared", or "mutual" knowledge. In this dissertation, I will follow the tradition of Stalnaker (1974, 1978) and call these background assumptions "Presuppositions" for empirical and theoretical reasons.

My concern in this study is not to develop another theory of presupposition, nor engage in that intractable quest to solve the projection problem for presuppositions. The thrust of this dissertation will be to investigate the role of presuppositions in discourse processing. There is general agreement in the literature on the importance of prior knowledge in text comprehension. The whole enterprise of discourse analysis is to determine the speaker's assumptions about what the hearer knows or does not know. The theme/rheme, (Halliday 1967), old/new distinctions (Prince 1981) are well known and they are supposed to map onto the background/focus (Chafe 1996) distinction, which has become the preoccupation of discourse psychologists. While this study, like those carried out by discourse psychologists, is meant to assess the role of backgrounded knowledge in discourse understanding, it particularly attempts to investigate the effects of cultural presuppositions in the comprehension of literary texts.

My interest in the study of non-linguistic components of literary discourse developed with my experience as a teacher of English literature for many years, in Ghanaian secondary schools and at the University of Cape Coast, where I am a faculty member of the Department of English. I have on several occasions shared the frustration of teachers whose students cannot make progress in the study of literature. Having had their own formation through the Leavesian tradition, the teachers find it difficult helping their students handle the indeterminacy they have deal with in literature. Interpretation of literature cannot be done ahistorically. There is a deposit of meaning, crucial to the understanding of the literary text that is non-logical, non-linguistic and non-conventional. This meaning comes implicit in the texts, presupposed as background information, which should be accessed before adequate comprehension could be achieved. It is this recognition that has stirred my interest in the study of the role of presuppositions in the processing of literary texts.

### **Objectives**

My objectives in pursuing this study are therefore both theoretical and pedagogical. This study is primarily to investigate how presuppositions structure and focus discourse to determine how texts are to be understood. Also, as Thor May (1994) has pointed out, the term 'presupposition' identifies a link between social reality and linguistic forms. If presuppositions are a reflection of social reality, then it may be assumed that the presuppositions accessible to readers will differ from community to community. This study is to find out if differences in cultural background can result in significantly different readings of a text. Again, this study is supposed to be part of the empirical study of literature and to contribute to the investigation of how literature is understood. Finally, the dissertation should result in giving students greater access to the worlds created by literary discourse

### **Presupposition Theory and The Nature of Meaning**

Presupposition research has had a long and chequered history. It was first of all the

preoccupation of philosophers, and then it caught the fancy of linguists and now it is being studied by computational linguists and AI workers. While the philosophers' concern with the notion had to do with issues of truth and reference, the linguists found in it a way of resolving issues of lexical and syntactic meaning. Frege's (1892/1952) puzzlement over some referring expressions which do not refer, is the basis of the philosophical theory of presupposition. Frege noted that

If anything is asserted there is always an obvious presupposition that the simple or compound proper names used have a reference... If anyone therefore asserts that 'Kepler died of misery' there is the presupposition that the name Kepler designates something.

In Frege's formulation therefore, proper names and definite descriptions presupposed the existence of their referents. This was the reason why Frege was dismayed that referring expressions in sentences like

(1) The king of France is wise

could be meaningful and yet lacked proper referents. His solution was to introduce the distinction between 'Sense' and 'Reference', and claim that even if sentences lacked referents and thus failed to have truth values, they still had sense and thus retained their meanings.

Russell's (1905) solution to Frege's problem was to propose his well-known *Theory of Descriptions*, which expounded his denotationist theory of meaning. He thought that even though definite descriptions like 'so and so' might occur in natural language like objects, logically they are not objects, but correspond to a conjunction of propositions. In the case of the sentence 'The king of France is wise', Russell proposed an analysis that yielded the following expansion:

- (2) (a) There is a king of France;  
(b) There is no more than one king of France;  
(c) There is nothing which is the king of France and is not wise.

