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Mario Dalmaso and Anna Lorenzoni

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The Social Side of Social Attention: New Perspectives and Implications

Mario Dalmaso and Anna Lorenzoni
Department of Developmental and Social Psychology, University of Padova

Visual attention is highly sensitive to spatial cues provided by others, with eye-gaze direction playing a primary role in shaping how we orient attention within different environments. While gaze-mediated attentional orienting can often be considered automatic, as it reflects our spontaneous tendency to look where others are looking, accumulating evidence suggests that it is also strongly modulated by social variables. These include characteristics of the observer, characteristics of the face providing the gaze cue, and the nature of their relationship. In this short review, we summarise and critically discuss some recent studies that have investigated the influence of such social variables on this form of social attention. Our discussion is grounded in the eyeTUNE framework (Dalmaso et al., 2020b), which we use not only to organise existing evidence, but also to propose refinements. In particular, we highlight the role of cultural background and dynamic contexts as key directions for future research, arguing that these may offer novel, relevant insights into how attention operates in everyday social interactions.

Public Significance Statement

In daily life, we spontaneously tend to follow the eye-gaze direction of others to gather information about what they are attending to. A growing body of research has shown that this form of social orienting is deeply influenced by various social factors related to the face providing the gaze, the observer, and their relationship. The picture emerging from this theoretical review confirms how gaze-mediated attention cannot be fully considered automatic, but rather a flexible and adaptive mechanism. A deeper understanding of this phenomenon can offer valuable insights into how attention operates in real-world interactions, with possible implications for different fields ranging from cross-cultural dynamics to artificial intelligence.

Keywords: social attention, eye-gaze stimuli, social variables, social cognition

The ability to orient attention in response to spatial cues provided by others is fundamental for human interaction, as it allows us to establish functional relationships with other individuals and the environment. Among the various spatial signals encountered in everyday life that can elicit visual orienting (e.g., head turns, pointing gestures, etc., see, e.g., Ariga & Watanabe, 2009; Dalmaso, 2023; Dalmaso, Lorenzoni, et al., 2025), eye-gaze direction is perhaps one of the most pervasive (Barbato et al., 2020; Capozzi & Ristic, 2018; Emery, 2000; Frischen et al., 2007; McKay et al., 2021, 2022). Orienting attention according to the direction of eye-gaze of another person represents a core mechanism of social attention. For instance, several developmental studies have shown that infants and children, by following the gaze of another person toward a shared object (a phenomenon known as *joint attention*), can acquire knowledge about the surrounding physical environment (e.g., object names), as well as more sophisticated social information, such as intentions, interests, and communicative goals of others (e.g., Mundy & Newell, 2007).

Gaze-mediated orienting can be investigated considering both covert and overt attentional mechanisms. As for covert attention, gaze-mediated orienting is generally referred to as *gaze-cueing of attention*, and the most common paradigm for its investigation (Driver et al., 1999; Friesen & Kingstone, 1998; Hietanen, 1999) involves participants manually responding to a peripheral target. Before the target appears, a centrally placed face with averted eye-gaze is shown, either gazing toward the upcoming target (i.e., a congruent trial) or away from it (i.e., an incongruent trial). As for overt attention, gaze-mediated orienting is generally referred to as *gaze following,* and the dominant paradigm for its investigation (Ricciardelli et al., 2002; see also Kuhn & Benson, 2007) requires participants to execute a saccadic eye movement toward a peripheral placeholder, as instructed by a central "go" signal. Simultaneously, a central face appears with eye-gaze directed either toward the saccade goal (congruent trial) or elsewhere (incongruent trial). In both paradigms (i.e., gaze-cueing of attention and gaze following), participants typically show better performance (i.e., faster manual or oculomotor responses and higher accuracy) on congruent compared to incongruent trials (e.g., Chica et al., 2014), thus revealing a reliable orienting effect triggered by eye-gaze direction of others (see also McKee et al., 2007; Murray et al., 2023).

