

V Conclusions

Throughout this thesis language as a means of communication from a functionalist approach has been considered. As it has been stated, language is, and will always be a natural tool developed through centuries of evolution for facilitating human life. It is by acknowledging this idea that the focus of this research has regarded the ability of people suffering closed-head injuries in Mexico City to comprehend both the SP and the NSP using extra-linguistic communication. The aim of this research was to find out if there was a difference in closed-head injured participants' comprehension between SP communicative actions and NSP communicative actions. It was also necessary to compare the similarities and differences in communicative actions comprehension (standard and non-standard) between using linguistic communication and using extra-linguistic communication. Finally, this research meant to compare the results obtained at the Bara et al.'s original study (2001) and this replication considering that the differences could possibly be explained by language differences and cultural differences between these studies.

5.1 The research

Through the second chapter of this thesis, mayor work in the area of this research has been discussed (specific and general). It has been shown that neurolinguistics has a long history of research although it is considered a new area of study and

that interdisciplinary research between neurology, cognitive linguistics, pragmatics, among others, is necessary for fully understanding how our mind works not only concerning language but communication in general, which according to Givón (2009) is the function, the ends, and the origin of language. A long history of wondering the causes and results of neurological damage (genetic or due to a trauma) has helped humans to better understand our brain, our perceptions of the world and ourselves. Following that line, this research proposes a comparison between a control group and closed-head injured participants, the use of extra-linguistic communication and linguistic communication and finally, between previous results proposed by performing this kind of research and the current findings. This was by no means an easy task and several limitations, especially for contacting the clinical participants and developing the material, were faced along the way. The protocol that was followed required several scenes that the researcher needed to develop herself and that due to economic restraints and time limitations, did not stay as close to the original material as it was wished. The setting in which the task was performed in the case of the closed-head injured participants was not as optimal as was desired. Possible distractions such as other patients talking, people walking by and noise surrounding the participant could have slightly affected the participants' performance through the tasks and therefore affected their results.

5.2 Results

The results found through this research indicated that in the case of participants suffering a closed-head injury in Mexico and as Bara et al.'s (2001) study in Italy, the performance of these participants resulted slightly lower than the control group in the task of comprehending a successful SP (simple communicative action and complex communicative action). The participants suffering of this trauma rated much lower in the task of comprehending a successful NSP (successful deceit and successful irony); and they rated the lowest in the task of comprehending that a failure to understand a NSP has occurred (failure of deceit and failure of irony). This could suggest a malfunction of certain cognitive processing devices particularly affecting the well functioning of the meta-level of the conversation game, which decides to take a SP or a NSP (a task which was not entirely successfully accomplished by the participants suffering of a closed-head injury in this study as it was shown in the cases of successful and failure of deceit and successful and failure of irony). Furthermore, it shows a pattern in complexity which is equivalent to the same pattern found by Bara et al. (2001). This pattern suggests that for people suffering from a closed-head injury, "irony" is a more difficult communicative act to recognize than lying. Additionally, this suggests that for these specific clinical participants it is significantly harder to recognize that a communicative action has failed if this communicative action has followed a NSP. Vice versa, it becomes more difficult for them to comprehend the NSP communicative action if there has been a failure to communicate resulting of the NSP communicative action.

The findings of Bara et al.'s study (1997) and the results of this study suggest that the same pattern of complexity and failure to understand what is happening in the communicative action is followed whether communication is performed by using linguistic means or by using non-linguistic means. In other words, the cognitive processes that are damaged due to a closed-head injury are not purely linguistic but cognitive. In other words, the ability of the cognitive apparatus' meta-level to follow the SP or to block an inferential phase and take a NSP is present (or damaged in the case of closed-head injured participants) whether a person is dealing with a dialogue (linguistic communication) or a communicative action (extra-linguistic communication). This means that the meta-level of the conversation game is not specific of linguistic features and it covers extra-linguistic communication as well. Therefore, it could be considered that the communicative competence resulting of the well functioning of the meta-level is an umbrella competence covering linguistic competence and extra-linguistic competence as a means of communication. This suggestion fits perfectly into Givón's theory (2009) of language from a functionalist approach and his his concepts around the evolution of language development.

Finally, the comparison between the results obtained in this study and the results obtained by Bara et al. (2001) show the same pattern in the performance of closed-head injured participants using extra-linguistic communication. The percentages found were slightly different from one study to the other. Although these differences could not have been explained considering the language shift from one study to the other as explained in chapter four, a cultural variable

according to Hofstede's dimensions as quoted by McDaniel et al. (2007) such as individualism versus collectivism and power distance index could explain the discrepancies. However, the similarities between the results of both studies could suggest that no matter the language or the culture, closed-head injuries damage the same cognitive processes which would also agree with the theory of communicative competence as a supra-layer over linguistic competence. Even so, the amount of participants for this study cannot be considered as representative of the language nor the culture and further research with a bigger number of participants suffering of a closed-head injury is needed for sustaining the former claim.

In conclusion, and according to this thesis research questions, it can be suggested that the difference between the respective difficulties of the standard and the nonstandard paths we found in linguistic communication can also found in extra-linguistic communication. Secondly, it can be suggested that the specific features of extra-linguistic communication (such as its simultaneity versus the sequential characteristic of linguistic communication) affect its comprehension compared to that of linguistic communication. But these features do not affect different pragmatic phenomena in different ways. Furthermore, as this thesis' study had a considerably smaller population than the original study, the effects of language and culture variation may not be representative. Even so, it can be assumed that for this study, the similarities between both languages did not create a discrepancy between results. Moreover, the difference between this thesis' results and the original study's results could not be explained by cultural

differences; but further research considering a representative population is needed for proofing or disproving this claim.

This study is meant to be a contribution between interdisciplinary areas concerned with researching the relationship between the mind, communication and language. Through this thesis, strong connections between cognitive processes and communication as the roots of language have been proposed theoretically and as the explanation of the results found on this study. As human beings continue to try to explain how the world works and how human minds work it is no longer enough to rely on purely theoretical concepts. In the case of linguistics, participants can be found everywhere (some more difficult to gain access to than others). We should embrace the opportunity of test-proving theories by performing empirical studies because this will take us closer to the truth. Interdisciplinary research is needed for this task because reality (human mind or the world) is not area specific and every single area of research can and will be found coexisting with others in real life.