This formulation allowed Russell to treat significant sentences in which descriptive phrases occur in such a manner as not to imply the existence or subsistence of some subject referred to in the phrase. Unlike Frege, Russell did not think a sentence like 'The king of France is wise' lacked truth value, but that it could be handled by the classical

logic of bivalence. By virtue of Russell's expansion, since the assertion 'There is a king of France' which is of primary occurrence is false, the proposition, 'The king of France is wise' is false. According to the *Theory of Descriptions* therefore, expressions which appear to refer, do not refer. Instead they have deep logical structures which avoid the need for reference entirely. Russell thereby ignored the role of presuppositions in the construction of meaning. It is against this position that Strawson directs his rhetoric,

Strawson's attack on the *Theory of Descriptions* is really an attack on Russell's view on proper names and their functions as referring expressions (see Hochberg 1970). The dispute is over referents which do not refer. Problems which arise have to do with the truth or falsity of sentences and the validity of inferences involving sentences containing non-designating names. Russell's analysis leads to the two-fold claim that all indicative sentences are either true or false, and that atomic sentences of the form ' $\alpha\upsilon$ ' are false where ' $\alpha$ ' stands for a name that does not name, while negations of such sentences are true. Strawson denies that all indicative sentences are either true or false and maintains that a sentence is true only if its negation is false. Strawson therefore gives support to Frege's idea that some sentences may lack truth values.

Strawson's opposition to the *Theory of Descriptions*, on the wider berth, was an opposition to Russell's denotationist theory of meaning. Strawson proposed certain distinctions, which may be seen to underlie his philosophy of language. Strawson (1950; 167) summarises his rejection of Russell's theory of descriptions in one sentence: "There is logically no proper names and there are no descriptions". In Strawson's presentation sentences like 'The king of France is wise' do not make existential assertions at all. Even if a speaker were seriously using such a sentence to refer they will not be asserting that such a person existed. They would, in a special sense of the word 'imply' that that such a person existed, they would presuppose that there was a king of France. Strawson thereby made his important distinction between 'presupposition' and 'assertion'. Strawson (1964) held that an empirically assertive utterance is made with informative intention, which is not the case with a presupposing utterance. In the case of presuppositions there is

usually, at least very often, a presumption (on the part of the speaker) of knowledge (in possession of audience) of empirical facts relevant to that particular point to be imparted in the utterance. Therefore in uttering the sentence, 'The king of France is wise', the speaker presupposes that the speaker is aware of the existence of a present king of France. Strawson held a different view of 'assertion' from Russell. He thought Russell was wrong when he claimed that in saying that the king of France is wise one is asserting both that there is a king of France and that he is wise. Strawson claimed that such a speaker would be asserting only the wiseness of the king; with regards to his existence, it is presupposed to be in the knowledge of the audience. Strawson's argument was that there is a special relationship between the sentence 'The king of France is wise' and 'There is a present king of France'. He called this relation "Presupposition" and held that it was a species of inference distinct from logical implication or entailment. Strawson defined the relation as:

*A statement 'A' presupposes a statement 'B' if 'B' is the precondition/or the truth of 'A'.*

In all this, Strawson was concerned with the nature of meaning. He gives a definition of meaning that is in clear opposition to Russell's denotationist theory of meaning.

According to Strawson (1952)

To give the meaning of an expression is to give the general directions for its use to refer or mention particular objects or persons. To talk of the meaning of an expression or sentence is not to talk about its use in a particular occasion but about rules, habits, conventions governing its correct use in all occasions to assert or refer.

He urged that we cannot talk of a sentence being true or false, but its being used to make a true or false assertion. Again we cannot talk of a sentence being about a particular person, only of the use of a sentence to talk about a particular person. He insisted that truth and falsity are the functions of the use of sentences. Strawson draws distinctions between a sentence, an utterance, and a use of a sentence. With such attention given to what he called 'sentence types' and 'sentence tokens,' Strawson made the claim that a sentence could be meaningful even if it contained referring expressions which failed to refer at a particular occasion of utterance. What Strawson did therefore amounted to proposing a theory of meaning that identified the meaning of expressions with their use. It is for this reason that Sellars (1970) pointed out that Strawson was making fresh first

hand observations about a living language which had been cultivated by Moore and by the latter Wittgenstein. Hochberg (1970) observed that Strawson's notion of presupposition was much closer to and supported by our ordinary use of language than Russell's, but Strawson achieved this fidelity by forfeiting truth conditional account of meaning.