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Mario Dalmaso https://orcid.org/0000-0003-0199-7861
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Correspondence concerning this article should be addressed to Mario Dalmaso, Department of Developmental and Social Psychology, University of Padova, Via Venezia 8, Padova, 35131 Veneto, Italy. Email: mario.dalmaso@unipd.it

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On the one hand, gaze-mediated orienting of attention is often described as a highly automatic phenomenon. Some studies have shown, for instance, strong and reliable attentional shifts in response to gaze cues in dual-task paradigms (Law et al., 2010; but see Bobak & Langton, 2015), when gaze cues were presented for extremely brief durations (Sato et al., 2007; but see Dalmaso et al., 2023), when they provided counter-predictive information about the location of the upcoming target (Friesen et al., 2004; Tipples, 2008) or when presented with invariant direction (Dalmaso et al., 2024), and even when participants were explicitly informed in advance about the location of the upcoming target, thus making gaze cues particularly irrelevant for the task (Dalmaso et al., 2020a; Galfano et al., 2012). In sum, resisting the directional pull exerted by the eye gaze of others appears to be particularly difficult. On the other hand, it is interesting to note that the magnitude of gaze-mediated attention shifts is often indistinguishable from that observed with nonsocial attentional cues, such as directional arrows. This latter finding suggests that, at least under specific conditions such as when schematic faces are employed (namely, impoverished stimuli with low ecological validity and high perceptual similarity to arrows), gaze cues may be processed similarly to nonsocial directional stimuli, leading some authors to conclude that these two stimuli would be treated by a domain-general attentional mechanism (Chacón-Candia et al., 2023).

Beyond the features discussed above, there is another crucial characteristic of eye-gaze cues that makes them unique compared to other spatial signals: in everyday life, eye gaze is typically embedded within a human face, which conveys rich and meaningful social information. This fundamental aspect underscores the importance of considering gaze-mediated orienting of attention as a phenomenon that can be profoundly shaped by social variables and social contexts. From this perspective, a recent review (Dalmaso et al., 2020b) highlighted how gaze-mediated orienting is highly susceptible to social factors related to the cueing face, the observer, and the relationship between the two. These characteristics were addressed within a theoretical framework called *eyeTUNE*, which aims to describe how social variables influence this form of social attention.

The eyeTUNE Theoretical Framework

In everyday life, we experience numerous social encounters, ranging from unknown individuals we pass on the street to more familiar ones within our home or work environments. Given such variability in our social environment, it seems reasonable to hypothesise that gaze-mediated orienting of attention is not equally triggered by all eye-gaze stimuli we may encounter. The eyeTUNE theoretical framework (Dalmaso et al., 2020b) was proposed as a tool to describe the *tuning* effects of social variables on this form of attention. Specifically, eyeTUNE posits that this tuning arises from the interaction of three core dimensions.

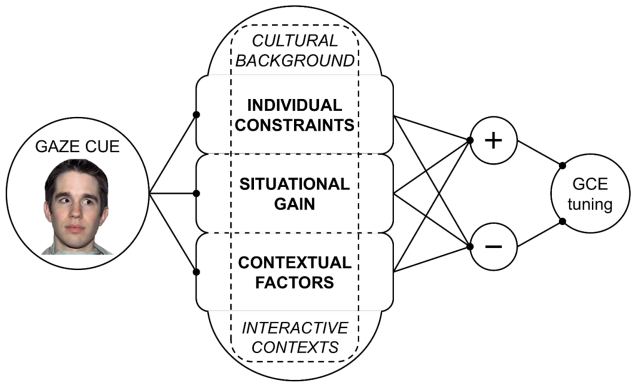
The first of these three dimensions, called *situational gain*, refers to the contextual relevance or utility of following the gaze of someone else. For example, there is evidence showing that individuals tend to orient their attention more strongly following the eye gaze of dominant or high-status faces, as these individuals are more likely to provide information that could be advantageous to track (Dalmaso et al., 2012; Jones et al., 2010). The second dimension, called *individual constraints*, includes both biological and psychological traits of the observer. In this regard, evidence shows, for instance, that female participants exhibit larger gaze-mediated orienting than male participants, and that people with lower perceived power are more influenced by gaze cues (Bayliss et al., 2005; Cui et al., 2014). The third dimension, called *contextual factors*, refers to dynamic features of the environment, such as task demands, frequency of exposure to a given face, or the presence of a meaningful context. For instance, faces expressing fear or anger can amplify gaze-mediated orienting, especially when those expressions are presented in emotionally salient contexts (Lassalle & Itier, 2015; Pecchinenda et al., 2008).

