Gestalt Perception and the Experience of the Social Space in Autism: A Case Study

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**Abstract**

Phenomenological approaches suggest that the bodily presence of others has a profound influence on the experience of social spaces. This intimate relationship is particularly evident in mental disorders. Investigations into the nature of intersubjectivity in various pathologies indicate that modifications to the capacity for social perception play a key role in determining the manners in which the social space is experienced and felt. This paper aims to examine the interviewing relation of social perception and the experience of space and its consequences in autism spectrum disorder (ASD). This is done through a phenomenologically informed analysis of the functioning of social perception in ASD. Our account proposes that the atypical socio-perceptual patterns exhibited by people with autism significantly reduce the capacity to grasp the context of the situation, which facilitates and intensifies negative feelings that are intertwined with the experience of social spaces. This novel understanding draws on the idea that ASD involves a fundamental difficulty to establish a gestalt perception of social scenes. The evidence we discuss suggests that this anomaly in the operation of social perception also modulates the experience of the social space. Failing to perceive the wholeness of the situation means that people with autism often experience the social space as unfamiliar, confusing, uncertain, and unsafe, rather than feeling familiar and understood in the embodied presence of others. As a result, autistic subjects may experience difficulty evaluating the outcomes of hazardous circumstances, which poses a risk to their well-being, particularly in borderline situations. This suggestion is elaborated through the tragic occurrences that led to the killing of Eyad al-Hallaq, a 32-year-old Palestinian with autism.

**Introduction**

In everyday environments, the experience of the social space typically involves feelings of familiarity and safety [1, 2]. Phenomenological approaches assert that the unfolding of these spatial feelings that are essential for the subject’s wellness is tightly linked to the operation of embodied intersubjectivity [3, 4]. Insofar as embodied-affective processes implied in intersubjective encounters form a “space of alignment,” the environment is experienced as comprehended and safe, and the sense of everydayness...
prevails [5]. The evidence we discuss in this article suggests that establishing an interpersonal space, which is colored with familiarity and safeness, requires and is constantly fueled by a fully operational capacity for social perception. Broadly construed, social perception is the capacity to grasp the other subject in interpersonal engagements as my fellow person [6, 7]. It involves empathy, knowing, and in some cases, higher mental capacities such as perspective-taking, judgment, and belief, all of which are attained by and intertwine with following others’ gaze and embodied behavioral patterns [8–10]. Under normal circumstances, social perception familiarizes and objectifies the lived environment for the subject, supports and increases social understanding and shared experiences, and allows to immediately and effectively grasp the context of a situation [7, 11, 12].

In autism spectrum disorder (ASD), we often see changes in social attention and perception [13]. These changes diminish the subject’s ability to grasp social cues by attuning to others’ embodied subjectivity [14], which might prevent people with autism establishing crucial spatial feelings such as familiarity and safeness. In what follows, we examine through the lens of phenomenology how, in ASD, the lack of a stable sense of safeness and familiarity in social spaces are bound up with modifications to the capacity for social perception. The empirical and phenomenological sources we discuss suggest that the atypical socio-perceptual patterns of people with autism might result in experiencing the social space as unfamiliar, uncertain, confusing, and unsafe, which can endanger them in borderline events, such as conflict situations. To demonstrate the suggestion that social perception and the experience of space are intrinsically intertwined in ASD and to highlight the risks this relationship bears for the autistic subject’s well-being, we examine the tragic events that led to the killing of Eyad al-Hallaq1. On Saturday morning, May 30, 2020, Eyad al-Hallaq, a 32-year-old Palestinian with autism, walked from his home in the East Jerusalem neighborhood of Wadi Joz to the special needs school he attended and worked at in the old city of Jerusalem. The walk to the school was part of al-Hallaq’s daily routine; he regularly encountered police officers and witnessed conflict situations between Palestinians and the Israeli police force stationed along his route. Unfortunately, being acquainted with the environment and its hazards did not help guide al-Hallaq’s reactions to the situation he was about to encounter on May 30. On this particular morning, when he arrived at the Lion Gate at the entrance to the old city of Jerusalem, he was ordered to stop by police officers stationed near the gate who suspected that al-Hallaq was a terrorist carrying a gun in his pocket. Confused and frightened by the officers’ anxious behavior, instead of standing still and taking his hands out of the pocket of his jacket, al-Hallaq fled from the officers and hid in a garbage room in a dead-end alley nearby. After entering the alley, a senior officer who chased him ordered a halt in fire. Immediately afterward, a second officer ignoring the signs of distress and confusion evident from al-Hallaq’s behavior without further warning fired six or seven shots that instantly killed al-Hallaq.

