Cognitive orthotics are devices that help us organize our abilities and behaviours, thereby enabling us to undertake complex activities more efficiently (Hutchins, 1995). To date, there is little research that systematically examines how people with aphasia develop and use cognitive orthotics to negotiate and distribute cognitive and communicative effort. Accordingly, in this qualitative study we pursue the following research question: how do people with aphasia and skilled neurotypical facilitators use cognitive orthotics in group therapy settings? We video recorded three different facilitators interacting with five groups of people with aphasia (each group was composed of between 3 and 9 people with aphasia). In total, approximately 15 hours of footage was reviewed and analyzed.

Frameworks developed in the literature on cognitive ethnography provided the conceptual lenses which guided our investigation. In particular, Goodwin's exploration of communicative abilities in people with severe linguistic processing impairments (2006b), research on tool use (Hutchins, 1995; Norman, 1993), and Systemic Functional approaches to understanding the role that language plays in social action and identity construction (Eggins & Slade, 2005) informed the way in which we scrutinized and processed the data.

Our results show the participants used a range of devices to accomplish conversational goals; pencil-and-paper, dry erase boards and iPads are some of the artefacts observed in the corpus. Co-constructing of utterances, comprehending interlocutors' turns, initiating and successfully carrying out communal word searches, selecting topics and ensuring long-range discourse coherence are examples of intra-conversational cognitive challenges that conversationalists negotiated through the deployment of orthotics. Overall, people with aphasia in our study enlisted orthotics to configure their capacities in ways that aligned well with relevant task demands and made optimal use of available resources. Importantly, the ways in which orthotics were put to use was driven by the demands of conversational interaction and the people with aphasia themselves. The neuro-typical facilitators / speech-language pathologists were adept at minimally managing events to promote sustained and accessible interactions.

Studies on cognitive orthotics involving neurotypical populations show that the distribution of cognitive effort across orthotics and individuals essentially is the default for human cognition in most natural settings. Our results show that the theoretical principles derived from those studies are robust, but that implementation is driven (not surprisingly) by the specific configuration of cognitive-communicative resources available. Furthermore, like many other researchers working in cognitive ethnography, we found that the most useful unit of analysis for elucidating social action in the groups we studied was the cognito-communicative system composed of (at a minimum) the interlocutors, their linguistic processing abilities, the utterances they co-constructed, the artefacts they employed and the shared set of ideas and background knowledge that influences interaction (to use Clark's terminology, the web of interdepencies (1997)). Current practices in applied clinical linguistics and speech-language pathology which conceptualize language and cognition as separate phenomena, and privilege the isolated, orthotic-less individual during assessment and treatment, would thus appear to be highly questionable.

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