Crucially, these three dimensions do not operate in isolation but interact to determine the magnitude of gaze-driven attentional orienting (see also Figure 1 and the section "The Dynamic and Mutually Interdependent Nature of Social Variables"). Hence, rather than reflecting a strictly reflexive mechanism, gaze-mediated orienting appears to be a flexible process, which can dynamically adapt to the meaning and relevance of faces in everyday social interactions. In the following parts, we will report and synthesise some recent findings that support the eyeTUNE framework and, subsequently, we will offer suggestions for its refinement based on these new perspectives.

Social Attention and Social Variables: New Evidence in the Light of the eyeTUNE Theoretical Framework

In recent years, a considerable number of studies have continued to explore how social variables can modulate gaze-mediated attentional orienting, thereby enriching the perspectives reported in the review by Dalmaso et al. (2020b). For the sake of parsimony, in the following paragraphs we discuss a selection of representative studies that are particularly informative for evaluating and refining the eyeTUNE framework. As in Dalmaso et al. (2020b), we focus exclusively on studies involving neurotypical adult populations, as including clinical populations and/or participants

Figure 1
The eyeTUNE Conceptual Framework for Social Attention



Note. Adapted from "Social Modulators of Gaze-Mediated Orienting of Attention: A Review," by M. Dalmaso, L. Castelli, and G. Galfano, 2020, *Psychonomic Bulletin & Review*, *27*(5), p. 849 (https://doi.org/10.3758/s13423-020-01730-x). Copyright 2020 by The Psychonomic Society. Adapted with permission, with particular emphasis on the subdimensions of cultural background and interactive contexts (highlighted in italics). When an eye-gaze stimulus is detected (left side), it is processed across the three core dimensions (highlighted in bold), which jointly determine the magnitude of gaze-cueing and gaze-following effects, here referred to as GCE-tuning. The dashed lines represent the dynamic, and potentially overlapping, boundaries between these dimensions. GCE = gaze-cueing effect. See the online article for the colour version of this figure.

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of different ages would have significantly broadened the scope of the current work. We also want to acknowledge that, as the reader will notice, some studies could fall into more than one section, given that, by definition, a social variable may simultaneously pertain to different dimensions. Each study was therefore classified within the category we considered most appropriate and consistent with the overall structure of the review.

Situational Gain

On the one hand, situational gain concerns the potential benefits of orienting attention in response to eye-gaze stimuli in general, given that this may help observers to detect relevant information in the environment around them. This could explain why presenting participants with a simple schematic face is sufficient to elicit an orienting response. In this regard, a recent work (Dalmaso, Galfano, et al., 2025) directly compared schematic and real faces, showing that gaze cues conveyed by the two types of stimuli elicited orienting effects of comparable magnitude. This finding suggests that gaze-mediated orienting may represent a default mode.

On the other hand, situational gain can also be ascribed to certain social characteristics signalling relatively high levels of relevance and/or reliability. In line with this view, recent studies suggested that gaze cues from individuals perceived as higher in social status or hierarchical rank can elicit stronger attentional orienting (Lorenzoni et al., 2023), consistent with the idea that monitoring high-status individuals would be particularly informative in social environments. Similarly, perceived trustworthiness can modulate gaze-mediated orienting, with trustworthy faces eliciting larger cueing effects than untrustworthy faces (Ding et al., 2024). In addition, emotional expressions further contribute to situational gain by providing biologically relevant information about the potential significance of gazed-at locations. In particular, gaze cues embedded in faces conveying positive emotional information, such as happiness, have been shown to enhance attentional orienting relative to both neutral and sad expressions, presumably because they convey information about potential rewards in the environment (Yuan et al., 2023). Crucially, not all socially salient or evolutionarily relevant facial dimensions enhance gaze-mediated orienting. For instance, although facial attractiveness can capture attention (Pereira & Ristic, 2026), converging evidence indicates that it does not modulate the gaze-cueing effect (Hutcheon et al., 2023; Roth et al., 2022).

