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ABSTRACT

Background: In the 1970s, Audrey Holland first emphasized the importance of 'functional communication' rather than 'linguistic accuracy' for individuals with aphasia, noting that they could often 'communicate' better than they could 'talk.' Her approach inspired many to explore why and how this could be so, and to look for avenues that tapped everyday communication skills, rather than the person with aphasia's performance on decontextualised language tests.

Aims: This paper addresses the kinds of issues that are involved in 'functional communication' and specifically addresses the role of language in this endeavour. It aims to highlight language as a set of 'meaning-making resources' rather than as a set of syntactic/semantic constructs that exist outside of the communicator's everyday environment, that have to be mastered before being put into practice and that exist regardless of specific contexts.

Main Contribution: The paper discusses language's role in social life in which speakers not only convey information to each other but maintain social relationships through communication. A taxonomy of the different kinds of social meanings that speakers use to communicate is proposed for use in aphasia research, based on the work of Halliday (1994) - those related to conveying ideas and experiences (e.g., vocabulary related to particular experiences, topics), those related to interpersonal relationships (e.g., speech acts, evaluative language devices, exchange structure), and those related to maintaining continuity and coherence across the speaker's discourse (e.g., cohesion). In addition, the systematic relationship existing between language and context and its clinical implications are explored.

Conclusions: Language as information is only one form of language use. The paper argues for further consideration in aphasiology of the importance of multiple language uses and their relation to context. It is proposed that regarding language forms from these different perspectives

of use will enable clinicians to further address the different aspects of communication required for meaningful and satisfying interactions in everyday social life.

INTRODUCTION

In the late 1970s, Audrey Holland emphasized the importance of 'functional communication' rather than 'linguistic accuracy' for individuals with aphasia, noting that they could often 'communicate' better than they could 'talk.' Her approach inspired many to explore why and how this could be so, and to look for avenues that tapped everyday communication skills, rather than the person with aphasia's performance on decontextualised language tests. In many ways, the early work of Holland and Martha Taylor Sarno (Holland, 1979, 1980, 1982a, 1982b; Sarno, 1969, 1980) provided the impetus in aphasiology for not only investigation of functional performance in a variety of everyday tasks and situations, but also much of the work carried out in the areas of Conversation Analysis and discourse analysis, as both these methodologies can be used for addressing real-life, everyday communication. A myriad of assessment tools, analyses, and treatment methods have now been developed that directly address an individual's functioning in a variety of contexts with a variety of conversation partners. Social factors such as relationships between conversational partners, degree of shared knowledge, and techniques for repairing communication breakdowns, are all now being discussed, as well as the nature of the ideational content of the language being conveyed. While much of the work in functional communication, however, has focused on multi-modality resources (including gesture, facial expression), we suggest that specific linguistic resources also need to be further explored if these too are to be maximally exploited in aphasia therapy from a functional perspective.

To date, 'language' has been largely regarded in the field of aphasiology as a symbolic system governed by a set of rules that must be mastered for a speaker to produce coherent speech (e.g., Shapiro, Gordon, Hack, & Killackey, 1993; Thompson, Shapiro, Kiran, & Sobecks, 2003). Much research has focused on single word production in terms of referential semantics, while

sentence level production has focused around accuracy of particular clause types. The notion of 'linguistic' analysis to many clinicians conjures up complex syntactic formulae rather than everyday communication. Such approaches to language function emanate from an *intra*-psychological perspective, in which language is seen as primarily a system operating within the individual's brain that is then applied for social purposes (e.g., Caramazza & Hillis, 1990; Kay, Lesser, & Coltheart, 1996). An *inter*-psychological approach, on the other hand, sees language as being shaped by that social purpose, and that contextual and social constraints are integral parts of 'the system' (Halliday, 1994). From this perspective, language cannot be comprehensively examined and analysed outside of real social contexts. Work by Beeke and colleagues (Beeke, Maxim, & Wilkinson, 2008; Beeke, Wilkinson, & Maxim, 2007) has demonstrated ways in which language use in conversational contexts differs significantly from monologic and artificial task contexts, this work shedding different perspectives on the nature of agrammatism. Likewise, others are exploring the ways that varying contexts and different social purposes can affect language form and function (Avent & Austermann, 2003; Beeke, Maxim, & Wilkinson, 2007; Borod et al., 2000; Simmons-Mackie, Elman, Holland, & Damico, 2007; Ulatowska, Olness, Keebler, & Tillery, 2006).

