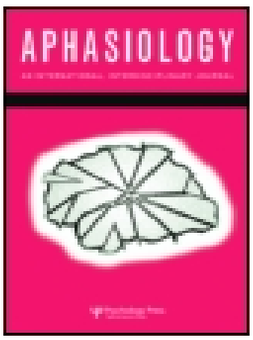

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Giving information: The importance of context on communicative opportunity for people with traumatic brain injury

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Abstract

This study is one of a series investigating everyday communication skills of people with traumatic brain injury (TBI) using communication partners other than speech pathologists or research assistants. The first of these studies examined telephone conversations where subjects were asked to request specific information during telephone interactions with a range of communication partners. Results indicated that people with TBI were disadvantaged in some of their interactions on the telephone with community agencies and family members during information-seeking interactions, when compared with matched controls. TBI subjects were given less information than matched controls and were also asked for less information. For example, therapists never asked TBI subjects questions to which they didn't already know the answer. This was in contrast to the control interactions, where subjects were asked for novel information.

In the current study seven subjects with TBI were compared with seven matched control subjects across two conditions: a community education information-giving session with two schoolboys, and an information-requesting interaction with the researcher. Exchange structure analysis showed that when placed in an information-giving role, TBI subjects gave similar amounts of information as control subjects. TBI subjects used joke telling as an information-giving device, serving a number of communicative functions, which are discussed. There was no significant difference in the amount of information requested or given by TBI and control subjects in the researcher condition; however there were significant qualitative differences in the nature of the requesting. It has been previously emphasized that people with TBI should be evaluated with a number of interlocutors as part of a thorough communication needs assessment (Hartley 1995). Merely varying the interlocutor is not sufficient, however, as the goal of the interaction and the primary speaking roles of participants are also important, and will determine the language choices available to both speakers. Exchange structure analysis is a useful way to delineate these language choices, as it is interpreted in light of the genre of the interaction and the tenor and communicative purpose of the participants.

Introduction

Communication deficits following traumatic brain injury (TBI) have been described in terms of discourse deficits including impaired cohesion (Mentis and Prutting 1987, Hartley and Jensen 1991, McDonald 1993); impaired coherence

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(Giles *et al*. 1988, Ehrlich and Barry 1989, Glosser and Deser 1990); impaired story structure (Liles *et al*. 1989, Coelho *et al*. 1991a); disrupted topic management abilities (Mentis and Prutting 1991) and difficulty initiating and maintaining a conversation, with a reliance on the communication partner to bear a larger amount of the communicative burden (Coelho *et al*. 1991b). Studies have analysed a number of discourse genres, including procedural, narrative and conversational samples, however none has examined the discourse of people with TBI with communication partners other than speech–language pathologists or research assistants. *Conversational* tasks have typically involved the interactants speaking on a particular or unspecified topic (Coelho *et al*. 1991b, Mentis and Prutting 1991), relating a self-generated account of a memorable experience and answering open-ended questions (Parsons *et al*. 1989).

This study is part of a series of research studies that are investigating everyday communication skills of people with TBI using communication partners other than speech pathologists or research assistants. Exchange structure analysis (Berry 1981, Ventola 1987) has previously been used to measure the performance of people with TBI on a functional day-to-day task, to establish how their communication impairments influence their ability to assume the social roles of patient, son and enquirer in service encounters with members of the public (Togher *et al*. 1996, 1997a,b, Togher and Hand 1998, 1999). This research has addressed whether people with TBI and matched controls change their communication behaviour with different conversational partners (e.g. mothers, therapists, bus timetable service providers, police officers), who vary according to familiarity and power relationships. Exchange structure analysis examines who has the knowledge in an interaction and how this knowledge is conveyed from one communication partner to another. If the participants are of unequal power (e.g. in a doctor–patient interaction), the dominant communication partner is said to be more likely to be a primary knower (K1) or the person who has the information. The subordinate is more likely to be a secondary knower (K2) or the one who does not have the information and is wanting to gain it from the primary knower. Using this analysis, it is possible to examine how often a person is given the opportunity to be a primary knower in different interactions. This will vary according to the communicative task and the people involved.

Interlocutors' responses to people with TBI have also been studied (Togher *et al*. 1996, 1997a,b) with the finding that some communication partners differed significantly in their responses to TBI subjects compared to controls. For example, mothers and therapists gave significantly more information to the control subjects than TBI subjects, even though questions were asked with the same frequency by both groups. The ways in which information exchange was negotiated also varied between TBI and control interactions. For example, therapists checked on the accuracy of information given by the TBI subjects, which did not occur with controls. Police officers were also more likely to check that the person with TBI had understood the information they had given, whereas this rarely occurred with controls. Finally, therapists and mothers used teaching exchanges, where they asked for information that both parties already knew, and asked fewer questions of TBI subjects than they did of controls. In contrast, the bus timetable condition, which represented a situation where the subjects were in a relative position of power as a customer, produced similar patterns of exchange structure results in TBI and control interactions.

It was suggested that therapists', police officers' and mothers' different communication with TBI subjects was linked to the power imbalance in these interactions which resulted in negative consequences for the person with TBI. By being asked fewer questions the TBI subjects were not given the same opportunities as controls to give information, and as the accuracy of the information TBI subjects gave was frequently questioned, their information giving was devalued.

The present study was developed to assess whether the context could be structured to place the person with TBI in a powerful information-giving position. By placing subjects in this position the question of interest was whether TBI subjects would be able to give information to the same extent as control subjects, and moreover whether communication partners who were in a deferential position would respond to both groups in a similar manner.

The manipulation of the speaker role for TBI and control subjects from information requester to information giver has not previously been addressed. To demonstrate that the same subjects could indeed respond to changes in the contextual configuration, an additional speaking condition was included in this study: TBI and control subjects were placed in an information-requesting role with the researcher.

Method

Subjects

Subjects were seven male adults with TBI and seven adults with spinal cord injury matched for age, sex and education. TBI subject characteristics can be found in table 1. All subjects in the experimental group had sustained a very severe blunt closed head injury—i.e. post-traumatic amnesia more than 24 hours (Russell and Smith 1961) and/or loss of consciousness more than six hours (Jennett *et al*. 1977).

TBI subjects were selected on the basis of inappropriate behaviours, as assessed on two independent speech–language pathologists' ratings on the Pragmatic Protocol (Prutting and Kirchner 1987), during a viewing of a videotaped conversation between each subject and the researcher (LT). Table 2 displays the 10 behaviours most frequently judged to be inappropriate in rank order. Table 3 shows the number of inappropriate behaviours for each of the subjects. An overview of the TBI subjects' cognitive-communication disorder was provided using the Scales of Cognitive Ability for Traumatic Brain Injury (SCATBI) (Adamovich and Henderson 1992) (table 4).

Control subjects were seven males who had sustained a significant spinal injury without reported significant loss of consciousness. These subjects were chosen to complete a similar communication task to the TBI subjects, which was to describe the effects of a serious injury on their life. It was therefore necessary for them to have sustained an injury that was significant enough to have effected long-term changes to the person's life experience. Control subject characteristics can be found in table 5.