Fuchs’s [1] investigations into the nature of altered intersubjectivity in ASD help clarify why autistic subjects may have a reduced capacity to evaluate and respond to social cues in such events, which expose them to severe danger. Fuchs suggests that autistic persons have recurrent difficulties to establish a holistic, intermodal gestalt perception of social scenes, which can prevent grasping the context and meaning of a situation. This meaning-constituting perception includes the linking of the behaviors, gestures, gazes, and attitudes of others with the whole of the situation. If this intentional linkage is lacking, the situation remains ambiguous, often puzzling or meaningless for those affected. The self-evident orientation in the social space, which is based on implicit embodied knowledge, fails and this subsequently increases problems in perceiving the wholeness of the situation.

In the next part of the article, we discuss evidence indicating that anomalies in social perception are inextricably intertwined with the way social space is experienced and felt by the autistic subject. Our phenomenologically informed analysis of the nature of disturbances in social perception in ASD suggests that changes in the experience of social spaces and difficulty to establish gestalt perception of social scenes form a vicious circle that increases the vulnerability of people with autism in borderline situations. In the third part of the paper, we look into the subjective characteristics of the experience of the social space in ASD. Then, we return to the case of Eyad al-Hallaq to demonstrate how the relationship between social perception anomalies and the experience of the social space operates in the face of uncertainty and danger.

An important note: Our account does not seek to replace the judicial process, nor does it attempt to reduce
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The Phenomenal Nature of Social Perception Anomalies in ASD

Uncharacteristic social behavior is a fundamental feature of ASD [15]. This core element of the autistic subject's lived world is considered to be intimately related to modifications of social attention and perception [16]. Abundant evidence suggests that the capacity of people with autism for social perception is altered [1, 16], which reduces the subject's ability to prereflexively and successfully grasp other people's intentions in interpersonal engagements [17]. Changes in social perception in ASD can manifest themselves in various ways, among them difficulties in following and responding to social cues provided by others’ gaze, facial expressions, gestures, and bodily acts (e.g., [13, 14, 18]). These alterations vary in their scope and level of amplification, depending on the functional status of the autistic subject and on the particular situation [17, 19]. Yet, regardless of individual circumstances, this type of irregularities in social attention and perception appears to have a significant impact on how space is experienced and felt by people with autism.

Phenomenological approaches reveal that what the changes in social perception in ASD have in common is that they involve and spring from anomalies in the subject's embodied relation to others [9, 20, 21]. Typically, the dynamic interaction between two embodied subjects fosters ongoing interchange of feelings and attitudes, which is crucial for coping with the social environment at both the affective and cognitive levels [10, 22]. From fairly early stages of life, embodied intersubjectivity helps unpick information and establish a familiar, coherent, and understandable sense of the world, thus facilitating the skills and predispositions of social perception [23–25]. The perceptual-motor skills that are integrated into social perception at young age allow subjects significant benefits, among them efficiently grasping the context of a situation by following others’ gaze and embodied patterns [26–28]. Another advantage enabled by a fully operational capacity for social perception is that it usually colors the space with a sense of familiarity and safeness [2], which is crucial for the subject's well-being.

ASD involves a substantial change in the subject’s embodied relation to other people. This socio-embodied shift is evident, for example, from the anomalies children with autism frequently display in gaze following, attuning to the motor patterns of other people, and grasping embodied intentions [29, 30]. Children with ASD have problems accomplishing sensory-motor integration and imitation and affect attunement that are essential building blocks of an operational capacity of social perception [1]. As a result, the presence of others may provoke feelings of confusion and uncertainty, which increases setbacks in second-person perspective-taking and social understanding (e.g., [29–31]).

For the most part, social perception is not fragmented but rather relates to a context. This context is immediately and effectively given to the subject by attuning to others’ gaze and embodied acts. Typically, people prereflexively link the embodied behaviors of others to the events they attend to, which facilitates a perceptual wholeness in which these embodied behaviors are correlated to a theme [7, 32]. For instance, subjects immediately attached seeing people running toward them to the loud noise they just heard. Similarly, others’ facial expressions of joy when watching together a person juggling balls in the city square are automatically ascribed by the subject to the scene [3]. This important feature of social perception supplements the use young children gradually learn to make of others’ embodied reactions to guide them in how to assess and respond to events around them, i.e., social referencing [33, 34] and joint attention. Broadly put, a capacity for joint attention that develops toward an infant’s first birthday enables them to effectively gain others’ perspectives on a jointly attended locus by attuning to their embodied patterns [25].