In this paper, we will explore language as a set of 'meaning-making resources' that are crucial to everyday communication and which enable speakers not only to convey information to each other but also to maintain social relationships in the sense of both transaction and interaction. We relate this approach to the primary way(s) in which language use has been examined in aphasia to date, while exploring language's role in social life rather than language as a set of syntactic/semantic constructs that exist outside of the communicator's everyday environment. Language in this sense is seen as 'functional' in that it performs multiple purposes

and is used across contexts. To explore such functional language, discourse as language in social interaction will be the focus of discussion, with an emphasis on expressive language resources rather than receptive language. The first section of the paper will elaborate on the different kinds of meanings that language conveys in terms of information content, interpersonal attitudes and stances, and the actual coherence of the text/discourse. The function of words beyond immediate referential function and grammatical category will be explored. The second section will then focus on the systematic relationship existing between such meanings and particular contexts, and how an understanding of this relationship can inform clinical endeavors.

FUNCTIONAL MEANING-MAKING

A primary function of language is for humans to convey information to each other or request services of some kind in a variety of situations (e.g., relating events that happen to them, giving someone directions, asking for services such as in a shopping or other service encounter). Different contexts require different kinds of vocabulary and different expressions that are suitable to that particular context. Such contexts can be classified according to 'genres' such as narrative, recount, exposition, procedure, protocol, report, explanation, and interview (Butt, Fahey, Feez, Spinks, & Yallop, 2000).

However, people do not only give information of a concrete nature to each other that has some inherent 'truth' about it. They put their own 'spin' on the information they give to either create an entertaining or emotive story, a convincing argument, a diplomatic inquiry and so on. In this sense, speakers are creating *interpersonal* meanings (Eggins & Slade, 1997/2004; Halliday, 1994; Martin & Rose, 2003). For example, a recount of events is not necessarily a true recount of facts. It is the narrator's version of events, with emotive language used at times to

give an opinion as to what the participants in the recount were like, what the effects of the events were, what the intensity of the events were and so forth. Such 'spin' then provides an interpersonal aspect to the discourse and provides a starting point from which a conversation partner might decide to agree or disagree, or at least to have a reaction that might promote a social encounter. Language is purposefully used to engage others as well as simply convey certain types of information. Speakers can construe their own identity and authority and choose to align or disalign themselves with potential conversation partners through their choice of words and particular grammatical constructions. In addition, they adjust their style of language according to whom they are talking. For example, language may be relatively 'formal' if talking with someone who is unfamiliar or has higher authority than the speaker. Conversely, contracted grammatical forms and shared 'local' vocabulary may be used with friends.

Another function of language is to create coherent messages (Halliday, 1994; Halliday & Hasan, 1976; Hunston & Thompson, 2000). For discourse to hang together in a logical and organized way, certain linguistic devices such as conjunctions and continuants (e.g., *however, therefore*) are used. Communication will break down if there is no continuity or coherence to a speaker's discourse. This occurs during both monologue and dialogue. In monologue, the speaker must maintain coherence within his or her own discourse; while in dialogue, he or she must be able to continue on from the previous speaker, using similar vocabulary, referring to what has just been said, and developing the topic.

Language consists of numerous devices that perform these different functions. Ideational (informational) content has been the primary focus in aphasiology and clinical practice to date, with an emphasis on linguistic form rather than function. However, when one looks at language in the above ways, aspects that relate to more than informational content and to language

function as well as form are highlighted. In this way, the role of language in social interaction is further illuminated. Different types of nouns and verbs have different meanings that are used for specific purposes. Different sentence types and grammatical constructions have similar but varied applications. As Ahlsen (2005) pointed out "looking at language and communication in different social activities provides clues to the roles of different determining factors behind the observed behaviours" (p.434). Hence, in exploring how language contributes to the construal of different kinds of social interactions, we may learn more about 'functional communication.' Each of the different aspects of language referred to above will now be examined, with reference to how these have been explored to date in relation to aphasia and how they contribute to 'functional communication' in people's everyday lives.

Language as information/content resource

One of the most researched areas in aphasia has been the aphasic speaker's ability to convey informational content. This has extended from the ability to name objects and actions at single word levels, to the ability to convey information at the sentence and discourse levels, with numerous measures available that attempt to capture these abilities. From a discourse perspective, measures such as the Correct Information Unit (CIU; Nicholas & Brookshire, 1993) reflect this focus on what Halliday termed 'ideational content' (Halliday & Matthiessen, 2004), and enable clinicians primarily to measure the amount of information a speaker can convey and the efficiency with which it can be conveyed in terms of time taken to produce it. While primary uses of these measures have applied to single and sequenced picture descriptions (e.g., Doyle et al., 2000), they have also been used to measure content produced in everyday discourse (e.g.,

Oelschlager & Thorne, 1999), although difficulties have been found in obtaining reliable measures under this latter condition.