Even more radical in the logic of natural language is Strawson's introduction of what has become known in the literature as 'Truth Value Gaps'. On Strawson's account it is false to say 'The king of France is wise' if only he is not wise; if there is no such man, then it is neither true nor false to say that 'The king of France is wise'. Conversely, 'The king of France is not wise' can only be true if there is such a man; if there is no such man, then like its positive congener, it is neither true or false. Strawson insisted that the point of controversy concerned an utterance suffering from a radical failure of reference; whether we have one special case of falsehood or that we have a statement that suffers from a deficiency so radical as to deprive it from the possibility of being either true or false. Strawson claimed that we have here something that is neither true or false, a situation which Quine had described as a 'truth value gap'. According to Strawson, there is here a contrast with a straight forward falsehood: it is 'void' for lack of reference.

Beaver (1996) has noted that on the Strawsonian account, presuppositions are constraints on the range of worlds/models against which we are able to evaluate the truth or falsity of predications and other semantic operations, or against which this evaluation is legitimate. If the constraints are not met, semantic undefinedness or illegitimacy of truth value results. In this formulation, any sentence may take one of three semantic values typically thought of as 'true', 'false' and 'undefined'. This is what has created the unique presuppositional logic, characterised by trivalence.

I will at this moment focus on some linguists whose explications on the notion of presupposition is of interest to me. Lakoff(1971) attempted to create a grammar which will generate sentence and presupposition pairs with grammaticality not relative to context or speaker, but relative to a particular presupposition, which like the

sentence itself, is a constituent of the competence model. The Kiparskys (1970) claimed that certain elements of factive verbs like 'realise', 'regret', 'be angry', presuppose the truth of their complements. Keenan (1971) provided a wide range of examples including factive verbs, definite names, cleft sentences, non restrictive relatives, certain aspectuals, iteratives and presuppositional quantifiers.

These linguists saw in presuppositional theory an opportunity to bring logical models in line with natural language semantics. It occurred to them that there was a part of the meaning of human language, deposited in the lexicon and in the syntax, which was presupposed. They therefore characterised presupposition as a binary relation between two sentences in a language. This relation is explicated in the semantic notion of entailment.

The empirical and methodological problems this semantic notion of presupposition faces are well documented (e.g. Kempson 1976; Gazdar 1979; Levinson 1983). Liability to denial, impossibility to maintain modus tollens in presuppositional logic, and the projection problem for presuppositions, are those problems that have attracted the greatest amount of attention. It is because of those problems that some researchers, (e.g. Gazdar 1979; Stalnaker 1974, 1978, Karttunen 1973, 1974; Karttunen and Peters 1979) opted for a pragmatic account of presupposition. I will not be detained here by the details of the debate on the problems with the semantic notion of presupposition. What is of interest to me are the insights about the nature of language and the construction of meaning that have been uncovered as a result of the debates on presupposition.

The non-viability of any truth conditional account of presupposition underlines the non-monotonic nature of human language and of the construction of meaning in general. The semantic-pragmatic debate on presupposition was really a debate over semantic and pragmatic accounts of human language. Kempson (1975) excludes speaker relative concepts from semantic theory because that will, in her view, automatically result in semantic theory losing its predictive power. Katz and Langendoen (1976) recognised that the debate between

A contextual and a semantic account of presupposition is part of the larger issue as whether adequate grammar of natural language is a formal system,

In recent times the debate has raged between Noel Burton-Roberts and Robyn Carston.

According to B-R (1997) the semantic pragmatic debate compels a choice between,

(a) abandoning the enterprise that the logic of natural language presents, and

(b) developing a non-logical, non-truth conditional pragmatic account of human language.

According to B-R (a) is a better choice since (b) will conspicuously lack empirical and theoretical motivation. Carston (1998, 1999) takes issue with B-R because she recognises in the work of B-R a conception of pragmatics as a thin icing on the substantial semantic cake. She proposes rather that in the construction of meaning, pragmatic inference is fundamental (the cake) while semantic decoding is a helpful addition, as an ostensive stimulus.

Beaver (1996) notes that one of the main insights in the last few decades of the study of presupposition is that the phenomenon is heavily influenced by the dynamics of the interpretation process. It is this that motivated theorists of the pragmatic notion to shift from the idea of presupposition as a binary relation linking two sentences to an idea of presupposition as a ternary relation linking two sentences and a context of evaluation. The context is understood to be created partly linguistically as a result of previous utterances.

Central to presupposition theory is what is referred to as 'the projection problem for presuppositions'. Langendoen and Savin's (1971) observation of the projection of presuppositions provides the claim that there is a presuppositional component to meaning. Beaver (1996) argues that the projection problem fits naturally into the larger problem of how language is analysed. It is the task of stating and explaining the presuppositions of complex sentences in terms of the presuppositions of their parts. The larger problem, which strictly contains the presuppositional problem could be 'the projection problem for meanings', i.e. the problem of finding the meanings of complex sentences in terms of their parts, conventionally referred to as 'compositionality'.