Individual Constraints

This section refers to biological, psychological, and dispositional characteristics of the observer that can modulate the extent to which eye-gaze stimuli trigger attentional orienting. Here, we discuss some recent studies showing that individual traits linked to social processing could influence gaze-mediated attention. For instance, individual differences in autistic traits have been shown to modulate the gaze-cueing effect. Individuals with higher autistic traits exhibited social orienting only in response to eye-gaze direction of ingroup members (Ricciardelli & Pintori, 2023) whereas, in multiagent contexts, preregistered analyses found no evidence that autistic traits modulated the use of predictive gaze information, although exploratory analyses suggested associations with overall response speed (Ma et al., 2024). Other variables, such as social anxiety, did not reliably modulate the gaze-cueing effect, as reported in a large-sample study, suggesting that not all traits associated with social functioning exert a consistent influence on gaze-mediated orienting (Talipski et al., 2021).

In addition, cross-cultural investigations have shown that gaze-mediated orienting would not follow a simple ingroup versus outgroup distinction but rather could reflect specific social and cultural factors of the context where data were collected. For example, Chinese participants living in China have been found to exhibit stronger gaze-mediated orienting in response to White faces than to Asian faces, while White participants living in Italy exhibited similar orienting to both faces, a pattern interpreted in terms of perceived social status (which, among Chinese participants, was higher for Whites than for Asians) rather than ethnic similarity (Zhang, Dalmaso, Castelli, Fiorese, et al., 2021; Zhang, Dalmaso, Castelli, Fu, et al., 2021). Another recent study involving Black and White British participants reported stronger gaze cueing for Black faces than White faces among Blacks, and a lack of a modulatory role of ethnicity among Whites (Ward et al., 2026), likely reflecting specific characteristics of the cultural context in which the study was conducted. Individual constraints can also arise from transient states. In this regard, recent work has shown that temporary feelings of guilt reduced gaze-mediated orienting (Zhao et al., 2023), likely reflecting a momentary tendency toward social avoidance, whereas temporary feelings of loneliness (Yankouskaya et al., 2026) and temporary social isolation (during the COVID-19 lockdown) enhanced it (Dalmaso et al., 2021), likely reflecting enhanced sensitivity to social cues in general, and a greater willingness to reconnect with others.

Contextual Factors

Here, we discuss the more dynamic aspects of the task or social environment that can impact gaze-mediated orienting, such as when social information becomes relevant and which social dimensions could be prioritised during social orienting. A first line of evidence highlighted the role of comparative contexts, especially those that can promote social comparison processes. In this regard, Zhang et al. (2023) reported enhanced gaze cueing of attention among Chinese participants in response to White than Asian faces when these two categories were presented within the same block of trials, namely a context that likely made group membership a particularly salient and directly comparable dimension. Importantly, this enhancement disappeared when White and Asian faces were presented in separate blocks, suggesting that gaze cueing reverted to a "default mode" in the absence of a meaningful comparative context. Contextual influences can also embrace affective and motivational states induced by the environment. In this regard, affective priming studies have shown that transient contextual manipulations can selectively tune gaze-mediated orienting. For instance, exposure to threatening primes enhanced the gaze-cueing effect, but not the arrow cueing effect, indicating that the affective context selectively boosted sensitivity to eye-gaze signals (Ishikawa et al., 2021). However, more recent evidence suggested that the relationship between affective context and social attention could be not strictly monotonic. Specifically, highly arousing threat-related primes have been shown to reduce the gaze-cueing effect by facilitating goal-directed target detection and increasing executive control, thereby attenuating the influence of task-irrelevant gaze cues (Zhai & Hietanen, 2024). Together, these findings indicate that affective context can either enhance or suppress gaze-mediated orienting depending on how it interacts with task demands and cognitive control

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mechanisms. Finally, contextual factors can also play a relevant role in multiagent settings, where attentional orienting can emerge across multiple, and potentially conflicting, social signals. For instance, recent research has shown that gaze cues from a numerical majority are typically prioritised over those from a minority, reflecting a context-sensitive mechanism that would integrate social cue quantity, and that previously learned social information about individual agents can override numerical dominance, allowing the gaze of a socially informative individual to guide attention even when embedded within a group minority (Capozzi, Bayliss, et al., 2021; Capozzi, Wahn, et al., 2021). These findings underscore the idea that gaze-mediated orienting operates flexibly across both individual and group contexts (Capozzi & Ristic, 2022).

