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VIGILANCE MECHANISMS IN INTERPRETATION: HERMENEUTICAL VIGILANCE

Abstract

The mind has developed vigilance mechanisms that protect individuals from deception and misinformation (Sperber et al. 2010). They make up a module that checks the reliability and believability of informers and information. Vigilance mechanisms may also comprise a sub-set of specialised mechanisms safeguarding hearers from interpretative mistakes conducive to misunderstanding by triggering an attitude of *hermeneutical vigilance* (Padilla Cruz 2014). This causes individuals to check the plausibility and acceptability of interpretative hypotheses appearing optimally relevant. Relying on empirical evidence, this paper characterises this sub-set of mechanisms and suggests some avenues for future research.

1. The modular mind and comprehension

Relevance-theoretic pragmatics (Sperber, Wilson 1995; Wilson, Sperber 2004) endorses the massive modularity thesis, according to which the mind is a complex system of modules (Sperber 1994, 2001, 2005; Carruthers 2006). These are mandatory, deal with a specific type of input and perform their tasks very rapidly. Their output is the conceptual representations that the mind manipulates. Some modules involved in comprehension are the *decoding* module, which decodes linguistic input; the *pragmatic* module, which performs various types of inferences, and the *mind-reading* module, which attributes mental states like beliefs and/or intentions to our interlocutors (Wilson, Sperber 2004). Another module playing a crucial function in communication is the *social cognition* module, which computes information about

interlocutors' personal attributes (Wilson 2012). These modules are driven by the search for maximum gain in return for minimum allocation of effort and yield interpretative hypotheses about speaker's meaning.

Interpretative hypotheses are constructed through a process of *mutual parallel adjustment* of the explicit and implicit content of utterances (Carston 2002). Decoding and inference work simultaneously when parsing and disambiguating constituents, assigning reference to elements like pronouns or deictics, adjusting conceptual material through narrowing or broadening, or recovering elided material. These tasks result in the *lower-level explicature* of an utterance. This may be subsequently inserted in a conceptual schema alluding to the action the speaker is thought to perform by means of her words and/or to the attitude she is perceived to have towards the proposition communicated.[1] The output of this is the *higher-level explicature*. Both lower- and higher-level explicatures amount to the explicit content of the utterance. This may additionally be inferentially related to *implicated premises* supposed to be necessary in order to arrive at the expected *implicated conclusions*, or the implicit content of the utterance.

A hearer will only regard a particular interpretative hypothesis as the intended message – i.e. the speaker's *informative intention* – if he attributes a *communicative intention* to her – i.e. if he really thinks that the speaker intends to communicate that message. However, attributing a particular informative and communicative intention to the speaker does not involve that the hearer reaches the right interpretation and believes what she says. One thing is to infer a particular interpretation and correctly understand an utterance, while another is to give credibility to it.

2. Epistemic vigilance

Hearers are prone to believe information when they perceive their interlocutors as *benevolent* – i.e. sincere, honest – and *competent* – having a good command of the grammar and norms of use of their language (Sperber 1994; Wilson 1999). Empirical evidence reveals that this results from the operation of further mechanisms fine-tuned between the ages of two and four, which focus on our information sources and the information communicated, thus enabling children not to gullibly trust just any kind of information or interlocutor (Clément, Koenig, Harris 2004; Koenig, Harris 2007; Corriveau, Harris 2009; Mascaro, Sperber 2009). These mechanisms check the reliability and sincerity of communicators and the credibility of the information they give (Sperber et al. 2010). Among other relevant data and factors, such mechanisms take into account the beliefs about informers accrued from previous encounters (e.g. the degree of authority or expertise in specific matters, trustworthiness, etc.); moral commitments determining whether one should actually rely on some individuals; the reputation of individuals as informers distributed within

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[1]   Reference to the speaker is made through the feminine 3rd person singular pronoun, while reference to the hearer is made through the masculine counterpart.

a social group; signals about the speakers' competence in or knowledge about specific issues (e.g. assertiveness, seeming certainty or conviction, difficulties at finding appropriate words, frequent rephrasing, stuttering, hesitation or contradictions); speakers' gaze direction or avoidance of eye contact; the relevance of the information dispensed or its coherence with information already possessed, or emotional reactions that might condition what individuals think about others (e.g. (dis)like, sympathy, anger, etc.) (Origgi 2013: 224).