Latest development in presuppositional research is a movement away from the narrow semantic-pragmatic dichotomy, to the development of hybrid models, which explore presupposition theory to establish an interface between semantics and pragmatics. There is an interesting combination of Gricean elements with Montague grammar in Karttunen and Peter's (1979) solution to the projection problem. Gazdar (1979) fuses inferences and implicatures with Hintikka's logic of knowledge and belief. Heim (1983) combines her file change semantics with contextual change potentials to develop her solution to the projection problem.

Van der Sandt's (1992) solution to the projection problem is of great interest here. Treating presuppositions as a species of anaphoric expressions, van der Sandt combines the strictly truth conditional semantics of Discourse Representation Theory (DRT) with contextual information to resolve presuppositional reference. Agreeing with van der Sandt that presuppositions share important characteristics with anaphora, Zeevat (1992) goes further to construe presuppositions in terms of update semantics.

### **Presupposition, Background Knowledge and Discourse Interpretation**

Strawson's theory of presupposition gave recognition to discourse participants' knowledge, beliefs and assumptions. His distinction between presupposition and assertion is a distinction of significance. In the literature, Strawson's distinction is considered to map fairly directly the distinction between old and new information, in that, what is asserted in an utterance is being treated as though it were new to the hearer, and what is presupposed is being treated as though it were familiar, part of common ground. Abbot (2000) notes that there is a widespread view that the concept of presupposition can be assimilated into the pragmatic concept of shared /mutual knowledge or common ground, and that this view began with Stalnaker's (1974) paper "Pragmatic Presuppositions". In that paper Stalnaker used the same formulation which Lewis (1969) used to define the common ground/mutual knowledge construct. Stalnaker claimed that

A presupposition is a pragmatic presupposition of a speaker in a given context just in case that the speaker assumes or believes that P and assumes and recognises his addressee

recognises that the speaker is making is making those assumptions or those beliefs.

In the 1978 paper Stalnaker went ahead to claim that presuppositions are what is taken by the speaker to be common ground of the participants in a conversation, what is treated as their common or mutual knowledge. Lambrecht (1994) is explicit in his identification of old information with presupposition. He urges that

Let's refer to 'old information' contained in or evoked by a sentence as pragmatic presupposition (or simply presupposition)... Old information is the sum of the 'knowledge' evoked in the sentence in which a speaker assumes to be already available in the hearer's mind at the time of utterance. The old is presupposed...while the new information is added to that knowledge by the utterance itself.

In spite of the strong opinion held by researchers about this, there is theoretical and empirical evidence to claim that speakers are not constrained to presuppose only information they believe to be available to the hearer. Lewis's (1979) theory of Accommodation is a recognition that speakers regularly put new information in presuppositional form. Stalnaker (1974) himself, recognised that speakers may act as if certain propositions are in common ground when they know such propositions are not in common ground. Delin (1995) and Abbot (2000) examine empirical evidence which confirm that presuppositions may contain new information and therefore may be distinguished from the common ground/mutual knowledge constructs. Speakers may presuppose information whether it is in common ground or not. They may not be constrained to check the state of knowledge of the hearer, and may put some information in the background, which is in fact not available to the audience. Presupposition then has a psychological status different from common ground or mutual knowledge. The important thing about presupposition is that it represents information that is backgrounded and taken for granted.

In this study, I will like to assume that presupposition, accounted for by logicians and by linguists at the local level as sentential or lexical property, may even more profitably be accounted for at the global level as a discourse phenomenon. While not regarding the logical and linguistic views of presupposition as totally irrelevant, it seems to me that a more common sense view of the notion of presuppositions as non-assertions that provide the framework for the understanding of discourse, will make the subject more