Refining the eyeTUNE Framework and Identifying Future Directions

The evidence reviewed in the previous sections supports the eyeTUNE framework for accounting for social modulations of gaze-mediated attentional orienting. At the same time, recent developments in the literature suggest that some components of the original framework would benefit from more explicit specification. We suggest that two aspects that have gained increasing relevance in recent years, while remaining comparatively underexplored, should be more clearly articulated within the existing framework. These are cultural background, which can be conceptualised as a higher level source of individual constraints, and interactive contexts, which can be considered a particularly important class of contextual factors (see also Figure 1). These refinements, which can be incorporated within the original structure of eyeTUNE, are discussed in greater detail in the following sections.

Cultural Background

Within the eyeTUNE framework, the individual constraints dimension includes biological and psychological characteristics of the observer that can modulate sensitivity to gaze cues. Cultural background fits naturally within this dimension, as it may be interpreted as a higher level modulator that can further shape how observers perceive, interpret, and respond to social information (e.g., Masuda, 2017). Despite this, culture has remained relatively underexplored in the literature on gaze-mediated orienting of attention.

The cross-cultural findings already discussed in the section "Individual Constraints" offer a preliminary illustration of this point. For instance, the observation that Chinese participants showed stronger gaze-mediated orienting toward White faces than Asian faces (a pattern interpreted in terms of perceived social status rather than ethnic similarity) highlights how cultural context can determine which social dimensions are weighted most heavily when processing gaze cues (e.g., Zhang, Dalmaso, Castelli, Fiorese, et al., 2021). Similarly, the finding that Black British participants showed stronger gaze cueing for Black faces, while White participants showed no such modulation, likely reflects specific features of the cultural and social context in which the study was conducted (Ward et al., 2026). Together, these findings suggest that the same gaze stimulus can elicit qualitatively different attentional responses depending on the cultural background of the observer, which is a pattern that goes beyond simple ingroup/outgroup distinctions and points to the need for more systematic cross-cultural investigation. Hence, cross-cultural perspectives offer rich and multifaceted avenues for future research. For instance, future work may investigate in more detail the impact of different cultural dimensions, such as individualism versus collectivism, or norms and communicative meanings related to eye contact and/or gaze avoidance (e.g., Cohen et al., 2017; Hessels et al., 2025; Takao et al., 2018; Uono & Hietanen, 2015). By adopting a cross-cultural approach, models of social attention could better capture the diversity of observer-related factors that influence gaze processing, highlighting how social orienting mechanisms operate within broader cultural environments.

Crucially, adopting a cross-cultural perspective would also allow researchers to move beyond the so-called Western, educated, industrialised, rich, and democratic (WEIRD) societies framework (see Henrich et al., 2010), considering the substantial variability that characterises human societies across different cultural contexts worldwide (Malu, 2025; Masuda et al., 2020). This is particularly urgent for social attention research given that, unlike other cognitive phenomena where cultural influences may be relatively modest (e.g., basic orienting mechanisms), gaze-mediated orienting is, by definition, embedded in social norms, communicative conventions, and interpersonal dynamics that may vary substantially across cultures. Hence, research on social attention that exclusively relies on WEIRD populations may risk considering culturally specific patterns as universal mechanisms.

Interactive Contexts

To date, most studies on gaze-mediated orienting have primarily relied on static (or semistatic) contexts, where participants are exposed to predetermined and relatively unchanging scenarios. However, an increasing number of studies have highlighted the importance of interactive dynamics, where the scenario can change depending on participants' behaviour (Osborne-Crowley, 2020; Ristic & Capozzi, 2022). Indeed, real-world social interactions are inherently dynamic, involving a continuous and reciprocal exchange of information between two (or more) individuals, where the roles of the observer(s) and the observed person(s) are not fixed but continuously evolve and can often alternate over time. From the perspective of the eyeTUNE framework, the interactive nature of social interactions represents a core aspect of the "contextual factors" dimension and should be more systematically incorporated into future research, as it introduces dynamic feedback loops through which the relative contribution of the three eyeTUNE dimensions can be continuously recalibrated. In addition, embracing more interactive contexts enhances the ecological validity of studies, and can better capture the continuous and reciprocal exchange of nonverbal information, such as mutual gaze and gaze avoidance, bodily signals, interpersonal distance, and proxemic cues (see also, e.g., McCall & Singer, 2015), but also turn-taking and manifestations of social norms that can shape social orienting (Colombatto et al., 2020).