At the single word access level, we know a great deal about aspects such as effects of word frequency, imageability, and familiarity (e.g., Nickels, 2002b; Robson, Marshall, Pring, Montagu, & Chiat, 2004) as well as factors such as 'semantic weight' (e.g., heavy verbs such as *smash, devastate* vs. light verbs such as *do, go*) (Bird & Franklin, 1996). However, the relationship between word-finding abilities on single word tests and during discourse/conversation remains equivocal (Herbert, Hickin, Howard, Osborne, & Best, 2008; Mayer & Murray, 2003). While studies measuring lexical retrieval in discourse currently attempt to control topic to control for effects of context, it is also of interest to explore further context effects. For example, what is the effect of topic? What amount and quality of vocabulary/lexical items are still available to people with aphasia in a variety of situations/contexts? How do individual speakers' word choices contribute to the re- establishment of that person's identity/attitude in particular situations? What kinds of words are needed for speakers to convey more than concrete information?

Further taxonomies extending the psycholinguistic notions of word frequency and imageability have been suggested by functional linguists who suggest that vocabulary can be categorized systematically according to function. For example, Martin and Rose (2003) described different kinds of entities, including various sub-types of concrete, abstract, and metaphoric entities (see Table 1). In this taxonomy, vocabulary can be examined in terms of its functional nature – everyday versus specialized or technical versus institutional versus generic. Such categories look promising in that they may take us beyond the current notions of lexical variety and access and relate them to functional usage according to context.

INSERT TABLE 1 HERE

In terms of actual grammatical categories, investigations of vocabulary/lexical access concerning word-finding difficulties in aphasia have predominantly focused on nouns (e.g., Hillis & Caramazza, 1991; Nickels, 2002a). However, taking a more holistic meaning-based approach, the *noun phrase* is also relevant here. For example, aphasic speakers are often unable to access the head noun of a phrase, but can begin the phrase with a definite article and adjective (e.g., '*the big uh…big…..'*)*. It must be noted that it is in the words surrounding the noun slot that meaning is also constructed – meaning that provides a context for the listener to guess what the head noun might be or that the target word is a noun. Hence, examination of determiners, numerators and adjectives in particular, as well as pre- and post-modifying phrases and clauses (e.g., *the thing* **with the red on it;** *the bit* **at the top;** *the one* **who is laughing**) may well be significant in the study of functional discourse and subsequently relevant to treatment goals and strategies.

To date, studies of verb usage in aphasia have largely utilized a formal grammatical approach to verbs, examining such aspects as argument structure (Bastiaanse & Jonkers, 1998; Kim & Thompson, 2000) and again aspects such as frequency (Breedin, Saffran, & Schwartz, 1998) and semantic 'weight' (e.g., Bird & Franklin, 1996). Looking from a semantic rather than grammatical perspective, however, Systemic Functional Grammar (Halliday, 1994) postulates that certain verb types or *processes* are characteristic of certain genres of discourse. For example, in a recount, material verbs (those conveying actions) and relational verbs (the verbs 'to be' and 'to have') predominate (Butt et al., 2000). The reason for this is that recounts involve actions and

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occurrences; hence action verbs are required. Recounts also usually contain descriptions (e.g., *the man was tall, it was dark)* and evaluations (e.g., *it was scarey, the car was well-cared-for*), while mental processes such as *think* and *believe* are less common, as are verbal processes such as *say* and *argue*. Material processes are also common in procedural discourse, while mental processes are more common in arguments and opinion-giving genres. In one of the few studies to examine verbs in relation to context, Armstrong (2001) reported on aphasic speakers' abilities to use mental (e.g., I *believe*….) and other evaluative processes (*it was awful* – the verb 'to be' here functioning as pivotal to the evaluation) in a recount, as well as the other varieties needed in this context (e.g., materials in particular). Findings showed that some aphasic speakers were able to use these processes effectively, while others did not. For example, two aphasic speakers in the 2001 study depended on material verbs to a larger extent than their non-brain-damaged counterparts, leading to more factual, but less evaluative and descriptive recounts; while overall lexical diversity in terms of type-token ratio was not hugely different between the aphasia and non-brain-damaged speakers, it was of interest that vocabulary specific to particular topics (e.g., *detonate* and *infiltrate* when producing a war recount, *diagnose* in a stroke recount) was used largely by the non-brain-damaged speakers rather than the aphasic speakers. In examining verb usage in aphasia from this perspective, it is thus possible to explore the different genres to which people with aphasia still have access, and their abilities to convey different kinds of meanings within such genres.