Procedure

TBI and spinal injury subjects were evaluated in two conditions: an information-giving interaction where subjects were asked to speak to two 16-year-old schoolboys as part of a community awareness driver education programme, and an

Table 1. Demographic and clinical details of TBI Subjects

Subj. No.	Age (years)	Premorbid occupation	Time since injury (years)	Period of P.T.A.† (months)	Period of L.O.C.* (weeks)	Nature of accident
S1	29	Carpenter	7.75	6	8	Driver MVA
S2	30	Factory hand	13	4	10	Pedestrian MVA
S3	35	Student teacher	12	2–3	8	Pedestrian MVA
S4	42	School student	26	NR	20	Passenger MVA
S5	33	Process worker	8.4	3	4	Driver MVA
S6	29	Clerk	12	10	6	Driver MVA
S7	37	Unemployed	7.4	4	1.5	Passenger MVA

* loss of consciousness.
† post-traumatic amnesia.
MVA = Motor Vehicle Accident.
NR = Not recorded in medical file.

Table 2. Rank order of top 10 inappropriate pragmatic behaviours for TBI subjects on the Pragmatic Protocol (Prutting and Kirchner 1987)

Rank	Pragmatic behaviour	Number of TBI subjects
1	Intelligibility	6/7
2	Quantity/conciseness	5/7
	Topic maintenance	5/7
3	Topic change	4/7
	Vocal quality	4/7
	Prosody	4/7
	Body posture	4/7
4	Topic selection	3/7
	Topic introduction	3/7
	Speech act pair analysis	3/7

Table 3. Number of inappropriate behaviours on the Pragmatic Protocol for TBI subjects

Subject	# Inappropriate behaviours
1	6
2	13
3	7
4	6
5	8
6	19
7	10

information-requesting interaction where TBI and control subjects were invited to ask questions about the project during a wrap-up session with the researcher. To provide a purpose for the school students in the interactions, each pair of students was briefed to compare the effects of TBI with spinal injury on subjects' lives by

Table 4. Standard scores and Severity Scores on the SCATBI for TBI Subjects

Subj. no.	SCATBI severity†	Perception/ discrimination‡ SEM§± 3	Orientation SEM± 5	Organization SEM± 4	Recall SEM± 5	Reasoning SEM± 4
S1	10	104	119	86	101	96
S2	12	113	119	119	91	99
S3	10	101	89	119	93	101
S4	14	104	119	129	101	120
S5	10	91	119	115	98	100
S6	8	93	97	98	80	90
S7	12	95	119	115	98	108

† Standard score with a mean = 10, SD = 3.
‡ Standard score with a mean = 100, SD = 15.
§ Standard error of measurement with upper and lower limit points.

Table 5. Demographic and clinical details of control subjects

Subject no.	Age (years)	Premorbid occupation	Time since injury (years)	Nature of accident	Level of injury
C1	37	Apprentice electrician	18.2	Trailbike accident	C6†
C2	39	Driver	14	Motor bike accident	T7–8‡
C3	25	Electrician	5.6	Passenger MVA§	T10
C4	32	Salesman	8	Motor bike accident	C5–6
C5	34	Army	4	Fall from parachute	T10
C6	36	Boner/slicer	12.6	Fall from clock tower	T12
C7	47	Apprentice electrician	27	Spear tackle–football	C4–5

† C = Cervical spinal injury ‡ T = Thoracic spinal injury § MVA = Motor vehicle accident.

interviewing both subjects for approximately 20 minutes. They were told that they would be interviewed afterwards by the researcher to discuss their findings. This information-giving condition placed TBI and control subjects in a position of relative power in the interaction. Interactions were audio and videotaped. The order of recording of TBI and control subjects was randomized with each student pair. A total of 28 transcripts (i.e. seven TBI subjects and seven matched controls across two speaking conditions—student and researcher) were scored using exchange structure analysis (Berry 1981, Ventola 1987) (Appendix 1). Exchange structure analysis taps into how information and goods and services are exchanged. All interactions are based around the demanding and giving of information or goods and services. These are typically realized by the speech functions of statements, questions, offers and commands. Berry (1981) and Ventola (1987) developed this basic system further by examining who in the interaction has the information (or goods and services) and how this is conveyed. The exchange is made up of 'moves', which are the basic units of analysis. A move is a semantic unit of information that is the smallest unit of potentially negotiable information presented by one speaker within one turn of interactive talk (Eggins 1990) and an

exchange is composed of a sequence of moves. When involved in an exchange, one is either (a) requesting or providing information, or (b) requesting or providing action. Exchange analysis has two types of moves: *synoptic* moves and *dynamic* moves. When analysing conversational exchanges the abbreviations K1 and K2 are used to refer to the exchange of this information. Exchanges can be initiated by either interlocutor. Therefore, subjects and their communication partners can be both primary (K1) and secondary knowers (K2) in different exchanges. Synoptic moves are denoted by brackets and dynamic moves are marked with arrows. Three types of moves were compared:

- *K1 moves per minute*, which is considered as the rate of information giving within interactions.
- *K2 moves per minute*, which is interpreted as the rate at which interactants do not have information and are either requesting or being given the information (as in a teaching exchange).
- *Dynamic moves per minute*, which is the rate of negotiating and tracking of information that is needed for information exchanges to be successful.

The most sensitive measure of information exchange appeared to be the number of exchange structure elements divided by the total time yielding a frequency measure of exchange moves per minute. Although these data are reported as individual moves per minute, it is with the recognition that all moves occur within the context of a full exchange. That is, a K2 (information-requesting) move cannot occur in isolation but must be followed by a K1 (i.e. information-giving) move, for a complete exchange of information to occur, such as the first exchange that occurs in Example 2 (also see Appendix 1). It is therefore recognized that interactions are two-way negotiated achievements (McTear and King 1991) and that the communication behaviour of one interactant will determine the choices available in the next turn.

To examine the exchange structure of information-giving and information-requesting interactions, two comparisons were made. The first comparison addressed the differences between TBI and control subjects in the two conditions—student and researcher. The second comparison was between the interlocutors when speaking to TBI vs. controls.

Results

Information giving and requesting interactions

TBI vs. control subjects' use of exchange structure

The mean frequency, range and standard deviations of K1 moves per minute, K2 moves per minute and dynamic moves per minute by TBI subjects and control subjects can be found in Appendix 2. Measures of K1 moves per minute, K2 moves per minute and dynamic moves per minute were compared using the Wilcoxon Signed-Ranks Matched-Pairs Test to discriminate differences between TBI and control subjects in the Student and Researcher conditions (table 6). Comparisons were also made of TBI and control subjects across conditions (i.e. TBI subjects in Student condition vs. TBI subjects in Researcher condition; Control subjects in Student condition vs. Control subjects in Researcher condition) (table 7).

Table 6. Comparison of TBI vs. control subjects' use of exchange structure elements across the conditions of Student and Researcher using the Wilcoxon Matched-Pairs Signed-Ranks Test

Exchange structure element	Observed value	Critical value	Comments
K1 moves/minute	a. T = 4 (n = 7)*	$p = 0.055$†	Controls > TBI
	b. T = 13 (n = 7)	$p = 0.47$	
K2 moves/minute	a. T = 4 (n = 5)	$p = 0.219$	
	b. T = 6 (n = 7)	$p = 0.109$	
Dynamic moves/minute	a. T = 4 (n = 5)	$p = 0.219$	
	b. T = 3 (n = 3)	$p = 063$	

a. Student.
b. Researcher.
† Approaching significance.
* n varies according to tied ranks.