These mechanisms trigger an attitude of *epistemic vigilance* (Mascaro, Sperber 2009; Sperber et al. 2010): an alertness to the possibility of being deceived that results in a critical stance to both informers and the information that they provide (Sperber et al. 2010: 363). In other words, epistemic vigilance intervenes in communication by generating a cautious attitude that prevents individuals from being blindly, naïvely and uncritically gullible (Sperber et al. 2010; Mercier, Sperber 2011; Sperber, Mercier 2012). It moves individuals from a position of *indiscriminate trust*, where they believe information unquestioningly, or another of *gullible trust*, where they even believe information that contradicts previous personal observation, to a position of *sceptical trust*, indispensable for avoiding deception (Clément et al. 2004: 361–363).

Epistemic vigilance may be activated to varying degrees. The stronger its activation, the more deception and/or misinformation is likely to be avoided; the weaker its activation, the more individuals run the risk of being deceived and/or misinformed (Michaelian 2013; Sperber 2013). However, individuals may raise their vigilance and inspect the data and factors listed above more closely in order to be aware of the reasons why they should (dis)trust someone or some information. When they do so, they exercise *active vigilance* (Origgi 2013: 224).

3. Active vigilance and interpretation

Active vigilance involves an awareness of the heuristics deployed while processing – i.e. which inferences are made when determining if someone or some information is reliable – and the biases that might have affected it – i.e. why one reaches that conclusion. Such awareness must be of external factors, like cultural norms conditioning interaction and beliefs about other individuals and states of affairs spread throughout a milieu (*external vigilance*), and of internal factors, like moral commitments, personal norms and beliefs about other individuals and specific states of affairs, as well as emotional reactions to and biases against them (*internal vigilance*). Since these factors have an impact on what a person thinks about others or how that person treats some information, individuals need to distance themselves from the conclusions they draw about others and the information they dispense, tracing their origin and assessing the potential consequences that believing those conclusions might have. In doing so, individuals can reconstruct the inferential steps taken and the beliefs exploited while inferring. This enables people to adopt a critical attitude to them, which is essential to separate valid inferences from those that manipulation of certain beliefs, norms or biases might have yielded (Origgi 2013: 226–227).

Since exercising active vigilance and introspecting enable people to reconstruct their inferences when deciding whether to trust certain informers and information, people may also introspect and trace the inferential routes they follow when constructing interpretative hypotheses. To put it differently, individuals may bring to consciousness how and why they segment, parse and disambiguate linguistic material, assign referents, narrow or broaden concepts, recover elided material, embed lower-level explicatures under higher-level ones, use some contextual material as implicated premises or overlook another, or reach some implicated conclusions.

4. Hermeneutical vigilance

Children process ambiguous sentences rapidly and effortlessly, and construct good-enough meaning representations (Ferreira 2003). Between the ages of three and six, children have problems with interpreting, for instance, homophones (Khanna, Boland 2010). Upon suspecting misinterpretation, they resort to cues such as lexical information (Norris, McQueen, Cutler 2003) in order to evaluate the appropriateness of their interpretations, but erroneous interpretations seem to linger in their minds (Ferreira et al. 2002)[2]. Between the ages of six and eleven, children still have problems with assigning referents to pronouns, though eye movement tracking reveals that they revise initially wrong referents (Engelen et al. 2014). Eye movement also unveils that some four- and five-year olds revise interpretations of ambiguous sentences (Choi, Trueswell 2010). By the age of eight or nine, children seem to achieve adult-like processing abilities, even if they may still hesitate between competing interpretations of some types of sentences or elements therein (Lorsbach, Katz, Cupak 1998; Parault et al. 2005; Weighall 2008).