In terms of words other than nouns and verbs, other lexical items fulfill numerous social/functional roles within discourse. As just noted, the majority of investigations in aphasia to date have focused on nouns and verbs, but when considering discourse function, it is clear that people with aphasia use a range of linguistic resources. Ahlsen's (2005) study of communication

in a role play situation by a person with aphasia and a person speaking their non-native language explored the ways in which speakers who were restricted linguistically participated in an argument situation. In this study, the participants were asked to play the role of someone returning a sweater to a shop because it had shrunk after one wash. The person does not have a receipt and wants cash rather than a new sweater. It was also significant that the sales person is not the one who sold the original sweater. The aphasic speaker in this study had a limited vocabulary, the author summarising his words in terms of the following categories: politeness words and greetings, feedback words, adverbs of modality, quantity, strength, time, and place, and swear words. Words used in the role play reportedly reflected Hans' (the aphasic speaker) persistence in the situation and his attitude: *yes but, that doesn't work, anyway, you see* – all words and expressions typical of the discourse of an argument, but not words which would be typically addressed in aphasia rehabilitation activities. In describing this kind of speech, Ahlsen commented that the gesture and the speech were complementary in that they contributed together to the person's ability to participate in this context.

When further considering the role that context might play in word usage, it has been noted that a number of factors affect vocabulary variety in non-brain-damaged individuals (apart from personal factors such as age, education, gender). For example, variety can be affected by interest or proficiency at the activity in which the speaker is engaged (Ahlsen, Allwood, & Nivres, 2003). Avent and colleagues' study of a 65 year old gentleman, 21 months post onset of aphasia revealed a greater lexical diversity (in terms of type token ratio) and higher average CIU when he was placed in a situation of teaching a science class to children at an early education centre than when he was in an aphasia group treatment (Avent & Austermann, 2003). The authors termed the teaching situation a 'reciprocal scaffolding treatment' defined as a shared

learning situation, in which an apprenticeship model exists. They attributed the improved performance to the fact that in the school situation, the person with aphasia was the 'more skilled partner' and was given the opportunity through this situation to access familiar professional knowledge and vocabulary in this role (prior to his aphasia he was a science professor) to teach 'novices' – in this case children – who reciprocally provided him with language models and opportunity for natural interaction.

Some studies also indicate that the ideational content of the discourse may affect discourse adequacy or effectiveness, or coherence. For example, Borod and colleagues (2000) suggested that topic can affect coherence. They reported increased coherence in aphasic speakers when talking about emotive topics, with positive emotions appearing to contribute to better discourse in individuals with left hemisphere damage, as opposed to negative topics eliciting better discourse for individuals with right hemisphere damage.

Language as interpersonal resource

While we know that people with aphasia are able to convey restricted information in their everyday discourse, we also know that many have a relatively large degree of retained interpersonal resources that correspond to Holland's observation of them 'communicating' better than 'talking.' Indeed, Goodwin (1995) illustrated this well in his description of a severely aphasic gentleman who communicated via multiple modalities, yet only had three intelligible words: *yes, no,* and *and.* Supplemented by gesture and intonation, as well as retained turn-taking ability, he managed to participate in complex interactions and convey relatively complex ideas, of course assisted through co-construction of these with his conversation partners (Goodwin,

1995). Similarly Dronkers and colleagues (Dronkers, Ludy, & Redfern, 1998) described the relative preservation of pragmatic functions despite severe aphasia. However, while gesture and nonverbal resources are still available in many instances, what other kinds of language phenomena are retained in aphasic discourse? To illustrate some of these resources in the rest of this section, we will be referring to Example 1.

Example 1. Personal recount of stroke by 'Jim,' who has fluent aphasia (also present are SP, his speech pathologist, and 'Chris,' his son)

SP   What happened when you had your stroke?

Jim   My I had a spot, yeah I, ah I going on a little bit and then got straight up and then I went ssah like a like a like a leap and then ah ah got a little bit bletter as I went to rather then we went to…what's his name where you took me?

Chris The doctors.

Jim   No the place, tell them what the place is.

Chris The polyclinic.

Jim   Poly yeah. They wouldn't take us.

Chris Yeah.

Jim   They wouldn't take us. It was the day the girl got shot by the arrow. Because -

Chris With the bow and arrow.

Jim   Yeah, and then an ordinary lead hard me. He he he and he didn't do it for me. He didn't do it and they were supposed to put me on something and make it quick, you know what I mean? And you remember that don't you? Yeah and then, and then the…we were gonna

go (another year,) another year or something to get do the next day and have it again and

have another look weren't we? Right. Yeah right? And then we picked them up we said

no. We go we gonna left there we went straight the cor- the corplet, didn't we? You took,

you took me.