Table 7. Comparison of TBI and control subjects' use of exchange structure elements across the conditions of Student and Researcher using the Wilcoxon Matched-Pairs Signed Ranks Test

	TBI (with students) vs TBI (with researcher)		Controls (with students) vs Controls (with researcher)	
Exchange structure element	Observed value	Critical value	Observed value	Critical value
K1 moves/minute	T = 5	$p = 0.07$*	T = 0	$p = 0.008$¶ (Student > Researcher)
K2 moves/minute	T = 1	$p = 0.01$§ (Researcher > Student)	T = 11	$p = 0.344$
Dynamic moves/minute	T = 1	$p = 0.01$§ (Researcher > Student)	T = 0	$p = 0.008$¶ (Researcher > Student)

* Five out of seven TBI subjects had a higher frequency of K1 moves/min in student condition.
§ Significant at $p \leqslant 0.01$.
¶ Significant at $p \leqslant 0.001$.

K1 moves per minute

One of the key questions of this study was whether a manipulation of the context would enable TBI subjects to be in a position of providing similar amounts of information to the students as control subjects. Although control subjects gave marginally more information to students than TBI subjects, this result only approached significance (T = 4, $p = 0.055$, table 6). The similarity between TBI and control interactions was in part due to the fact that they were asked a similar number of questions by the boys. Despite the frequency of information-giving being approximately the same, there were significant qualitative differences in the way TBI subjects imparted information. They used a range of strategies, including telling jokes to get their message across.

Joke Telling: Joke telling appeared to perform a number of interpersonal language functions as well as being a way of providing information, but this strategy is not

accounted for in the exchange structure analysis. It is therefore being reported separately. Joke telling occurred in TBI and control interactions with students as the following examples demonstrate.

Example 1. TBI subject S4–Joke Telling with boys
Moves 120–122 S = TBI subject A & B = students

120	K1	S: then I think they were happy with the way I came out of it because the doctors towards the end of my coma said to mum and dad and to my brother they said you know if I pulled out of it I would be lucky to be a vegetable for the rest of my life
121	joke	S: So I'm not doing too bad for a brussel sprout am I?
122	rjoke	A & B: (laugh halfheartedly) No

Example 2. TBI subject S4–Joke Telling with boys
Moves 299–314 S = TBI subject A & B = students

299	K2	B: Did you ever think about ending it all?
300	K1	S: Oh definitely
301	K1	S: You know I I thought about that quite often
302	K1	S: and I probably still do at times
303	K1	S: but it's against my religion
304	cfrq	B: religion?
305	rcfrq	S: (nods)
306	clrq	B: which is?
307	rclrq	S: Catholic
308	cf	A: Roman Catholic
309	joke	S: No I I stay still
310	rprq	A: What?
311	rrprq	S: I don't roam around
312	joke	S: I just stay still
313	rjoke	A: (Looks and smiles)
314	rjoke	S: (smiles and looks away)

Contrast this with a joke told by a control subject early in the interaction:

Example 3. Control subject C2–Joke Telling with boys
Moves 35–46 A & B = Students C = control subject

35	K1	C: and um I saw this hand like this and I ask this I ask the XX* well what do you think about that you know having an inquiry at this level ah leading your life in this chair
36	K1	C: what do you think you'd do about that?
37	K1	C: or how would you react?
38	K1	C: and this you know country kid up the back I think he comes from a property cause I asked them about you know who rides horses and motorbikes and that
39	bch	A: (nods)
40	K1	C: and this kid sort of up the back in a real sort of country drawl he's gone 'well they'd have to put you down'
41	K2f	A: (laughs)
42	K2f	B: (laughs)
43	K1	C: something like this you know

44	joke	C: Reckon I got one the other day there was this kid who reckoned his goldfish had been a paraplegic three times
45	rjoke	A: (laughs)
46	rjoke	B: (laughs)

* XX = unintelligible two syllable utterance

One TBI subject told jokes throughout the entire interaction so that by the end the boys were making up their own concrete responses:

Example 4. TBI subject S6–Joke Telling with boys
Moves 348–362 S = TBI subject A & B = students

348	joke	S: Yeah yeah and do you do you do you know there's one thing I want to tell you
349	joke	S: Do you know how how are you to sleep?
350	joke	A: What?
351	joke	S: How are you to sleep?
352	joke	A: How?
353	joke	S: on a bed
354	joke	A: (laughs)
355	joke	B: (laughs)
356	joke	S: And do you know how you are to eat?
357	joke	A: At a table?
358	joke	S: No
359	joke	B: With a knife and fork?
360	joke	S: No on a clean plate on your own plate
361	joke	A: (laughs)
362	joke	B: (laughs)

K2 moves per minute

Two comparisons are reported in this section. The first is a comparison of TBI vs. control subjects in their use of K2 moves with students and with the researcher. This comparison was made using the Wilcoxon Matched-Pairs Signed-Ranks Test and found no difference in the use of K2 moves by TBI vs. control subjects in the student condition ($T = 4$, $n = 5$, $p = 0.219$) or in the researcher condition ($T = 6$, $n = 7$, $p = 0.109$) (table 6).

Given that TBI and control subjects were expected to primarily be asking for information in the researcher condition and giving it in the student condition, a second comparison was made of TBI and control subjects' use of K2 moves in the researcher condition compared with the student condition using the Wilcoxon Matched-Pairs Signed-Ranks Test. Results indicated that TBI subjects were in the K2 role more often in the researcher condition than in the student condition, as was expected ($T = 1$, $p = 0.01$, table 7). However, the control subjects produced similar frequencies of K2 moves in both conditions ($T = 1$, $p = 0.34$, table 7). This can be explained by a number of factors. An examination of the types of K2 moves made by TBI and control subjects indicated that some TBI subjects asked the researcher questions that were not relevant to the purpose of the discussion, such as asking how they had performed with the students, whereas this occurred rarely in control interactions. Two TBI subjects (S3 and S6) were also noted to repeat questions. In one case K2 moves were made by TBI subject S6 within a teaching

Table 8. Most commonly used dynamic moves by TBI and control subjects across speaking conditions‡

	TBI	Controls
Student condition	Backchannelling S1*, S2, S7	Backchannelling C2, C6, C7
	Response to confirmation request S1*, S5	Response to confirmation request C4
	Confirmation S3, S6	Response to clarification request C1, C3
Researcher condition	Backchannelling S1, S2, S3, S4, S5, S7	Backchannelling C1, C2, C3, C4, C5, C6, C7
	Response to confirmation request S6	

* Where two dynamic moves are listed both were of equal frequency.
‡ Definitions and abbreviations for dynamic moves can be found in Appendix 1.

interaction initiated by the researcher. Control subjects' use of K2 moves was limited to requesting information regarding the research project, the potential usefulness of the results and future plans. In short, some requests made by TBI subjects to the researcher were questions that she was unable to answer (such as how they had just performed with the students even though the researcher wasn't present), repetitions of previous questions or questions related to their own recovery. These types of questions were not asked by control subjects.