This suggests that the human mind is sensitive to inadequate interpretations. That sensitivity would progressively develop in parallel to the abilities to read other people's minds and attribute beliefs and intentions – essential for understanding, among others, irony (Wilson 2013) – or to assign credibility to informers and information (Mascaro, Sperber 2009). The frontal lobes, whose neurodevelopment requires time, would be responsible for such sensitivity. One of their components, the left inferior frontal gyrus (LIFG), seems to cope with resolution of some conflicts, among which are those of competing interpretations (Milham et al. 2001; Ye, Zhou 2009). Damage in LIFG correlates with inability to disambiguate garden-path sentences (Norris, McQueen, Cutler 2009) and underdevelopment of frontal lobes surfaces in processing problems (Woodard, Pozzan, Trueswell 2016).

Further evidence that humans develop some form of caution against misinterpretation can be adduced from the realm of humour. In puns and some jokes, humourists are aware of the potential ambivalence of some words or syntactic strings and can somehow anticipate how the audience may process them, as well as which

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2   Some five-year olds, in contrast, do not seem to rely on contextual information in order to revise misinterpretations.

contextual information they will use (Yus Ramos 2008). This enables humourists to cunningly guide and wittingly bias the audience to an interpretation that appears very reasonable or expectable because of its compatibility with the encoded linguistic material, the frames that the audience will very likely activate or the implicated premises that they will supply. At a certain point, however, a completely unexpected, maybe incongruous, interpretation suddenly surfaces as plausible and puzzles the audience, who might have assigned plausibility to the initial interpretation (Attardo 1993, 2014). Awareness of that new interpretation and its plausibility would be possible thanks to that caution, which enables the audience to discover the ambivalence of the text and where the humourist's wittiness and cunningness reside.

Vigilance mechanisms could therefore be thought to include a specialised cluster of mechanisms targeting interpretative processes and their outputs, which might be located in the frontal lobes, more specifically in the LIFG. Those mechanisms would check if the interpretative hypotheses constructed are plausible and acceptable, and therefore allow the hearer to arrive at the intended message. Such a cluster of mechanisms would be sensitive to flaws in interpretative hypotheses, and hence to their implausibility and unacceptability. Their sensitivity to possible mistakes in any of the tasks of mutual parallel adjustment would safeguard hearers from misinterpretation. Since epistemic vigilance protects individuals from deception, the mechanisms protecting from misinterpretation could be said to enact a form of vigilance that could be labelled *hermeneutical vigilance* (Padilla Cruz 2014). It causes individuals to test the plausibility and acceptability of interpretations before finally regarding them as intended. This cluster of mechanisms would be an evolutionary response to the need to determine the plausibility of interpretative hypotheses prior to their final acceptance (Mazzarella 2013).

5. Avenues for research

Individuals tend to adopt a trustful attitude towards others and the information they convey, so they do not constantly check if their vigilance mechanisms work and fulfil their functions efficiently. Individuals rely on these mechanisms and only check if their level of activation is adequate when they feel some risk of deception (Origgi 2013: 224). The same would be true of the mechanisms assessing the accuracy of interpretative hypotheses: on average they would be moderately activated and individuals would be confident enough that they do their interpretive tasks appropriately. Individuals would only verify that these mechanisms actually work well when they perceive misunderstanding. Likewise, their level of activation could be raised if individuals are alerted to serious risks of misinterpretation.

In argumentation, epistemic vigilance examines the validity, strength and coherence of claims and premises, and can detect fallacies and cases of deception (Mercier, Sperber 2011; Oswald 2011). Relevance theorists have recently re-analysed some *hearsay* particles and adverbials, evidential adverbials, parenthetical clauses, past participles and quotatives in some languages as devices enacting the activation of

epistemic vigilance. Such elements assist epistemic vigilance to determine whether to trust or discredit some information by indicating if the informer possesses adequate or enough evidence lending support to what is said (Ifantidou 2001; Wilson 2012; Unger 2012; Padilla Cruz [forthcoming]). Quite similarly, hermeneutical vigilance mechanisms could be alerted to the possibility of misinterpretation, even if innocuous and merely intended for the sake of amusement and enjoyment, as in some forms of humour. Stress, intonation and paralanguage, which have been analysed as elements guiding the construction of higher-level explicatures about the speaker's attitude to the proposition expressed (Wharton 2009), could also have evolved as a means to alert or over-activate mechanisms surveying interpretations and checking the correctness of interpretative hypotheses. It would therefore be insightful to investigate which tones or shifts in them, what types of gestures or facial expressions (e.g. sneers, gazes, winks, etc.) could serve this purpose in different languages and cultures.