Nowadays, interactive paradigms can be implemented relatively easily (and at a reasonable cost) by means of eye-tracking techniques combined with gaze-contingent tasks, which can dynamically evolve based on the oculomotor behaviour of participants (Pfeiffer et al., 2013). This approach can also capture more subtle aspects of social interaction that are typically lost, or less evident, in static settings, such as gaze serving both as an index of active attentional allocation and as a communicative signal (i.e., the so-called dual function of gaze; Gobel et al., 2015). Moreover, interactive eye-tracking paradigms provide an opportunity to address a frequently implicit

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and often erroneous assumption in the literature, namely that looking at a location necessarily implies attending to it (the so-called eye–mind assumption). Humans can dissociate overt attention (where the eyes are directed) from covert attention (where attention is allocated), a dissociation that is fundamental to many social dynamics. For instance, a person can make eye contact with a conversational partner while simultaneously attending to someone nearby, without wanting to be noticed. Despite its importance, this dissociation has received limited systematic investigation in the literature and constitutes what Foulsham and Kingstone (2025) called "the dark matter" of social attention.

Finally, it is important to note that in interactive contexts the role of verbal and linguistic information has been little explored. In real-world social interactions, eye-gaze behaviours rarely occur in isolation from speech, and it is well recognised that language can substantially shape the meaning of a gaze cue. For example, the same gaze shift may be interpreted as an attempt to establish joint attention (e.g., when the interaction partner says: "Look at that!") or as a purely personal goal with no communicative intention toward the interaction partner (e.g., when the interaction partner says: "I am looking for my keys!"), thus shaping the possible situational gain associated with the interlocutor's face. Importantly, language can also serve as a cue for social categorisation (e.g., hearing an interaction partner speaking in one's native language vs. a foreign language), similarly to other well-established cues such as age, ethnicity, and sex (Lorenzoni et al., 2022). Despite this, the impact of verbal and linguistic information on social attention has received little systematic investigation (see Lorenzoni et al., 2023; Macdonald & Tatler, 2015, 2018) and represents another promising direction for future research.

The Dynamic and Mutually Interdependent Nature of Social Variables

The emphasis placed on cultural background and interactive contexts in the previous sections underscores a broader point, namely that social orienting mechanisms are best understood as emerging from the interaction of multiple dimensions. Although, for the sake of clarity, the empirical evidence reviewed here has been organised by discussing the three eyeTUNE dimensions separately (as in Dalmaso et al., 2020b), these dimensions are assumed to dynamically and jointly tune gaze-mediated orienting. To date, however, the systematic examination of such cross-dimensional combinations remains relatively scarce. For instance, the modulatory role of ethnicity on the gaze-cueing effect has been shown to depend on whether same- and other-ethnicity faces are presented within the same block of trials or in separate blocks (Zhang et al., 2023), a manipulation known to alter the contextual salience of different stimulus types (see also Dalmaso, 2023; van Zoest & Higgins, 2026). This suggests that a stimulus-related variable (i.e., ethnicity; situational gain) can interact with a context-related variable (i.e., intermixed vs. blocked presentation; contextual factors) to shape attentional orienting. Similarly, Ponsi et al. (2024) showed that the social status of the observer (individual constraints) modulated gaze following, whereas the dominance conveyed by face stimuli (situational gain) did not (this may suggest that the possible mutual influence of the two hierarchical dimensions may depend on additional contextual conditions). Future research should therefore adopt more integrative, factorial designs that orthogonally manipulate different variables and dimensions within the same task, as this would allow researchers to identify which ones exert the most robust influence under different conditions, eventually strengthening both the descriptive and generative potential of the eyeTUNE framework.