Dynamic moves per minute

In the student condition no significant difference was found between TBI and control subjects in their use of dynamic moves ($T = 4$, $n = 5$, $p = 0.219$, table 6). This result was replicated in the researcher condition ($T = 3$, $n = 3$, $p = 0.63$). To establish whether TBI and control subjects varied their frequency of dynamic move usage across conditions, comparisons were made using the Wilcoxon Matched-Pairs Signed-Ranks Test. This showed that both TBI and control subjects used a greater frequency of dynamic moves with the researcher than with the students (TBI: $T = 1$, $p = 0.01$; Controls: $T = 0$, $p = 0.008$, table 7).

To further examine the nature of these differences, the most commonly used dynamic moves were identified for TBI and control subjects across both conditions (table 8). This revealed significant differences where the most common dynamic move was the backchannelling move in 6/7 TBI–Researcher interactions and in 7/7 Control–Researcher interactions. In contrast, in the student condition, backchannelling was the most common dynamic move in only 2/7 TBI–Student interactions and 3/7 Control–Student interactions.

Effect of TBI on the nature of information exchange: Partner responses

A description of the mean frequency of K1 moves per minute, K2 moves per minute and dynamic moves per minute by the students and the researcher can be found in Appendix 2. Measures of K1 moves per minute, K2 moves per minute and dynamic moves per minute by communication partners were compared across TBI and control conditions using the Wilcoxon Signed-Ranks Matched-Pairs Test (table 9).

Table 9. Comparison of communication partners' use of exchange structure elements with TBI and control subjects using the Wilcoxon Matched-Pairs Signed-Ranks Test

	Students (with TBI) vs. Students (with Controls)		Researcher (with TBI) vs. Researcher (with Controls)	
Exchange structure element	Observed value	Critical value	Observed value	Critical value
K1 moves/minute	T = 14 (n = 7)	$p = 0.53$	T = 6 (n = 7)	$p = 0.109$
K2 moves/minute	T = 9 (n = 7)	$p = 0.234$	T = 5 (n = 7)	$p = 0.078$
Dynamic moves/minute	T = 7 (n = 7)	$p = 0.148$	T = 13 (n = 7)	$p = 0.469$

K1 moves per minute

Students used a similar frequency of K1 moves with TBI and control subjects (T = 14, $p = 0.53$). Information giving by students was usually characterised by brief comments which supported or encouraged the TBI and control subjects' K1 moves. In the following example, the student (B) comments on the problems reported by the TBI subject:

Example 5. TBI subject S4–Student condition
Moves 213–218 S = TBI subject A & B = students

213 K1 S: I mean a lot of people are uneducated about brain injuries and all that
214 K1 S: They don't realise that when a person has suffered a brain injury he's still a person
215 K1 S: You know they think he's some moron or cretin or something like that
216 K1 B: But like they wouldn't know it
217 K1 B: No one would know it to look at you
218 cf A: that's right yeah

In some cases, the students used their K1 moves for narrative purposes to recount funny episodes that had occurred to them. These stories were recorded in both TBI and control samples. Occasionally, students used the K1 move as a way of restoring the topic with TBI subjects. The way that exchange structure moves were used to compensate for topic repetition is demonstrated in the following example. The dialogue initially involves a discussion of the Melbourne Cup horse race which is a major sporting event in Australia.

Example 6. TBI subject S3–Student condition
Moves 407–429 S = TBI subject A & B = Students

407 K1 B: It's still good to see it live though
408 K2f A: Oh yeah—watching
409 K1 B: People go through big leaps and bounds to see that
410 K2 S: Do they sell Coke here cause we couldn't buy a can of Coke at university?
411 K1 A: No I think they've always sold Coke here eh?
412 cf B: Yeah they've always sold Coke here
413 K1 B: I don't know XX

414	⌜	K2	S: It's not only um like at the universities such as I was at aren't they sponsored by a certain drink?
415	⌞	K1	A: Yeah a lot of them are um
416	⌜	K1	A: I played this year I played for um I played rugby union for N.S.W., N.S.W. Catholic colleges
417		bch	S: Yes
418		K1	A: like on my jacket here (points to jacket)
419		bch	S: (nods)
420		K1	A: and we were sponsored by Coke
421		cf	S: You were sponsored by Coke
422		rcf	A: Yeah
423	⌜	K1	A: They sponsor a lot of people—Coke but
424	⌞	K2f	S: Yeah
425	⌜	K1	B: It's a good investment if you can get into Coca-Cola shares
426		K2f	A: Yeah
427		K2f	S: (nods)
428	⌜	K2	S: What did you say—what position did you play in?
429	⌞	K1	A: I play front row hooker
430		cf	S: Front row hooker

In this excerpt, S3 made a topic shift from a discussion about the Melbourne Cup horse race which was to be run on the day of data collection, to a question regarding whether Coke was sold at the school (move 410). S3's rapid topic shift also constituted a repeated generic structural element (see Togher and Hand, 1999, for details of generic structure potential analysis). To smooth the transition of topic shift, student A incorporates the comment about Coke with sport sponsorship, which is loosely related to a previous discussion about the students' sporting achievements. Following on from this, student B raises the issue of Coke shares, which can be connected to a previous discussion of how S3 invested his compensation payout. Thus, both students were 'normalising' the unusual contribution S3 had made by using information-giving moves that provided some connection with previously discussed topics. S3 was then able to ask an appropriate question related to sport (move 428). Students' use of K1 moves in this case provided an opportunity for the TBI subject to regain appropriate topic control by priming him towards previously discussed topics with which they were more familiar. By placing the TBI subject in a position of relative power within an interaction, the students compensated for abrupt topic changes by using linguistic resources that would not undermine that power imbalance but maintain the TBI subject's face. One of the ways they accomplished this task quite skilfully was with the use of K1 moves.

The researcher also used a similar number of K1 moves with TBI and control subjects. The nature of the information giving was primarily related to describing the purpose of the research and future plans. In control interactions, however, the researcher spent a greater proportion of the interaction discussing the research in response to K2 moves by the control subjects requesting further information.

K2 moves per minute

Comparisons of K2 moves per minute by the students and the researcher were made in interactions with TBI and control subjects using the Wilcoxon Matched-Pairs Signed-Ranks Test. This analysis examined whether the students and the researcher differed in their use of K2 moves in their interactions with TBI and control subjects. Students were required to be primarily in the K2 role, as they were requesting information from the TBI and control subjects. There were no significant differences in the frequency of K2 moves/minute by students with TBI and control subjects ($T = 9$, $p = 0.234$) or by the researcher ($T = 5$, $p = 0.078$, table 9). Students asked similar frequencies of questions to both TBI and control subjects, thus responding to the contextual configuration that required them to find out information.

In one transcript, a control subject (C2) made explicit the contextual configuration after a student invited him to ask questions of them (Example 7). The student appeared to use this as a strategy to continue the interaction because he had no further questions to ask. C2 asked a couple of questions (moves 292 and 294), however the interaction moved to a series of K1-led exchanges by the control subject regarding co-educational schools, flatulence, lunch and finally, the control subject reintroduced one of the purposes of the interaction which was to highlight awareness and prevention of spinal injuries.