Wilcox and Davis (1977) were among the first not only to document the variety of speech acts[1]

used by people with aphasia, despite their aphasia, but also to highlight the effect of context in

providing different opportunities for people to use their retained competence. Wilcox and Davis

found a variety of differences when comparing conversations taking place in a group therapy

setting with those occurring in individual treatment settings. For instance, in the individual

therapy sessions, clinicians used predominantly questions, requests, and assertions, while the

clients produced almost entirely assertions (responses to the clinician's questions). In the group

setting, the clinicians acted very similarly, except that they asked even more questions and used

slightly more assertions and fewer requests; the clients asked more questions, made slightly more

requests, and made fewer assertions (Wilcox & Davis, 1977). Later work on communication in

group settings has confirmed that people with aphasia can use a variety of speech acts, thus

contributing to their overall communicative competence (Drummond & Simmons, 1995;

Simmons-Mackie et al., 2007). In Example 1, we also can see that Jim is able to use a variety of

speech acts (e.g., stating, requesting, commanding).

To look specifically at the role of relationships between interactants and to compare these

across different contexts, it is useful to use a broad conception of the functions of each 'move'[2].

For example, it is possible to describe the roles taken by interactants in terms of what is being

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[1] Speech acts were originally defined by Searle and involved a taxonomy encompassing such communicative acts as
requests, comments, acknowledgements (Searle, 1969).
[2] A 'move' is the unit of meaning in the exchange and may comprise one or more utterances.

given or received (i.e., information [knowing] or goods/services [acting]), the direction of the flow of meaning between interactants (i.e., giving or receiving), and whether the speaker is the giver (primary) or receiver (secondary) (Halliday & Matthiessen, 2004). Togher (Togher, 2000; Togher, Hand, & Code, 1997a, 1997b) has applied this framework to analyzing exchanges between individuals with cognitive-communication disability following traumatic brain injury. She found that in exchanges that involved the person with the communication difficulty finding out information, there were differences in opportunities to display communication competence with different partners. For example, while more scaffolding was provided in conversations with therapists and family members (due to shared knowledge), some individuals were able to display higher communicative competence in the higher demand situations (bus timetable enquiry; police officer) during which knowledge was not shared. She also found that shifting the role of the person with communication difficulty from that of receiving information to that of giving information resulted in greater opportunities for communicative competence to be displayed. In Example 1, Jim and Chris share the knowledge about the circumstances of Jim's stroke, and so although Jim is in the speaker role of being the primary provider of information, he repeatedly requests confirmation from Chris during his telling of the tale. Chris does not appear to be providing scaffolding, but rather adding information for the speech pathologist to confirm the information Jim is providing (and yes, the bow and arrow event did occur).

The conversational management of the interpersonal exchange of information has been explored through the approach of Conversation Analysis (Sacks, Schegloff, & Jefferson, 1974; Schegloff, Jefferson, & Sacks, 1977). The analysis of turn-taking between speakers in a conversation allows the machinery of pragmatics to become visible, as turn-taking provides the structure for regulating the negotiation of who speaks when and for how long. Studies of

conversation involving aphasic speakers have demonstrated their continued access to this turn-taking machinery despite aphasia (Goodwin, 2003), although the repair of communication breakdown typically extends more frequently over a longer series of turns and involves greater participation of the communication partner (Beeke, Maxim et al., 2007; Ferguson, 1994, 1998; Laakso & Klippi, 1999; Perkins, Crisp, & Walshaw, 1999). Their continued access to the turn-taking structure provides people with aphasia with an important communication resource, as they are able to maintain a flow of interaction with their partner despite linguistic difficulties and are able to use their turns to handle communication breakdown (e.g., seeking assistance with word-finding, repairing prior turns). Conversation analysis has provided speech-language pathologists with a strengths-based approach to the assessment of natural interactions involving people with aphasia and their partners (e.g., Whitworth, Perkins, & Lesser, 1997), as well as frameworks for intervention (e.g., Locke, Wilkinson, Bryan et al., 2001). These approaches are consistent with the invention developed by Holland and colleagues described as Conversational Coaching (Hopper, Holland, & Rewega, 2002) and provide important theoretical background to the work emerging involving conversational scripts in intervention (Cherney, Halper, Holland, & Cole, 2008; Youmans, Holland, Munoz, & Bourgeois, 2005). In Example 1, Jim holds the floor, and although there are repeated turn transition opportunities (provided through Jim's checking), neither the speech pathologist nor Chris take a substantial turn – partly due to the rate of Jim's delivery, which could be described as 'press of speech.'

