

DIFFERENTIAL PRAGMATIC LANGUAGE LOSS FOLLOWING CLOSED HEAD INJURY

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HIGHER DEGREE THESIS (PhD)

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had satisfied requirements for admission to this degree. This thesis represents
a major part of the prescribed program of study.

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ABSTRACT

The following series of studies was motivated by a need to explore and delineate non-aphasic communication disorders following severe closed head injury (CHI). In a review of these disorders it was emphasised that any exploration of language function needed to take into account two major factors: (1) pragmatic aspects of language use and (2) the neuropsychological sequelae of CHI and in particular the impact of frontal lobe impairment. The general aims of this research were thus as follows: to delineate communication disorders after CHI; to develop methods of assessment based on pragmatic language literature; to take into account neurological sequelae, in particular frontal lobe processes and finally to specify the role of the frontal lobes in language.

Two CHI subjects with predominantly frontal lobe impairments were the focus of six studies, three examining expressive language skills and three examining receptive language. Twelve suitably matched control subjects also took part. The first study examined the subjects' ability to describe a novel procedure to a third person.

Judgements made by blind raters indicated that the CHI subjects were differentially disorganised and ineffective in their productions. Subsequent linguistic and logical analyses demonstrated that both subjects had poor monitoring and self correction of their discourse that resulted in a lack of consideration for the listener. One subject's production was repetitious and perseverative while the other subject had problems with impulse control.

The subsequent two studies investigated aspects of politeness behaviour by examining the subjects' ability to make polite requests. While the two CHI subjects were normal in their ability to produce conventional straightforward polite requests, they were quite

impaired in their capacity to produce non-conventional requests and off-record requests (hints). Unlike their non-brain-damaged counterparts they were unable to exploit conceptual aspects of the context when formulating their request. When making a hint the most common strategy used by the controls was to refer to some logically prior antecedent leading up to the incentive to make the request. Neither CHI subject did this as often as controls and on the occasions that they did, were then unable to refrain from continuing the line of argument until they had stated their intention baldly.

The final three studies examined receptive language. In the first of these studies the subjects were required to anticipate a word on the basis of the preceding context. The two CHI subjects performed normally. In the second study they were asked to identify correct and incorrect endings to indirect speech acts. While both were both able to appreciate the appropriate non-literal ending, one CHI subject frequently chose the literal ending as appropriate as well. This appeared to reflect his known cognitive rigidity. The relative success of the two subjects to appreciate non-literal meaning was considered to be due to the conventional, almost transparent nature of the requests used.

The last study extended the observations of the previous ones by examining the CHI subjects' ability to comprehend non-conventional indirect speech acts in the form of sarcasm. The subjects were presented with pairs of sentences. The first sentence acted as the context and the second sentence was a response that was either literally consistent with the meaning of the first or that literally conflicted with it, in which case it could only be understood as a sarcastic retort. The CHI subjects performed normally on the literally consistent sentence pairs but were unable to interpret the literally inconsistent i.e. failed to perceive irony.

The results of the six studies were reviewed and used to describe a model of frontal lobe function in language. According to this model frontal lobe integrity is required for cerebral activation which in turn is necessary to all language processes. It was argued that one subject suffered under-activation while the other suffered over-activation and that this lead to characteristic deficits at many levels. Frontal lobe processes were also held to be involved in the utilisation of conceptual aspects of the context in formulating verbal utterances and in understanding conversational implicatures. This is frequently necessary for successful social interaction. Finally it was surmised that the frontal lobes play an important role in the self evaluation and regulation of verbal output.

Areas of future research to extend these findings were specified and the discussion concluded with an appraisal of the usefulness of the various methods devised in both assessment and remediation of communication disorders after closed head injury.

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