Example 7. Control subject C2–Student condition
Moves 285–297 C = control subject A & B = students

285	⌜	**K2**	**A: Would you like to ask us something?**
286	⌜	**K2**	**A: Ah you can talk to us you're allowed to ask questions, interrogation**
287	⌞	K1	**C: Ah right no well this is basically an assignment for you guys is it?**
288		chall	B: No it's for her
289		clrq	C: Oh she assesses what we do
290		rclrq	B: Yeah
291		K1	C: Says what we do and then try to make study go on for six months six months or something
292	⌜	K2	C: and what you guys are at the school here?
293	⌞	K1	B: Yeah
294	⌜	K2	C: How many pupils have you got?
295	⌞	K1	B: Oh a few five or six hundred I think
296		check	B: Is there?
297		rcheck	A: It's sort of combined cause Nazareth's up there and um we have some classes together

Despite some episodes of inappropriate or repeated information giving or inappropriate actions by TBI subjects, students continued to formulate questions. This was demonstrated clearly in the interaction between the TBI subject, S6 and the students. S6 produced a number of inappropriate behaviours, including inappropriate joking as well as interfering with the audio recording equipment and being distracted by the surrounding environment. The students reacted mostly with laughter, but persisted with K2 moves throughout the interaction. As the interaction progressed the students made some attempts to control S6's behaviour by requesting action from him to turn the audio tape back on (moves 504–507), but

Table 10. Most commonly used dynamic moves by the researcher and students across TBI and control subjects‡

	Students	Researcher
With TBI	Backchannelling S1, S2, S3, S4, S5, S6, S7	Backchannelling S1, S3, S4, S7 Request for confirmation S2, S5, S6
With controls	Backchannelling C1, C2, C3, C4, C5, C6, C7	Backchannelling C1, C2, C3, C5, C6, C7 Confirmation C4

‡ Definition and abbreviations for dynamic moves can be found in Appendix 1.

even after he had flouted that request (moves 514–517) they fell back on question asking as a way of attempting to keep him on track (moves 518–520) (Example 8).

Example 8. TBI subject S6–Student condition
Moves 504–528 S = TBI subject A & B = students

504	A2	B: Better turn on the tape again (laughs)
505	rprq	S: mm?
506	rrprq	B: Turn it back on
507	A2	B: No the one down there
508	A1	S: (turns tape recorder back on)
509	A2f	B: yeah that's it
510	K1	B: Now it's back on
511	excl	S: Hey what's been happening buddy! (Laughs)
512	rexcl	A: He went for a sleep
513	K2f	A: yeah
514	A1	S: OK go back for a sleep
515	A1	S: (turns off tape again)
516	A2f	A: (laughs)
517	A2f	B: (laughs)
518	**K2**	**A: So how long have you been out here for?**
519	joke	S: Since since since the day the plane brought me in
520	**K2**	**A: When was that?**
521	K1	S: '81
522	cf	B: '81 (nods)
523	cf	A: '81
524	K1	S: '81 to '96–thirteen years or something?
525	bch	A: (nods)
526	chall	B: Fifteen
527	rchall	S: Fifteen years?
528	cf	B: Fifteen years

Similarly, the researcher also asked similar proportions of questions of both TBI and control subjects. The majority of K2 moves by the researcher in both conditions were prompting whether subjects had any further questions regarding the research project.

Dynamic moves per minute

A final way of examining across conditions was to examine the amount of negotiation that was needed for information exchange to take place. Comparisons of dynamic moves per minute produced by the students and the researcher were made in TBI versus control conditions. Results showed that students produced similar frequencies of dynamic moves in both TBI and control conditions, as did the researcher (table 8).

Qualitative analysis was completed to establish the commonly used dynamic moves by the students and the researcher in both conditions (table 10). This revealed that the most common dynamic move used by students with 7/7 controls and 6/7 TBI subjects was the backchannelling move. This is in keeping with the listening work that was required in this particular context. In two cases (S4 and S6), the challenge move was used relatively frequently by students with TBI subjects. The challenge move is considered to be interpersonally oriented because it focuses on the talk in the preceding move and attacks its validity by actively rejecting negotiation, querying what has been said or the sayer's right to say it (Eggins and Slade 1997). Challenges can be used to suspend or abort exchanges (Martin 1992). Example 9 illustrates a challenge:

Example 9. TBI subject S6–Student condition
Moves 424–426 S = TBI subject B = student

424	A1	S: Rewind rewind (touches tape recorder)
425	**chall**	**B: No don't touch it (laughs)**
426	**chall**	**B: we'll get in trouble**

In Example 9, the student does not give permission for the TBI subject to interfere with the tape recorder. Interestingly, this challenge is masked by laughter and a justification. This masks the attack on the validity of what the TBI subject is proposing to do. The challenge is successful as the TBI subject's response is to ask questions of the students about the researcher and their future:

Example 10. TBI subject S6—Student condition
Moves 427–435 S = TBI subject A & B = students

427	**K2**	**S: Is she your teacher?**
428	K1	B: No she just came here
429	K2f	S: (nods)
430	**K2**	**S: And what are you going to do?**
431	K1	A: Electrician
432	K2	S: How about you?
433	K1	B: Um computing
434	cf	S: Computing
435	rcf	B: yeah and programming and hardware

The dynamic moves most commonly used by the researcher with TBI subjects were the backchannelling move (4/7 subjects) and the confirmation request (3/7 subjects). A confirmation request occurs when a listener repeats part of a speaker's move with rising intonation, as a non-verbal indicator of the need for response. It explores the experiential meaning that has already been made (Martin 1992). The use of the confirmation request with TBI subjects was primarily to confirm an

element of the preceding utterance, and to keep trace of the TBI subject's information giving and requesting. Similarly, the backchannelling move was the most common move used by the researcher with control subjects (6/7 control subjects) followed by the confirmation move (1/7 controls). Although backchannelling was used with both groups, the researcher was more likely to use moves that tracked and supported the control subjects' information giving, rather than needing to request confirmation or clarification of the experiential meanings being expressed which occurred with TBI subjects.

Discussion

The design of this study was based on our previously reported information-requesting study because of two findings. One was that people with TBI appeared to be able to interact in a similar manner to control subjects in information-requesting interactions if they were in a powerful role as determined by the context (in this case, a customer in a bus timetable interaction). The second finding was that the interlocutors differed in their use of exchange structure moves with TBI subjects when compared with control interactions. These differences appeared to limit the amount of information giving the TBI subjects were able to engage in, when compared to control subjects (Togher *et al*. 1996, 1997a).

This led to the question of whether manipulating the context by placing TBI subjects in a powerful information-giving role would enable them to give information to the same extent as control subjects and furthermore, whether the interlocutors in this type of interaction would provide similar opportunities to the TBI subjects as control subjects.

TBI vs. control subjects' use of exchange structure

Results indicated that TBI subjects were clearly able to take on an information-giving role in an interview with students to almost the same extent as controls. Such findings contrast with previous research which examined the information-giving abilities of TBI subjects (Coelho *et al*. 1991a, Bond and Godfrey 1997). They demonstrate the powerful effects tenor may have on information-giving opportunities and also the importance of taking the activity into account. By placing TBI subjects in an interview setting where they were the 'expert' the activity also promoted their information-giving potential. The notion of empowering TBI subjects through the discursive practices they are exposed to has not been addressed in previous research. In this research, it was demonstrated that most TBI subjects were able to interact in similar ways if provided an appropriate context. Facilitating access to positive communicative environments may be a powerful way for speech-language pathologists to foster successful community integration for the person with TBI.