Moving deeper into the way language is used, we can drill down to look at the available resources at the lexical and grammatical level that are used to reflect, instantiate, and maintain role relationships between people. The types of lexicogrammatical resources that speakers use for interpersonal purposes typically involve the use of grammatical mood (e.g., framing a

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statement as a question for politeness purposes) and changes that soften or strengthen the utterance with reference to the stance of the speaker (e.g., adding modal adjuncts - I *definitely* want….; *Maybe* I will….; changing the form of the finite part of the verb – I *might* do…., I *will* do…). Research suggests that considerable resources remain available to aphasic speakers to use their available language in these ways. Ferguson (1992) examined use of these linguistic resources in a number of aphasic speakers in conversation and in the role-play sections of the CADL (Holland, 1980), and found that across the speakers there were examples of all interpersonal resources being used. Similarly, Mortensen (2005) found retained use of these interpersonal linguistic resources in the written discourse of individuals with cognitive-communication disability from traumatic brain injury. In Example 1, Jim's use of 'would' (e.g., they *would*n't take us) demonstrates access to interpersonal resources of language, as he modalises the happening.

Other kinds of resources that enable the speaker to express opinions and give their particular 'slant' on events or information come under the heading of 'evaluative language.' While one can say that 'the man drove the car,' if one said 'the maniac drove the car,' this puts a particular slant on someone driving a car and conveys a lot of what is termed 'interpersonal' meaning, rather than purely referential meaning. Evaluative meanings (Labov, 1972; Martin & White, 2005/2007) can be expressed through nouns (e.g., *idiot, maniac*), verbs (e.g., *raced, enthused*), adjectives (e.g., *fantastic, horrible*), intensifiers (e.g., *very, clearly*), or complete phrases or clauses (e.g., *without a doubt*). If one examines this kind of language, it can be seen that it is this emotive or opinionated language that enables speakers to assert who they are (i.e., their identity) and what their perspective on events is. In Thompson and Hunston's words, evaluative language involves linguistic devices that "express the speaker's or writer's opinion,

and in doing so … reflect the value system of that person and their community" (p.6, Thompson & Hunston, 2000). The purpose of evaluative language is also "to construct and maintain relations between the speaker or writer and hearer or reader" (p.6). To date in aphasiology, the emphasis has been on referential meanings (e.g., *man, car*), but there are strong arguments for suggesting that such evaluative aspects of language provide an important resource for the expression and reflection of personal identity (Armstrong, 2005a) and thus provide an additional avenue for therapy directed at the renegotiation of identity after aphasia within a social participation framework (Shadden, 2007). Additionally, early work by Sherratt (2007) on the language of people with cognitive-communication disability associated with right cerebral hemisphere damage suggests that further attention to this linguistic resource is warranted in cognitive-communication disorders as well as aphasia. In Example 1, Jim uses some evaluative resources (e.g., '*little*', '*hard*', '*better*').

Thus, in summary, functional communication in everyday situations necessarily involves aphasic speakers in interactions with a wide range of people operating in a wide range of institutional and personal roles. The research indicates that interpersonal aspects of communication are typically strengths for people with aphasia but a challenge for those with cognitive-communication disability. In both these situations, a deeper look at the discourse features that underlie the interpersonal aspects of their communication provides for an understanding of important areas to assess as well as directions for intervention.

Language as a resource for discourse coherence

What is functional about cohesion/coherence? Without this, much of our discourse is not understandable to others. In interactions, we must have some kind of shared reference and be

able to interpret to what the other person is referring. For conversations to flow, we must be able to pick up the continuity of the topic and make the response to a previous utterance relevant. Conjunctions have a cohesive function in that they allow the speaker to join thoughts together in a coherent way – see **Example 2**.

Example 2. Case description – conjunctions as a residual resource for meaning

Bob (not his real name), who was seen recently by one of the authors, had a repetitive utterance as his main form of communication. However, these utterances were occasionally interspersed with such conjunctions as *and, however,* and *but*. These were always said with emphasis and certainly assisted the listener in getting a general feel for what he was trying to say at least, and conveying the interpersonal as well as textual meanings he was trying to convey. Examples of his usage were: *carter carter carter carter* (intoned as a statement)…*HOWEVER*….*carter carter carter carter…AND…carter carter…BUT…carter carter* …. It was the use of the conjunctions that accorded him some credibility with his conversation partners that he knew what he was saying but just 'couldn't find the right words.' It conveyed the feeling that he was sharing an argument about something for which he had strong feelings, but which was open to debate. It was as if the last corner-stone of his coherence had been left, contributing to at least some feeling for the listener of some communicative competence.

Pronoun usage has not been the focus of many aphasia treatments to date, and yet it too has important functional implications and can assist both the person speaking and the

conversation partner with reference – one of the key components of shared communication – see **Example 3**. While researchers have largely examined pronouns referring to things/people within their own discourse (i.e., endophoric reference) (e.g., Coelho, Liles, Duffy, Clarkson, & Elia, 1994; Ellis, Rosenbek, Rittman, & Boylstein, 2005) speakers also use pronouns exophorically (i.e., referring to their environment), and this is an important area for further research and to harness in therapy.