relevant to discourse interpretation. Presuppositions conceived in this way may play a crucial role in constructing the background-foreground structure of texts necessary for the comprehension of texts. Eco (1979) believed that in discourse we always find a textual perspective which obliges us to see events, characters, and concepts from a given point of view. He referred to this phenomenon as textual focalisation. Eco argued that in natural discourse some information is set in the background, which becomes structured in some information set, and other information, which is in focus, is foregrounded. Discourse in this light becomes a multi-stratified system and its hierarchical organisation depends strictly on functional considerations, that is a device for distributing information. This differentiation is what Murray (1995) calls 'Partitioning', which he identifies as a process that divides the world into what is explicitly stated and what is inferred. The process constructs a stable background held invariant and constant, against which action occurs. It is in this light that a contingent figure stands out of necessary ground to allow expressive meaning to manifest itself in practical space. Fauconnier (2000) has indicated that the study and modelling of cognition has revealed that language is at the tip of the cognitive iceberg, and that whenever we engage in any language activity we draw unconsciously on a vast cognitive resource, call up innumerable models and frames, set up multiple connections, co-ordinate large arrays of information, and engage in mappings and transfers and elaborations. This is what he refers to as backstage cognition. Fauconnier argues that generalisations about presupposition should lead to the understanding of general cognition. He claims that if we try to spell out backstage cognition in detail we are struck by the brevity of linguistic forms and the corresponding wealth of meaning construction. Language forms contain very little information per se, but they latch on to pre-existing networks in the subject's brain and trigger sequential and parallel activations. The interest in presupposition is that it provides the frame for a wealth of knowledge, assumptions beliefs, and information to be assumed so that discourse can take upon vast amounts of meaning over and above its linguistic content. If the presupposed information is shared, then the discourse is accessible to the hearer, otherwise it becomes puzzling or even incomprehensible. For this reason the reader's knowledge is considered an important factor in controlling inferences (see Werth 1999). Emmot (1997) affirms that the reader always has to make implicit connectives,

fill in gaps, draw inferences, and test hunches- And to do this means she has to draw on tacit knowledge of the world in general and of literary conventions in particular. Hobbs (1990) is emphatic that interpretation is impossible in the absence of a belief system and the primary focus of discourse interpretation is how this belief system is used in interpretation- It is assumed in this dissertation that this belief system required for the interpretation of discourse is not asserted by the explicit linguistic structure of the text, but is presupposed in the form of backgrounded information, which should be recovered for the reader to make a full interpretation of the text.

I will now at this point turn my attention to certain aspects of the methodology I will use to undertake the empirical study of presuppositions.

## **Methodology**

Methodologically, this study is going to form part of the empirical research into literature. As Beaugrande (1989) has noted, some researchers contend that the perception and comprehension of literature are too complex and poorly structured, too subjective and idiosyncratic, too sensitive to details of literary genre and convention to be amenable to 'empirical' methodology. Empirical study in literature has still not developed a dominant paradigm prescribing research procedures. In a situation like this we may expect appeal being made to antecedent disciplines with available paradigms. The empirical study of literature will therefore be inter-disciplinary.

Beaugrande urges that any purist position asserting the total independence of literature would be out of question because by implication all empirical methods developed for non literary language will be ruled out. As W.J. Harker (1999) has observed, the development of cognitive psychology in the latter half of the twentieth century has produced numerous models of text processing and the model that has emerged through the work of van Dijk and Kintsch (e.g. van Dijk & Kintsch 1988; Kintsch 1998) not only accommodates the findings of cognitive psychologists who have explored text processing but continues to determine the kind of questions psychologists ask. Discourse

psychologists working within the framework of constructionism have been influenced immensely by the work of Van Dijk and Kintsch.

Discourse psychologists have attempted to tap the processes that occur during reading. Graesser, Mills and Zwaan (1997) have noted that experimenters can test psychological theories of human cognition and behaviour by systematically creating story worlds, controlling several variables and observing the comprehender's response. Researchers have investigated a broad array of written texts. At one extreme, they have investigated naturalistic texts. In the narrative genre, the texts have ranged from simple well-formed folktales to literary short stories. These investigations of naturalistic texts uncover representative sets of discourse features, patterns, devices, meanings and comprehension processes. The advantage of ecological validity that comes with the use of naturalistic text also brings along the loss of precise control over the text's stimulus properties. Consequently, at the other extreme end, experimenters carefully craft texts to manipulate independent variables, control extraneous variables and satisfy counter balancing constraints. These textoids however can be meandering, choppy, pointless and uninteresting.

In this study I will resist the temptation of ease of control in the use of textoids, and make use of naturalistic materials. I believe that in a study like the one I am pursuing, ecological validity should not be sacrificed for any reason.