Although the frequency of information giving was similar for TBI and control subjects, there were qualitative differences. The use of one strategy, joke telling, as a way of introducing or dealing with confronting topics, such as suicide and the details of a major trauma, showed that TBI subjects were able to access a wide range of information-giving resources. Although joke telling by TBI subjects tended to be more in the form of puns and word-play, whereas control subjects were more likely to recount funny stories, the use of humour was effective in both cases.

The use of joke telling by TBI subjects has not been reported previously in the literature to this researcher's knowledge. There has been some investigation of TBI subjects' ability to appreciate humour in the form of cartoons with captions (Braun *et al*. 1989) and parents' perceptions of the person with TBI's ability to comprehend humour (Pettersen 1991, Malia *et al*. 1995). Braun and colleagues found that sense of humour was markedly impaired in TBI subjects when compared to controls as measured by time taken to rank jokes according to funniness and classification of types of jokes. This was attributed to a narrow lexicon, poor lexical semantic processing or some types of reading dysfunction (Braun *et al*. 1989). Although these authors commented that many of their TBI subjects had problems with interpersonal communication skills, including humour in natural and spontaneous conversation, there was no further description of these abilities. It is therefore difficult to use these findings to interpret the use of humour in the present study.

Given the advantages of being liked, it is understandable that people engage in considerable effort to get others to like them. Humour serves as a face-saving device, as a way of establishing solidarity and of preserving a person's identity. The jokes told by TBI subjects were usually puns and very concrete. Control subjects often made jokes by telling funny stories, and they usually did this early in the interaction, possibly as a way of establishing credibility and rapport. Joke telling and humour have been described as performing a number of functions in conversation, such as creating or maintaining in-group solidarity, seeking approval, or achieving feelings of superiority (Giles *et al*. 1976). Other theorists have explained the occurrence of humour when there is an incongruity of some kind (Bateson 1973). Eggins and Slade (1997) expand on this by drawing on critical discourse perspectives. These interpretations view humour as a way of expressing the social structure. Humour enacts contradictions and conflicts in the social relations between interactants. These contradictions and ambiguities are simultaneously exposed and covered up through the use of humour.

One of the best ways to identify when someone is being humorous is the presence of laughter, although not all humour is identified by laughter. Other cues include phonological cues such as change of pace, volume, intonation or stress, and kinaesthetic cues such as a change of facial expression or posture (Eggins and Slade 1997). Laughter, however, is the most commonly observed behaviour associated with humour. Studies on laughter in naturally occurring spoken interactions have shown that people often laugh at things that do not seem all that funny (Mulkay 1988; Norrick 1993). What may appear to be funny in one context may not be in another, suggesting that the 'funniness' is created contextually. It therefore involves relationships between text and the immediate (micro) context, and the more abstract cultural or macro context (Eggins and Slade 1997). The person who initiates laughter has also been examined as an important feature in determining the social relationships that are being enacted. Laughter initiated by the speaker has been described as an invitation to growing intimacy to which responsive laughter from the listener implies willingness to affiliate, whereas withheld laughter implies a declining of the invitation (Jefferson *et al*. 1987).

To explore these issues further, the types and effects of humour will be examined using the texts quoted earlier. The two examples of joke telling by TBI subject S4 use word games and surprise (Examples 1 and 2), which have been reported to be the least offensive type of humour as no individual or group are denigrated (Cashion *et al*. 1987). This subject's use of humour may have served a number of

purposes. It provided some distance and disguised the serious work that the talk was achieving. It also confirmed the hierarchic relationship between the participants as the subject was 'holding the floor' with an episode of information giving. This hierarchic relationship was rendered invisible, however, with the addition of humour. Humour was also used to express the difference between the subject and the students. The comment that 'I'm not doing too bad for a brussel sprout am I?' (Example 1) was confirming that S4 was indeed different from the boys but this difference was softened with the use of humour. In the Roman Catholic text (Example 2), humour was used essentially to avoid the issue of suicide; a potentially confronting and difficult topic. Humour was therefore used as an interpersonal resource to enact the TBI subject's position in the culture of an information-giving interaction, in addition to being a personal response to the interlocutors.

The joke told by control subject C2 was in the form of a story (Example 3). C2 claimed the right to tell the story which required that the fundamental turn-taking mechanism was suspended for a brief time. This was an assertive strategy which may be construed as an act of power. This was masked however, because the story was humorous. The humour arose because of the incongruities in both the micro-context and in the social structure. From the micro-contextual perspective, C2 used the narrative as a platform from which to dominate the talk and restrain contributions from his audience. From a macro-contextual perspective, a seriously disabled young man is a 'joke' in a society where intactness and health are valued. Thus, a funny story in the early stages of an interaction may be a powerful tool for C2 to establish the interactive inequality by dominating the talk and also by sending up concepts of disability and consequences of being disabled. These implications are well disguised with the use of humour.

Finally, in Example 4, TBI subject 6 attempts to use humour as an information-giving tool. S6 opened this exchange with the statement that he wanted to tell the boys some information. The series of jokes that followed were attempts at domination of the interaction but they lacked the appropriate opening move to project the concept of an approaching joke or to have the continuity of a narrative. They also failed to address the concept of difference. There was no underlying excuse or confronting issue that was being addressed through this type of humour. Interestingly the attempts by S6 usually produced a laughter response from the boys which may have been evidence of attempts to save face for the TBI subject and also to reinforce his information-giving role.

The use of joke telling was a prominent information-giving strategy for TBI subject 6. S6 was the most severely impaired of all the subjects with TBI (with a SCATBI Severity Score of 8, which classified him as moderately impaired) and with a total of 19 inappropriate behaviours on the Pragmatic Protocol. This moderate cognitive-communication impairment was realized by significant difficulties at the levels of discourse semantics and genre. His use of linguistic resources reflected a paucity of information giving in the student condition, as evidenced by his use of K1 moves (3.2 K1 moves per minute—the lowest of all subjects) and an increased use of the K2 move with students (1.6 K2 moves per minute—more than double the frequency of all subjects). S6 relied heavily on the use of joking in the student interaction, although he did not use this resource in his interaction with the researcher. This may indicate some awareness by S6 of the variation in the genre and power imbalance that was represented by these two conditions.

TBI and control subjects were also compared in their ability to request information in the researcher condition. TBI and control subjects asked similar proportions of questions of the researcher which partly accounts for the similar amounts of information giving by the researcher. The ability of TBI subjects to request information has previously been reported to be impaired when compared with matched controls (Schloss *et al*. 1985, Mentis and Prutting 1991). While the frequency of requesting behaviour was similar in this study, the nature of the requests was different. The nature of information-requesting behaviour by TBI subjects appears to be more important than the frequency of requests.