Example 3. Case description – pronouns as a residual resource for meaning

Bob also has retained pronouns – normally a cohesive feature of discourse. He uses pronouns in that he either points or nods towards the person to whom he is referring, or the listener must infer the referent from shared knowledge – this is when the pronouns are perhaps of most importance – the listener is then cued in to whether he is discussing a male or female or groups of people and narrows down the potential topics somewhat, depending on the degree of shared knowledge. For example, an unpleasant incident had occurred to Bob in the nursing home where he lives. It involved several nurses and nursing attendants, only one of whom was a male. When Bob was talking about the incident (obvious largely from gestures), use of the pronoun *he* directed the conversation to the role this particular male nurse involved in the incident.

An additional aspect of the textual resources of language that is important to consider for people with aphasia is the channel of communication (e.g., spoken, written, gestural). So far in this paper we have focused on spoken and written channels, but it is important to recognize that, just as for non-brain-damaged speakers, the so-called paralinguistic resources of gesture and prosody are invaluable resources that add meaning to the exchange (Ferguson & Peterson, 2002; Rose & Douglas, 2008). Functional communication approaches commonly make use of gesture as both alternative and augmentative resources (e.g., Glindemann & Springer, 1995; Jacobs, Drew, Ogletree, & Pierce, 2004; Martin, Thompson, & Worrall, 2008), and it is important to note the close interrelationship of gesture within the total meaning-making system to avoid assessing or treating one without the other. In a similar way, intonation often plays a crucial part in the exchange of meaning; for example, for people with global aphasia using perseverative stereotypic utterances, only their intonation may signal the different speech functions of the utterance, and for people with fluent extended jargon, it is often the intonational contour of the utterances that listeners use to guide their understanding of possible meanings. Also, intonation appears to make an important contribution to the resources that communication partners utilize when highlighting information for people with auditory comprehension difficulties (Ferguson & Peterson, 2002), and so may form part of interventions such as conversational coaching.

FUNCTIONAL SITUATIONS AND LANGAGE USE

In this paper we have argued for greater recognition of the role of language in relation to understanding, assessing, and treating functional communication in everyday settings. We have

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discussed the previous research that illustrates the most salient aspects of language use with reference to three main language functions: talking about something, establishing and maintaining a relationship with a communication partner, and the way language is used to bind meanings into coherent messages. In discussing each of these aspects, we have noted the inextricable relationship between the linguistic options that arise for that particular function within particular contexts of situation. This close relationship between language use and context is an important consideration for speech-language pathologists in guiding their clinical decision-making about what types of language samples they need to obtain to validly assess clients, and what everyday situations will be most relevant and productive to focus on in therapy. Without an understanding of the systematic relationship between particular aspects of the context of situation and the particular aspects of language that are typically drawn upon within that context, the speech-language pathologist is left with commonsense, yet essentially ad hoc, selections for assessment and intervention. The 'contextual configuration' (Halliday & Hasan, 1985) of particular interactions can be used to describe the particular aspects of the field, tenor, and mode of the discourse and to guide the selection of which types of discourse (genres) need to be selected for individual clients (see Table 2).

INSERT TABLE 2 HERE

Using principles underlying the way(s) in which language use varies in a relatively predictable way according to different contexts of situation (Fairclough, 2003; Martin, 1997), the speech-

language pathologist can target specific aspects of language use for assessment and treatment. For example, a speech-language pathologist may configure the following two contexts of situation for assessment to sample a range of the client's capabilities. In these examples, Field refers to the general nature of what is happening and the content, Tenor refers to who is taking part in the interaction and the relationship between participants (e.g., familiarity, formality required), and Mode refers to the role the language is playing (e.g., oral, written, face-to-face, telephone) (for further discussion of these aspects of context, the reader is referred to Armstrong, 2005b; Armstrong, Ferguson, Mortensen, & Togher, 2007; Halliday & Hasan, 1985).

CC1: Contextual Configuration 1

Field: Talking about stroke (familiar), in clinic (setting)

Tenor: Talking with clinician (less familiar), clinician-patient relationship

Mode: Formal register, interview, spoken with visual, language constitutes exchange

CC2: Contextual Configuration 2

Field: Finding out about driving license regulations, in government department

Tenor: Talking with government employee (unfamiliar), service provider – customer relationship

Mode: Formal register, spoken on telephone (no visual), language constitutes exchange

Previous research that has explored the implications of different genres and different contexts of situation has supported the contention that attention to this aspect is of clinical importance. Ferguson's research (1994) on conversational repair found different aspects of the field of discourse provided different opportunities and demands for repair by both people with

aphasia and their communication partners. Findings indicated that formal testing situations restricted the opportunities for demonstrating the capacity of people with aphasia to negotiate interactive repair, and conversational chat reduced the extent to which partners would repair (so that conversational flow was maintained) in comparison with tasks with a high demand for clarity and specificity of information. Other research has found that different aspects of tenor affect the conversational competence demonstrable by people with aphasia, so that talking with partners with professional and personal experience of aphasia provided greater scaffolding for effective communication in contrast with talking with someone who has little experience with or understanding of aphasia (Ferguson, 1998). Togher's work (as discussed previously) has also demonstrated the substantial effects of partners' role (information giver or receiver) and status (family member, clinician, member of police force) on the communication of individuals with cognitive-communication disability following traumatic brain injury (Togher & Hand, 1998; Togher et al., 1997a).