Most of the studies carried out by discourse psychologists have concentrated on the processes that occur during the on-line reading of texts. Even though like them I am trying to account for readers' mental models, I do not have the motivation to restrict myself to on-line processing. On-line processing has generally been considered in the literature to be the measure of comprehension. The entire debate between the minimalists (e.g. McKoon & Ratcliff(1992) and the globalists (e.g. Graesser et al 1994) has been to ascertain the kind of inferences that readers make on-line. This preoccupation follows Schneider and Shiffrin's (1977) distinction between automatic and strategic processes. Accordingly automatic processes are considered the effects of comprehension in

the natural reading setting; strategic processes are supposed to occur only when comprehenders are put under certain conditions, like being constrained to make some inferences in response to an experimenter's questions. In this study I will not be worried by the automatic-strategic distinction. The issue at stake here is how to model comprehenders' background knowledge. Whether the inference they make comes automatically or strategically is not a question here. The point is to find out whether they have the kind of prior knowledge required for the full understanding of the text. In addition, Garnham (1992) has observed that restriction to on-line processes is not an essential component of the mental model theory. Singer, Graesser and Trabasso (1997) have expressed doubts as to whether the automatic-strategic distinction applies to discourse processing. Therefore I will make use of both concurrent and retrospective procedures to model, in as much detail as possible, the kind of knowledge readers bring to bear upon the texts they process.

Clapham (1997) has witnessed to the difficulty on accessing background knowledge. It is difficult, even impossible, to gain a complete knowledge of a person's background knowledge. Since different techniques are known to affect results, it is sensible, where possible, to collect multiple measures from subjects involved in the reading comprehension study. Bernhardt (1991) recommends four techniques: recall protocols, grammatical achievement tests, response writing and a retrospective interview. In this study I intend to collect verbal protocols and to do a retrospective interview. I will in addition to these carry out observations in the classroom situation to seek confirmation of whatever findings I will make in the quantitative study.

## **Subjects**

My subjects will be first year Scottish undergraduate students in the University of Edinburgh and the University of Cape Coast, Ghana. Ghanaian students are non-native speakers of English while the Edinburgh students are native speakers of English. Studies on the disparities between native and non-native comprehension of texts have concentrated on linguistic differences between the subjects. It has been reported in the literature (e.g. McLeod & McLaughlin 1984) that advanced ESL readers do not interact with texts the way native speakers do. Native speakers are reported to make insertions, deletions and substitutions. McLeod & McLaughlin for instance came to the conclusion that their advanced ESL students have not come to the stage where they can automatically construct the text. The idea is that non-native speakers process differently from native speakers because of deficient competence on the part of the ESL students. My purpose here is different. I am concerned not with the linguistic variable but with differences in cultural knowledge.

I have chosen first year undergraduate students to control the variable of differential linguistic competence. Undergraduate students in Ghana have been taught in English since primary four, and they have come through the various lectal stages to what K.E.Sey (1973) refers to as co-ordinate bilinguals. They have therefore passed through what researchers like Clarke (1980) propose to be the threshold level below which non-native speakers are unable to use of their background knowledge. As found to be too familiar with the foreign culture will have data from them excluded from the analysis.

## **Materials**

For my research materials I will use a story from Muriel Spark's *Collected Stories* and a story from Ama Atta Aidoo's collection. *The Girl Who Can*. Researchers in the empirical study of literature (e.g. Janos Laszlo 1999) have found the short stories the most suitable genre for the study of literary understanding. This choice is also in tune

with the practice of discourse psychologists like Graesser and his colleagues. Graesser et al (1994) claim that narrative texts rather than any other discourse genre have correspondence to everyday experience in contextually conditioned situations. They point out that both narratives and everyday experiences involve people performing actions to suit goals, the occurrence of obstacles to goals and reactions to events. Knowledge about these actions, events and emotions are deeply embedded in personal and social experience, because it is adaptive to understanding events and actions in our social and physical environment. These researchers insist that the inference mechanism and world knowledge structures are tapped during comprehension of narratives. There is therefore reason to believe that such interpretive mechanisms are in use during the reading of narratives. Again Kenneth J. Gergen (2000) has observed that narration is chiefly a discourse mode for generating intelligibility; it shares with other linguistic formations a lodgement within particular socio-cultural circumstances.

