

## Does the *mano a tulipano* gesture mark non-canonical questions? 🍷

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**Introduction.** Since the seminal work of Ekman and Friesen (1969), gestures have been seen as solving different communicative functions: emblems encode a conventionalized meaning (e.g., the gesture with the index finger and thumb touching to make an open circle, 🍷, means “okay/correct”); iconic gestures might specify what is being (linguistically) said (e.g., showing a fish size with arm gestures); other gestures can inform about the speaker’s emotional stance. In this talk, we focus on a symbolic gesture, the *mano a tulipano* (MAT), widely used by native speakers of Italian. In the MAT gesture, the hand is positioned at the level of the torso, with a “tulip” configuration (sometimes referred to as an “artichoke”), in which all fingertips touch (🍷); the tulip-hand then moves repeatedly up and inward towards the speaker. MAT can be used as a co-speech and pro-speech gesture. As for its semantics, co-speech MAT has been described in the literature as accompanying interrogative speech acts. Scholars agree that MAT can accompany non-canonical questions: Giorgi and Dal Farra (2018) report that MAT can accompany what they call “surprise-disapproval” questions; Poggi (2007) describes some of the questions accompanied by MAT as “pseudo-questions”. It is on the other hand controversial whether MAT is compatible with canonical questions, that is, in which the speaker is genuinely seeking to obtain information that they do not know, and that they assume the hearer knows and is willing to share (see a.o. Dayal, 2016). Poggi (2007) claims that MAT can signal also canonical, information-seeking, questions. Disambiguation would occur thanks to the tempo and amplitude of the movement (fast and restricted for canonical questions; slow and wide for non-canonical ones), and/or facial cues (presence or absence of frowning eyebrows, position of the head, etc.). In contrast, Ippolito (2019) argues that co-speech MAT can only accompany non-canonical questions: the MAT gesture would act as a presuppositional trigger that constrains its occurrence to non-canonical questions, in which the speaker is negatively disposed towards all the (contextually salient) possible answers.

**The study.** The goal of our research is to test whether MAT is only felicitous with non-canonical questions, as suggested by Ippolito (2019). To this end, we asked participants to evaluate the appropriateness of the fast tempo MAT gesture associated to two types of questions: a canonical information seeking question, and a non-canonical question, in which the speaker was clearly biased towards a (negative) answer. Ippolito (2019)’s account predicts that MAT would be judged more acceptable when it accompanies biased questions compared to information seeking questions. To check this prediction, two different studies were conducted, a binary forced-choice sentence evaluation task (Study 1) and a gradient acceptability judgment study (Study 2).

**Methods.** We administered a questionnaire in which participants had to read a context that ended with one character posing a question; they then had to play a video of a person making a gesture (only the torso being visible); the task was to evaluate the appropriateness of that gesture in the given scenario. In Study 1, the judgement was dichotomous (appropriate/not appropriate); in Study 2, it was on a 7-point Likert scale. Target items were 12 questions accompanied by the MAT gesture in two experimental conditions, rotated across two lists. In one condition, labelled “neutral”, the MAT gesture accompanied a canonical information-seeking question. For example, the question “Where did you get your haircut?” was uttered by Emily’s mother who was interested in trying the same hairdresser. In the other condition, labelled “biased”, the same gesture

accompanied the same question uttered by Emily's mother who, in this scenario, is negatively surprised as she did not expect any hairdresser to cut Emily's hair the way they did. The test also comprised 36 filler items, which had the same structure of the critical ones (a context that ends with a question accompanied by a gesture) but involved three other gestures, that were either appropriate (matching) or inappropriate (mismatching) in the given scenario. Participants were Italian university students (N = 57 in Study 1; N = 97 in Study 2).

**Results.** In Study 1, the acceptance rate of MAT in biased context was 91% (SD = .16); in neutral context the acceptance was significantly lower (58%, SD = .37; Est. = -2.6476,  $z = -9.191$ ,  $p < .0001$ , as resulted from the logistic mixed effects model on acceptance), albeit higher than mismatching controls that were almost always rejected. In Study 2, the same materials were judged on a 7-point scale. They show a similar trend: ratings of MAT in biased contexts were high (M = 6.1, SD = 0.84) and those of MAT in neutral contexts were significantly lower (M = 4.54, SD = 1.27; Est. = -2.6747,  $z = -10.24$ ,  $p < .0001$ , as resulted from the ordinal mixed effects model on ratings), albeit higher than the ratings of mismatching fillers (M = 1.24, SD = 0.37). Participants were in general consistent with their judgments across items, and no hint of bimodal distribution was revealed.

**Discussion.** Our results indicate that MAT is rated as fully felicitous when it accompanies questions whose interpretation in the given context is non-canonical; ratings and acceptability are significantly lower when MAT accompanies a canonical question in a neutral context that does not support the "negative attitude" reading. To account for the fact that MAT in neutral context was not straightforwardly rejected (as were mismatching fillers), we speculate that the presupposition triggered by MAT (which was not explicitly satisfied in the preceding context) was accommodated and the context enriched so as to support a biased question: for example, in the scenario presented above, even if the mother is presented as sincerely interested in knowing which hairdresser cut Emily's hair, the participant might accommodate the assumption that the mother did not expect her daughter to receive such a haircut, in order to satisfy MAT's presupposition. Notice that the intermediate acceptance ratings (4.5 on a 7-point scale) assigned to MAT in neutral contexts in Study 2 are indeed compatible with the ratings assigned to presuppositions triggering sentences in unsupporting contexts (Schwarz & Tiemann, 2017, a.o.).

**Conclusion.** We thus conclude that the results of our studies are consistent with Ippolito (2019)'s account of co-speech MAT as a gesture triggering the presupposition that the interrogative speech act is non-canonical. This kind of contribution seems analogous to the one offered by prosodic cues, since intonation permits to distinguish among canonical and non-canonical questions (Giorgi & Dal Farra, 2019), and challenges traditional classifications of gestures. Future studies should explore the relative contribution of phonological and gestural cues in the interpretative process.

## References:

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