While research into the effects of context on language use has relied heavily on recorded and transcribed discourse sampling, such methods are not typically viable in a busy clinical setting, with Armstrong and colleagues (Armstrong, Brady, Mackenzie, & Norrie, 2007) recently suggesting a transcription-less method as being a viable alternative. However, with the research findings on discourse as a guide to both sampling and interpretation of findings, we would suggest that the functional communication literature, including much of the work of Holland, provides a number of clinically useful methods for assessment and measurement of intervention outcomes. In 1982, Holland argued for the importance of assessing people with aphasia outside the clinic room to obtain valid information (Holland, 1982a). She described the development of an observationally-based set of ratings that could be used following home visits, and we suggest

that this research demands further attention as a means by which comparisons of aphasic communication across settings could be made. In relation to the clinical assessment of interactions with everyday partners, Kagan and colleagues (Kagan et al., 2004) have developed two useful rating scales – the Measure of skill in Supported Conversation for describing partner contributions and the Measure of Participation in Conversation for describing the communication of the person with aphasia. These scales provide a useful means to make valid observations in relation to the aspect of the tenor of discourse across contexts of situations. There are some methods for analyzing aspects of the mode of discourse within a research context - for example, Armstrong's work on cohesion (Armstrong, 1991), and Klippi's detailed conversation analysis of aphasic interactions (Klippi, 2003); however, there is a need to consider further developments of tools for this aspect of language use for everyday clinical purposes.

CONCLUSION

In this paper we have suggested that the functional approach to communication pioneered by Audrey Holland has ensured that research and clinical work with people with aphasia has stayed closely related to their everyday discourse needs. As both discourse analysis and conversation analysis have been increasingly applied in the field, we believe that further 'un-packing' and clarification of the specific skills and behaviours which contribute to 'functional communication' will further enhance aphasia assessment and treatment strategies. As we look to the future of providing relevant and socially grounded treatments for aphasia, we argue that theories of context, as well as detailed empirical findings about everyday discourse can further guide

clinicians in their systematic selection of language sampling for assessment and toward a well-grounded selection of functional contexts for intervention. While this paper has ostensibly focused on expressive language resources, the negotiated nature of communication in everyday contexts also compels us to explore the effects of receptive language abilities, as well as the nature of other expressive modalities such as gesture and facial expression. Future studies need to examine all of these areas to gain a comprehensive picture of functional communication. Once again, however, it is recommended that studies be conducted within a theoretical construct of context so that systematic and integrated analyses can add to our knowledge of functional communication.

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TABLE 1
Kinds of entities – Reprinted with permission from Martin & Rose (2003)

Indefinite pronouns		Some/any/no thing/body/one
Concrete	everyday	man, girlfriend, face, hands, apple, house, hill
	specialized	mattock, lathe, gearbox
Abstract	technical	inflation, metafunction, gene
	institutional	offence, hearing, applications, violation, amnesty
	semiotic	question, issue, letter, extract
	generic	colour, time, manner, way, kind, class, part, cause
Metaphoric	process	relationship, marriage, exposure, humiliation
	quality	justice, truth, integrity, bitterness, security

TABLE 2

Systematic guide to the selection and design of everyday functional situations

Key aspect of context of situation	Role of language	Key aspect of language use	Key aspects when selecting assessment & treatment
Field	Exchange of meaning about what is happening	Vocabulary, syntactic-semantic relations within the clause (e.g., who/what is doing what to whom, when, where, why, how) Taxonomic relations within linguistic system	Topic (e.g., familiarity, technicality) Setting
Tenor	Reflect, establish, & maintain role relationship between interactants	Mood/modality (e.g., shading meaning, politeness) Speaker role (giving/receiving information/goods & services)	Partner (e.g., familiarity, power/status) Role (e.g., knower or recipient, actor)
Mode	Instantiating & binding meanings	Channel (verbal, non-verbal modality; spoken, written) Cohesion including aspects of reference	Accompanying action (e.g., while playing cards, at the shops), or constituting exchange (e.g., chat, interview)