A complementary methodological consideration concerns the type of dependent measure employed. To date, studies on gaze-mediated orienting have often relied exclusively on either covert (manual response) or overt (oculomotor) measures. However, social variables may not necessarily affect these two indices in the same way, as suggested, for instance, by evidence showing that attractiveness (Pereira & Ristic, 2026) and eye contact (Dalmaso, Lorenzoni, et al., 2025) are reflected differently on covert and overt measures. Directly comparing both indices within the same paradigm would therefore help identify which social variables (and their possible interactions) represent robust modulators of gaze-mediated orienting, and which instead depend on more specific boundary conditions associated with measurement approaches.

Conclusive Remarks

The studies reviewed here highlight the intrinsic social nature of gaze-mediated attentional orienting. Although this mechanism is robust and often difficult to suppress (Chacón-Candia et al., 2023), it is also highly flexible and can be modulated by several social dimensions. By organising recent findings along the three core dimensions (i.e., situational gain, individual constraints, and contextual factors) of the eyeTUNE framework (Dalmaso et al., 2020b), this review provides further support for the idea that social orienting is a multifaceted process, emerging from a complex interplay among social factors. Beyond consolidating existing evidence, we have also proposed two refinements to the framework, namely the explicit incorporation of cultural background as a higher level source of individual constraints, and interactive contexts as a particularly important class of contextual factors. We have also stressed that a key priority for future research is to move beyond the investigation of isolated social variables, adopting instead integrative designs that examine how different social dimensions can jointly shape gaze-mediated orienting. Together, these refinements aim to strengthen both the explanatory scope and the heuristic value of the eyeTUNE framework, while bringing it closer to the complexity of real-world social interactions.

Studying the basic mechanisms underlying attentional processes in social contexts is of fundamental importance, not only for basic research but also for its broader theoretical and applied implications. Indeed, this line of research can provide valuable insights across multiple levels, ranging from developmental trajectories to clinical insights (Chacón-Candia et al., 2024; Vascello et al., 2024). At the same time, a deeper understanding of social attention is increasingly relevant for more applied domains, particularly those involving interactions between humans and artificial agents, such as robots and digital interfaces (e.g., Chevalier et al., 2020; Hessels & Fang, 2026). In this regard, the rapid spread of artificial intelligence in society is generating digital social environments that are becoming progressively more realistic and, in some cases, difficult to distinguish from real ones, as highlighted by the emergence of the so-called deepfake technologies (Diel et al., 2024). These developments could strongly benefit from findings in social attention research, helping to design artificial agents that are more humanlike in their interaction rules. In this respect, understanding how gaze signals are interpreted in human social interactions, and how gaze is often used to infer the mental states of others (e.g., intentions, beliefs, communicative goals), rather

than reflecting a simple eye–mind correspondence, may be crucial for enabling artificial systems to respond to gaze cues in a socially appropriate way (Foulsham & Kingstone, 2025; Strachan et al., 2024). Critically, this challenge is further influenced by the cultural and contextual variability that characterises human interlocutors and relationships. A deeper understanding of these dimensions will therefore be essential for building artificial systems that can engage with the complexity of social attention in a humanlike fashion.

Résumé

L'attention visuelle est extrêmement sensible aux indices spatiaux fournis par autrui, la direction du regard jouant un rôle primordial dans la façon dont nous orientons notre attention dans différents environnements. Bien que l'orientation attentionnelle induite par le regard puisse sembler automatique, car elle correspond à notre tendance naturelle à regarder dans la même direction que les autres, des preuves de plus en plus nombreuses suggèrent qu'elle est également fortement influencée par des variables sociales. Ces variables incluent les caractéristiques de l'observateur, les caractéristiques du visage fournissant l'indice de regard ainsi que la dynamique de la relation entre les personnes concernées. Dans cette courte synthèse, nous résumons et examinons de manière critique certaines études récentes qui ont étudié l'influence de ces variables sociales sur ce type d'attention sociale. Notre analyse s'appuie sur le cadre eyeTUNE (Dalmaso et al., 2020b) qui nous sert non seulement à organiser les données existantes, mais qui nous permet également de proposer des ajustements à ce cadre. Nous mettons en évidence l'importance de l'influence du contexte culturel et des contextes dynamiques dans les recherches futures, en faisant valoir que ces facteurs pourraient révéler de nouvelles informations précieuses sur le fonctionnement de l'attention dans les interactions sociales du quotidien.

Mots-clés : attention sociale, stimuli liés à la direction du regard, variables sociales, cognition sociale

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