In humour, for instance, contextual elements about which individuals may possess encyclopaedic information (e.g. the type of programme individuals are watching/listening, the type of people featuring therein, etc.), the medium where a text appears (e.g. headline, advertisement, sitcom, etc.), the type of text (e.g. a canned joke, monologue, sketch, etc.), images or accompanying discourse (e.g. phrases such as "do you know the one…?") could also be thought to alert hermeneutical vigilance mechanisms by signalling actual, potential or upcoming verbal playfulness. Additionally, textual features and elements unveiling the humorous nature of a text – lexical, semantic or syntactic ambiguities, metaphors, etc. (Attardo et al. 2011; Alvarado Ortega, Ruiz Gurillo 2012; Attardo 2014) – could similarly be argued to be exploited by hermeneutical vigilance mechanisms in order to assign plausibility to new interpretations. It would be interesting to chart which those elements are, whether they are used in specific humorous (sub-)genres, how they are perceived, their interrelation with other devices and, ultimately, their effects on the activation of vigilance mechanisms.

Exercising vigilance is no doubt necessary to overcome or avoid misunderstanding at the explicit and implicit level of communication, as hearers may reach erroneous interpretations, which accidentally appear relevant (Wilson 1999), and believe them to have been intended (Padilla Cruz 2013a). The fact that other individuals appear not to be fully competent communicators due to 'strange' or deviant behaviours may induce some hearers to wrong them and forge unfortunate stereotypes. In social epistemology, such wronging is known as *epistemic injustice* (Fricker 2007). One of its sub-types is *testimonial injustice*, which arises when individuals think that others should not be credited because of the quality of the information they supply. Another sub-type is *hermeneutical injustice*, which originates when individuals are not understood as they expect or deserve (Fricker 2006). Low level of hermeneutical vigilance may explain why testimonial and hermeneutical injustices are perpetrated: they may originate as a consequence of not revising conclusions about other individuals and their claims, which are drawn as a result of using inadequate premises in inferential processes. Future investigations could elucidate if hermeneutical vigilance mechanisms are inhibited in specific communicative contexts or by factors such as

lack of familiarity with idiosyncratic ways of speaking, differing patterns of think-ing, social closeness or distance, or emotional or psychological states like sorrow, anger, illness, tiredness, absentmindedness, etc. (Mustajoki 2012).

Misunderstanding is germane to communication in a first language, but risk thereof may exponentially increase when communicating in a lingua franca (LF) or second language (L2) being learnt and not yet mastered. A small-scale qualitative study shows that not being vigilant enough led learners of Spanish and English at different proficiency levels to credit erroneous interpretations in a series of listening comprehension tasks. Not adopting a critical attitude towards the ways in which they assigned referents or disambiguated sentences, identified illocutionary force or derived implicit contents made them misunderstand their interlocutors or differ-ent texts (Padilla Cruz 2013b). If vigilance mechanisms are part of our genetically-determined equipment, they perform their tasks regardless of the language used to communicate: individuals cannot prevent these mechanisms from performing their computations. However, since vigilance needs time to develop, it might also need fine-tuning to the peculiarities of an LF or L2. Researchers could also look into how it gets adapted to them, the amount of time adaptation requires and if instruction could help.

6. Conclusion

Ever since comprehension was described as a decoding activity, great progress has been made in unravelling its complexity and intricacies. Models from disciplines like theory of mind or philosophy of mind and empirical evidence from develop-mental psychology reveal that a series of sophisticated mental mechanisms are put to work when constructing interpretative hypotheses leading to understanding speaker's meaning. While one of those modules performs inferences and another is responsible for belief or intention attribution, another determines whether to (dis)trust individuals and information. This work has argued that vigilance mecha-nisms may include a set of devices that scrutinise the adequacy and acceptability of interpretative hypotheses as a way to avoid misinterpretation. It has also suggested avenues for future research, which will certainly contribute to fuller insights into the factors influencing that series of mechanisms, how they work and, ultimately, how the mind behaves in comprehension.

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