The choice of a Scottish text and a Ghanaian text is to turn the same group of readers once into a high knowledge group and then to a low knowledge group. The Edinburgh students will be expected to be experts when processing the Spark text and are expected to be novices while processing the Aidoo text. The situation should be the converse with the Ghanaian students.

Noordman and Vonk (1992) investigated inferences that varied from being highly familiar with readers, to inferences that concerned unknown situations. According to far as linguistic constraints are concerned the Ghanaian students should be comparable to their Edinburgh counterparts, and should be able to make maximum use of linguistic cues in the text.

Again I will like to assume that these 18 year olds are sufficiently inducted into their respective cultures through education and other forms of socialization and can be considered as representatives of the epistemic structures that constitute their respective cultures. I am assuming here that the two groups will bring different knowledge forms to bear on the texts they read.

Clapham (1997) following Bernhardt, (1991) has expressed concern about the assumptions researchers make about the knowledge of their subjects and about how fast they are inclined to assume that all members of the same group have the same background knowledge. Bernhardt has insisted that the fact that people come from the same ethnic background does not mean that they have the same background knowledge. She argues that assuming knowledge or lack of knowledge on the basis of ethnic heritage is rather a naive view of knowledge.

Shore Bradd (1996) has warned that our conception of culture as a master narrative has given way to a stress on competing voices or discourses. While these competing frames, epistemies and discourses profoundly relativise our knowledge frames, technology and economic trends have tended to homogenise knowledge. Such centripetal and centrifugal forces at play in every community will make it difficult to identify a group as typically Ghanaian or typically Scottish. Accessing the cultural presuppositions of populations based on their nationalities as I intend to do is therefore a tricky enterprise and should be approached with caution. There must therefore be a careful check on the background of the students. After the experiment, students will be required to complete a debriefing questionnaire that will assess their familiarity with the cultural knowledge of interest. Students found to be at the periphery of the home cultures will be considered outliers and data from them will not count in the study. Also, students

## **Procedure**

Graesser, Mills and Zwaan (1997) have noted that the methods for studying text comprehension are diverse. Some researchers have employed eye movement techniques, collected reading times, or used sentence completion tasks. When the objective is to study meaning representation the procedure is to collect recall protocols, summary protocols, answers to questions and various judgements on test questions. I intend using verbal protocols to obtain the data needed for the quantitative study. Graesser et al (1994) have noted that it takes considerable effort to collect protocols and analyse them

and so researchers have resisted the temptation to pursue this methodology. However it is believed that the protocols give good indication of the kind of knowledge readers bring to bear on the texts they process. Experimenters collect verbal protocols from readers to access the kind of inferences they make during comprehension. These protocols are collected while the readers comprehend the text sentence by sentence or clause by clause. These protocols are supposed to reveal knowledge-based inferences. Graesser et al (1997) have noted that verbal protocols are a rich source of data for discovering possible comprehension strategies and for testing detailed claims about representations that enter the reader's consciousness. Researchers have demonstrated that think aloud protocols are somewhat valid reflections of normal comprehension processes (Ericson & Simon 1993; Trabasso and Magliano 1996; Zwaan & Brown 1996). Yukie Horiba (1995) notes that the verbal reports are taken to be reflections of the allocations of cognitive resources of conscious attention during reading and used to analyse various processes that are occurring during reading. However verbal protocols are not known to tap unconscious comprehension processes (Ericson & Simon 1980; Beaugrande 1989; Graesser et al 1997). It is normally believed that think aloud protocols (concurrent introspection) reveal the content of information available to the reader's awareness of the short term working memory from which one can infer the comprehension process.

I intend using question and answer procedures instead of a straight forward think aloud procedure. In this direction I will follow the procedures adopted by Graesser and dark (1984). In this design the subjects' protocols will only be guided through the use of questions like, 'why', 'how', 'what happens next'. Suh and Trabasso (1993) have cautioned that what is revealed should not be constrained or directed by the task instructions since the data from the use of questions or instructions that encourage students to make specific inferences may bias subjects to make predicted inferences which they will otherwise not make. In this study readers will be free to communicate whatever comes to their mind. Graesser and dark (1984) have argued that answers to why questions about events and actions are most likely to be generated on-line. Long, Golding & Graesser (1992) argue that this claim is consistent with the theory of comprehension proposed by Schank (1986) in which he argues that comprehension is

explanation based, that is, actions and events are understood only to the extent that readers can provide explanations for what has occurred. Explanations are obtained by searching for knowledge structures that place an event or action in an appropriate context. Moreover Schank argues that the search for explanation is question-driven. In order to explain action people pose themselves questions and propose answers to those questions. The questions that will be used in this design therefore are those readers are likely to pose to themselves anyway. In this study the minimal instructions that will be given to readers is not for the fear that they will make inferences that they will otherwise not make. The objective is to allow them to communicate whatever context they can think about and access. Whatever information becomes accessible to them even after the prompt of a question is significant. If they do not have any such information, no question, however specific may elicit it in their protocols. The protocols will be recorded and transcribed for analysis