The resources used by TBI and control subjects to negotiate the exchange of information are of interest, as TBI subjects have been previously reported to have difficulty with repairing interactions or providing feedback, with the bulk of communicative burden being placed on the interlocutor (Coelho *et al*. 1991b). There were no differences between TBI and control subjects in the frequency of dynamic moves (which are used to negotiate meaning). There were similar patterns of use by TBI and control subjects, with a greater amount of backchannelling with the researcher and a lesser amount with the students. Backchannelling is used to monitor the dialogue, reassuring interlocutors that negotiation is proceeding smoothly. Backchannels typically occur during another speaker's turn and do not appear to be sensitive to phonological, grammatical or discourse boundaries (Martin 1992, Sacks *et al*. 1974). They have also been referred to as 'encouragers' (Edelsky 1981), minimal responses (Fishman 1978) and acknowledgement tokens (West 1984).

Increased use of backchannelling responses in the researcher condition may have been for two reasons. First, the researcher condition required subjects to request information. Backchannels are reported to be a characteristic of good listeners which encourage a speaker to continue talking. They indicate that the listener is paying attention and is interested in hearing more (Holmes 1995). The researcher provided more information to both TBI and control subjects than did the students and the increased frequency of backchannelling responses may have been due to the subjects supporting this process. Second, minimal responses have also been reported as being an indication of power imbalance in gender differentiation research, whereby women have been found to use more of these responses than men (Maltz and Borker 1982). The decreased use of backchannelling in the student condition may have been a reflection of the power imbalance and possibly gender differences that existed.

Effect of TBI on the nature of the information exchange: Partner responses

Students asked similar frequencies of questions and gave similar amounts of information to the control subjects as they did to the TBI subjects. Students were noted to give similar types of information to TBI and control subjects, including recounting funny stories and giving supportive or encouraging comments. Information giving was also used as a resource by students to redirect TBI subjects during periods of abrupt topic change, without posing a threat to face. In these cases, K1 moves made by students appeared to smooth over the transition and to facilitate the person with TBI to refocus on the topic at hand. There is a paucity of information regarding the communication behaviour of the partners of people with TBI and the effects that they have on TBI discourse. The present research

indicates that these behaviours directly influence the linguistic choices available to people with TBI. In the student condition, the tenor (i.e. relationship between participants) and field (i.e. activity) made a similar range of linguistic choices available to the TBI subjects as the control subjects. By placing the person with TBI in this particular context, they were able to function in the K1 role to a similar extent to controls, engage in joke telling and request similar amounts of information. The communication behaviour of the partner is determined by the role that partner is playing in the larger picture of the register, genre and ideological characteristics of the interaction. These characteristics have not been directly evaluated in previous research examining communication following TBI.

Similarly, the researcher condition demonstrated that a deliberate manipulation of tenor and field can produce differences in the roles available to TBI and control subjects. The researcher gave more information than students to both TBI and controls and similarly, the students asked more questions than the researcher of both groups of subjects. This reflected the preset purpose of each interaction, where the students were to request information from the subjects and the subjects were to request information from the researcher.

Information giving is related partly to the frequency of information requests by the communication partner. The researcher gave similar amounts of information to TBI and control subjects, which may be because TBI subjects made similar proportions of requests as the controls. Previous research has focused more attention on the quantitative characteristics of conversational behaviours of people with TBI without an appraisal of the qualitative features (e.g. Ehrlich and Sipes 1985). A combination of both approaches is crucial to appreciate the complex difficulties people with TBI experience in their interactions. It is also important to examine behaviours across different stratal levels of language as an isolated examination of exchange structure does not provide a complete picture of the complexity of language resources used by interlocutors. For example, generic structure potential analysis, which describes the overall structure of the interaction, provides additional insights into the present data that are not available in exchange structure analysis, (e.g. TBI and control–student interactions were similar in the proportion of time spent on topics related to the purpose of the interaction compared with unrelated topics) (Togher and Hand 1999). It has previously been emphasized that people with TBI should be evaluated with a number of interlocutors as part of a thorough communication needs assessment (Hartley 1995). Merely varying the interlocutor is not sufficient, however, as the goal of the interaction and the primary roles participants are assuming will be directly realized through the language that is used.

Treatment suggestions at the level of exchange structure

Requesting and providing information and action is the basis of all interaction (Halliday 1994). Exchange structure analysis provides a detailed account of how information is exchanged, with implicit links to the context of the situation, the genre and the ideology of the participants.

Therapy could be designed to incorporate both information-giving and information-requesting tasks. The role of information giver is powerful as it provides the speaker with an opportunity to take the floor (Edelsky 1981, Poynton 1985) and is often determined by the context and the genre. For example, those in

a position of relative power are more likely to be information givers (e.g. teachers, doctors, supervisors, therapists). The greater the equality between interactants, the more likely they are to behave linguistically in parallel or symmetrical ways: equals have the right to take on the role of primary knower (information giver). Conversely, the greater the inequality between interactants, the more likely it is that their linguistic behaviour will be non-reciprocal: superiors have the right to nominate topics and provide information (Poynton 1985).

The speaking situations in which the person with TBI is placed can be manipulated to place them in information-giving roles, and therefore give them the opportunity of being in a position of power. This is in contrast to the typical therapy session, where the TBI patient is only in this role when the therapist hands it to them. For example, using exchange structure allows an examination of the options available to a therapist when interacting with clients. In initiating an exchange, a therapist can interview clients, set the agenda for a session and provide evaluation of performance. The TBI client is far more constrained in what they are able to say or do: they mainly answer questions and perform tasks. By recognizing the constraining characteristics of a typical therapy session, and indeed many of the interactions people with TBI may be having, it is possible to design contexts that will enable them to take on new roles. Orienting new clients to a brain-injury service, involving clients in education sessions with families, peer review in groups, pairing newer patients with those who are longer-term during group activities such as shopping, cooking, life skills etc. would place the person with TBI in such a role. Involvement in community education is ideal. This change in emphasis on the information-giving role within a medical discourse model represents a profound shift in the clinician's role.

An information-requesting task could involve the person with TBI making an enquiry during a telephone service encounter. The person with TBI could be prompted to formulate a clear service request using keywords to prompt all the main concepts. The notion of communication breakdown could be described with reference to the use of dynamic moves, especially asking for clarification and perhaps repeating information to confirm and help them to remember. Working with people with TBI in service encounters is discussed in further detail in Togher *et al*. (1997b).

The notion of effecting change in the communication process is central to speech pathology practice. Using tenets of systemic functional linguistics and critical linguistic theory (Fairclough 1992) to develop this notion, the concept of democratization of discourse is useful. This process aims to remove the inequalities and asymmetries in the discursive and linguistic rights, obligations and prestige of groups of people. This can be enacted in three ways with the TBI population. The first is access to prestigious discourse types for speakers with TBI. At the most simple level this involves access to the primary knower (K1) role, but has implications for advocacy for people with TBI in the rehabilitation process and in their reintegration into the community. Being involved in the hiring of staff in brain-injury rehabilitation programmes, speaking on their own behalf at community education sessions, having a role in the operation of transitional living units are some examples. A second way to promote democratization is through the elimination of overt markers of hierarchy and power asymmetry in institutional discourse where power relations are unequal. The way therapists interact with their TBI patients could be altered to take account of this. For example, taking less

control over turn taking, giving the client the right to determine topics, reducing the use of specialized vocabulary, reducing the number of teaching exchanges, asking real questions, reducing checking behaviour and following up comments by the person with the TBI are all positive ways of reducing overt asymmetries in the therapist interaction. This is closely associated with a third way of eliminating power asymmetry, which is to have a tendency towards informality. The goal of treatment is to assist the patient to achieve autonomy and choice so that they will be a 'self-steering' individual who can participate in a range of institutional and local discourse domains (Fairclough 1992: 220).

