

What do gestures reveal about the coding of causality in Spanish?

*Andrea Ariño Bizarro*¹, *Aslı Özyürek*², *Iraide Ibarretxe-Antuñano*³

¹University of Zaragoza

²Max Planck Institute for Psycholinguistics

³University of Zaragoza

aribiz@unizar.es, Asli.Ozyurek@mpi.nl, iraide@unizar.es

Every day all speakers linguistically encode the relationship between causes and effects, regardless of the language in which they express themselves. However, not all languages divide and encode the causal information continuum in the same way (Kwon 2012; Sanders et al. 2009; Sanders and Sweetser 2009; Wolff 2003). Previous psycholinguistics studies on causality on Spanish have revealed that these speakers, when talking orally about causal relationships, usually draw their attention to the agent's type of involvement (accidental or intentional) in the development of the causal action (Ariño-Bizarro and Ibarretxe-Antuñano 2018, 2020; Gibbons 2003; Ibarretxe-Antuñano 2012; Melis 2020). Moreover, the key role of intentionality becomes evident not only in the variety of oral encoding options available in these languages (see Ibarretxe-Antuñano's (2012) Intentionality and Force Dynamics scale) but also in the way speakers categorise and recall these events (Filipović 2013, Ibarretxe-Antuñano et al. 2016, Pascual et al. 2017). However, the role of gesture in the encoding of intentionality of caused motion in this language has not been explored in detail yet.

In other languages, research has shown that co-speech iconic gestures not only offer information about objects and actions, but also about the speaker's subjective viewpoint (Debreslioska et al. 2013; Hostetter and Alibali 2019; Masson-Carro et al. 2016; McNeill 1985, 1992; Parrill 2010; Parrill and Stec 2018). The literature has shown that the viewpoint that the speaker assumes when gesturing either as the observer (in third person) or as the agent (in first person) can give information about the degree of the speaker's agentive interpretation of the causal action (Chan and Kelly 2021; Brentari et al. 2014, 2012; McNeill 1992). Indeed, recent studies (Chan and Kelly 2021; Debreslioska et al. 2013; Parrill 2010; Parrill and Stec 2018) have exposed that differences in gestural viewpoints align with linguistic differences in agentivity: (i) character viewpoint gestures are often accompanied primarily by transitive sentences (e.g., structures such as "I dropped the vase" followed by gestures in which the two hands present the action of dropping an object); and (ii) object viewpoint gestures are often accompanied by intransitive sentences (e.g., the structure "The vase dropped", while making a fist and moving downwards representing the trajectory of the object's fall). Thus, gestures can also be classified depending on their degree of agentivity.

Based on these studies, this talk investigates (i) the gestural encoding of agentivity in causality events, and (ii) the possible alignment (division of labour) and correlation between gestural and oral expressions in these events. Data were collected using Causality Across Languages project's videoclip stimuli (CAL, Suny-Buffalo, NSF BCS-1535846), a set of 58 live action videos of interactions among humans, natural forces and inanimate objects. Thirty-two native European Spanish speakers (from Aragón) in two tasks: (i) a non-verbal categorisation task where participants have to attribute different degrees of responsibility to the actions performed in the clips, and (ii) a verbal description task, where participants responded to the question "what happened?". All data were transcribed and encoded with the ELAN computer software (Lausberg and Sloetjes 2009). A total of 541 causal descriptions were transcribed, which make up the CAUES corpus of 23,873 words and 474 iconic gestures.

Results show that the intentionality is not only fundamental cognitively in Spanish, but also discursively, both orally and gesturally. Cognitive tasks show that, when assigning the degree of responsibility in causal events, Spanish speakers behave differently depending on the intentionality: the participants give greater attribution of responsibility when the agent has acted intentionally, than when the agent has acted accidentally. As far as the speakers' multimodal encoding, data show that these speakers choose a different gestural viewpoint and focus on a different type of semantic information based on the type of intentional causal event performed in the stimuli. In stimuli with intentional causal actions, speakers prefer the character's point of view and provide Path + Manner information combined in their gestures. In stimuli with accidental causal events, on the other hand, informants take the observers' viewpoint and describe Path information alone. Moreover, these gestural preferences are significantly correlated with the oral structures with which these gestures co-occur. Transitive constructions are aligned with the character's viewpoint gestures which congruently express high agency and, consequently, high intentionality and responsibility (the results are in line with studies such as Chan and Kelly 2021).

Index Terms: causality, gestural viewpoint, agentivity, Spanish, intentionality, cognition, multimodal description

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