## **Design**

Readers will be seated in front of computer terminals with texts of the short stories presented to them paragraph by paragraph. Reading will be self-paced. At the end of each paragraph will occur the questions: 'why', 'how', 'what happens next', relating to the plot of the story thus far. Readers will be encouraged to communicate their responses to these questions and any others they can think of. Following Ericson & Simon's (1980, 1984) recommendation, students will be allowed to have a practice of the think aloud technique with one short story. Subjects will be told not to explain their behaviour but only communicate their responses to the questions and other thoughts they have in relation to their understanding of the text in context of the stories, no matter how obvious it will be for them.

When readers have fully communicated their responses and thoughts about a paragraph they will then press the space bar for the next paragraph to appear. Due to the fragile nature of protocols, there will be a retrospective interview of subjects after the experiment.

## **The Data**

The independent variables of this study are the Ghanaian and the Edinburgh students, and the experimental stories they will read from the Spark and the Aidoo texts. The dependent variables will be their understanding of the stories, which may give an idea of them the mental models they might have constructed in processing the stories, while the experts made on-line inferences, the non-experts did not make on-line inferences. Their results show that elaborative inferences are not made when they are not part of the reader's knowledge. The representation of novices, rather than the representation of experts is characterised as propositional representation. The novices' representations are related to the textual signals and therefore are closer to the surface form of the text than the representation of experts. This, according to Noordman and Vonk is to be expected because the novices do not have the relevant knowledge. The representation of experts is better characterised as mental models.

I therefore expect the Edinburgh students to make elaborative inferences of the Spark text but construct a representation that is close to the surface structure of the Aidoo text. The Ghanaian students should do the reverse. On the hand it is possible for either group of students, reading their respective foreign texts to make elaborative inferences different from those that members of the author's cultural background will normally make.

The challenge at this stage will be to quantify the comprehension of readers so that their background knowledge may be profitably compared. According to the constructionist theory, which provides the framework for this study, the understanding of readers are analogic representations of the perceptual embodied system (Zwaan 1999). The problem here is that statistical measures of quantification are amenable only to amodal symbolic systems based on conventional representation system. Alberto Greco (1998) has noted that from the psychological point of view analogical representations reproduce something in an analog way, i.e. similar in some aspects to what is being produced. Amodal or digital representations, on the other hand are more abstract, more conventional, like human language. But as Greco says, an analog domain must be digitised in order to

be read. The analog is undivided and ambiguous until read by means of a digital scale imposed on it. Zwaan (1999) agrees that amodal propositional framework may not be incomparable with perceptual embodiment framework of analogic representation. Analyses based on analogic framework may yield the same set of constituents as analyses based on amodal propositional framework. In fact, Kintsch's situational model is supposed to be constituted of propositions.

Therefore the dependent variables in this study will be taken to be the number of propositions and relationships between propositions constructed in the readers' protocols. As was done by Graesser et al (1994) a constructive history chart will be prepared for each of the inferences that will be elicited by the Q-A protocols. The chart will identify explicitly which sentences elicited particular inferences and that proportion of subjects who generated the inferences. It should then be possible to determine whether the inferences were constructed from the textbase or from extra-textual prior knowledge representing the presuppositions that have been accessible to the readers. It is from this that the background knowledge of the two populations may constructed and compared.

## **Conclusion**

This study attempts to move away from what has been the central pre-occupation of presupposition scholarship: the projection problem. The interest here is much closer to the procedural problems of presupposition study- its importance in the understanding of natural discourse. My data will be from prose literature and I intend using the methodology developed by discourse psychologists. That is why this study is going to be interdisciplinary. It is designed to access insights the studies of the phenomenology of meaning construction, psychological processing of language, the pragmatics of literary discourse and the role of cultural knowledge in discourse understanding. I intend that this study will help teachers to make literary texts more accessible to their students.

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