Variation across these discourses means that the clinician needs to be aware of the range of institutions and domains with whom the person with TBI interacts. Therapy can address this diversity through the following processes: (1) increasing the variability of discursive practice (for example, the speech pathology interview being conducted in more varied ways), (2) less predictability for participants in any given discursive event, with a constant need to negotiate (such as giving clients challenging communicative situations) and (3) greater permeability of discourse types emanating from outside (such as introducing service encounters into the clinic room using the telephone). Using democratized forms of discourse (eliminating overt asymmetries in terms of address, being informal) is a way of breaking down the distinctions and barriers between standard therapeutic discourse and other discourse varieties in the person with TBI's everyday life. The discourses with which the person with TBI are faced are complex, heterogeneous and often contradictory, and are therefore a significant challenge for the speech–language pathologist who is assisting in the process of regaining autonomy and choice. With the use of analyses of SFL and awareness of the power imbalance in interactions, the speech–language pathologist has some tools with which to face this challenge.

The notion of empowering people with TBI to assume new social roles through varied discursive practices has training implications not only for the people with TBI, but also, significantly, for their communication partners. Future studies are planned to evaluate training programmes for communication partners. Given the small subject numbers in this study, it is also recommended that future studies be undertaken to replicate results with larger numbers.

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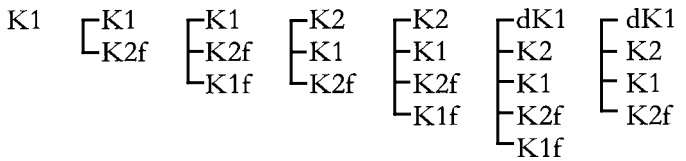
Appendix 1

Examples of exchange types in information exchanges

Types of moves		Examples
Information-requesting exchange		
K2 = secondary knower, who does not have the information	K2	A: So were you in hospital for a while after the accident?
K1 = primary knower, who already knows the information	K1	B: About fourteen months
K2f = a follow up move by the secondary knower to finish the exchange	K2f:	A: Oh
The teaching exchange		
dK1 = primary knower asking a question to which they know the answer	dK1	A: What did you do this morning?
	K2	B: I spoke to school students
	K1	A: That's right!
Information-requesting exchanges with dynamic moves		
	K2	A: Did you have to teach yourself how to do stuff again?
	K1	B: Yeah you have to redo everything
	*K2	A: It would have been really hard wouldn't it?
* new exchange	K1	B: Still is
cfrq = dynamic move that asks for confirmation	cfrq	A: Still is?
rcfrq = response to confirmation	rcfrq	B: Oh not so much hard as annoying
	K2f	A: Right
Information-giving exchange		
	K1	B: Everything was pushed over on me and squashed my car
bch = backchannelling move	bch	A: Ah ha
	K1	B: They even had to cut with the jaws of life
	K2f	A: (nods)

Exchange structure is made up of two types of moves. These include *synoptic* moves which serve to request and provide information and *dynamic* moves which serve to keep the interaction going so that this exchange of information can occur. Exchanges involved the exchange of either *information* (i.e. knowledge) or *action*. The above examples are of information exchange.

There is a range of synoptic moves that can only occur in certain sequences. These sequences are as follows:



Key to synoptic moves in information exchanges
K1 = primary knower (person who has the information)
K2 = secondary knower (person receiving the information)
K1f = follow up move by K1 (e.g. Oh, O.K., Yeah)
K2f = follow up move by K2
dK1 = teaching/cueing move where K1 asks a question to which they already know the answer and delay (hence the "d") the K1 response, which acknowledges the correctness of the other speaker.

Dynamic moves

Dynamic moves are used to facilitate the negotiation of meaning, either through the use of active means (such as clarification or checking), or by giving feedback that the information has been conveyed successfully (by confirmation or backchannelling).

Type of dynamic move	Code
Tracking moves	
Forward channel	fch
Backchannel	bch
Replay request	rprq
Response to replay request	rrprq
Confirmation request	cfrq
Response to confirmation request	rcfrq
Clarification request	clrq
Response to clarification request	rclrq
Confirmation	cf
Clarification	clar
Check	check
Self correct	sc
Collocational prompt	cp
Response to check	rcheck
Challenging moves	
Challenge	chall
Response to challenge	rchall
Justification	jst

Appendix 2

Descriptive exchange structure data

Exchange structure moves by TBI subjects across Student and Researcher conditions

Speaker condition	K1 moves/minute	K2 moves/minute	Dynamic moves/minute
Students (n = 7)	Mean = 7.7 Range = 3.2–13.2 S.D. = 3.1	Mean = 0.6 Range = 0–1.6 S.D. = 0.6	Mean = 1.7 Range = 1.0–2.8 S.D. = 0.6
Researcher (n = 7)	Mean = 4.65 Range = 1.25–9.0 S.D. = 3.1	Mean = 1.6 Range = 0.12–3.8 S.D. = 1.5	Mean = 3.4 Range = 2.0–5.5 S.D. = 1.4

Exchange structure moves by control subjects across Student and Researcher conditions

Speaker condition	K1 moves/minute	K2 moves/minute	Dynamic moves/minute
Students (n = 7)	Mean = 10.34 Range = 6.5–15.3 S.D. = 3.5	Mean = 0.3 Range = 0.05–0.6 S.D. = 0.2	Mean = 2.1 Range = 1.2–4.5 S.D. = 1.1
Researcher (n = 7)	Mean = 4.2 Range = 1.4–6.0 S.D. = 1.8	Mean = 0.6 Range = 0–1.8 S.D. = 0.6	Mean = 4.2 Range = 2.3–8.0 S.D. = 2.1

Exchange structure moves by students across TBI and control groups

Subjects	K1 moves/minute	K2 moves/minute	Dynamic moves/minute
TBI (n = 7)	Mean = 1.7 Range = 0.4–3.0 S.D. = 1.0	Mean = 2.0 Range = 1.4–3.0 S.D. = 0.67	Mean = 3.3 Range = 1.8–4.2 S.D. = 0.9
Controls (n = 7)	Mean = 1.7 Range = 0.3–4.4 S.D. = 1.4	Mean = 1.7 Range = 0.8–3.2 S.D. = 0.9	Mean = 3.9 Range = 1.5–6.3 S.D. = 1.6

Exchange structure moves by the researcher across TBI and control groups

Subjects	K1 moves/minute	K2 moves/minute	Dynamic moves/minute
TBI (n = 7)	Mean = 4.0 Range = 1.4–7.2 S.D. = 1.9	Mean = 0.9 Range = 0–1.8 S.D. = 0.6	Mean = 3.1 Range = 0.8–5.6 S.D. = 1.6
Controls (n = 7)	Mean = 5.5 Range = 2.4–10.2 S.D. = 3.0	Mean = 0.4 Range = 0.2–0.6 S.D. = 0.2	Mean = 3.7 Range = 1.6–5.7 S.D. = 1.5