These crucial features of embodied intersubjectivity are significantly reduced in ASD from early childhood. Consequently, compared to typically developing subjects, people with autism are less inclined to rely on others’ embodied attitudes as a source of knowledge in daily situations [19, 35]. Without a stable tendency to hinge on others’ embodied subjectivity as a point of reference to information and meaning, the perceptual wholeness of a social scene is often out of reach. As a result, autistic subjects may feel confused, uncertain, and unsafe in social encounters, and these feelings and moods will most likely amplify in borderline situations [36].
The phenomenologically informed observation that gestalt perception of social events is considerably diminished in ASD is backed by compelling scientific evidence. In the study of Klin et al. [37], which employs gaze-tracking techniques to examine monitoring of social scenes by subjects with ASD, autistic and nonautistic participants were presented with short scenes from the 1967 film of Edward Albee’s “Who’s Afraid of Virginia Woolf.” One of the scenes displays the facial expressions of two actors when hearing a sound of a smashing bottle in the background. While nonautistic participants tend to fixate on the actors’ eye region when viewing this scene, the participants with autism converge on the mouth region or natural objects in the room ([37], p. 346). The same occurred when the participants viewed a scene that showed the embodied response of three actors to a shared object (a painting hung on a wall). In this case, unlike the controlled group, the participants with autism did not follow the gaze patterns of the actors and did not attend to non-verbal signs toward the shared object, such as pointing and gesturing ([37], p. 348). Similar results were shown in Chawarska et al.’s [38] study. In this research that used recordings of gaze trajectories to examine socio-perceptual patterns, autistic children were asked to attend to short videos comprising objects and persons. The analysis of the participants’ gaze patterns shows that subjects with ADS have recurrent difficulties picking the task-relevant bodily features. Instead of immediately grasping the relation between things and others, people with autism repeatedly attuned when watching the scenes to atypical targets ([38], p. 7–9).

The uncharacteristic gaze patterns displayed by people with autism in such studies suggest that autistic subjects’ capacity to link the embodied reactions of other people to the social event they monitor is reduced, which impedes perceiving the wholeness of the situation. This fundamental disturbance in the functioning of social perception seems to be correlated to the general problems in the body and affect attunement that is typical to ASD [24, 39]. People with autism often struggle with distinguishing the affective states of others [30] and this difficulty results in people with autism acquiring less knowledge about everyday events by tracking and following others’ body patterns [1].

3 Intriguingly, this occurs regardless of the level of complexity of the social scene [38].

4 Without over emphasizing or downplaying the other subject’s embodied mental life.

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*The Constitution of Social Spaces and Its Relation to Gestalt Perception of Social Scenes*

The social space is constituted and inhabited by two or more interacting lived bodies [40, 41]. It usually comprises inner and outer spaces that are intrinsically intertwined [42]. Social spaces accommodate an array of embodied feelings and moods interlocked and nourished by a dynamic feedback relationship between self and others. The design of the crucial socio-affective interplay that facilitates social spaces requires a capacity for social perception that automatically and effectively brings to the fore others’ embodied affectivity in relation to a shared context, as demonstrated, e.g., in the research by Klin et al. [37]. Fuchs and Koch [43] assert that “in every social encounter, two cycles of embodied affectivity become intertwined, thus continuously modifying each subject’s affective affordances and resonance. This complex process may be regarded as the bodily basis of empathy and social understanding” ([43], p. 5). The interaffective processes that arise when the subject encounters other embodied subjectivities [6] play a decisive role in forming social spaces from a very young age. Studies in developmental psychology suggest that newborns’ first instances of social engagements are already laden with emotions triggered by attending to the embodied patterns of their caregivers, which colors the space for them with a distinct intersubjective flavor [24, 44]. The primary manifestations of inter-affectivity that are correlated to the experience of the social space subsequently pave the way for extended forms of embodied-affective cycles of feedback and responses modeled by socio-perceptual acts [45].

Along different developmental trajectories, subjects learn to discern others’ embodied affectivity and prereflexively bind them to a context [11]. This socio-embodied operation that constitutes and intensifies social understanding and empathy [44, 46] shapes how the social space is experienced and felt by the subject. As long as the interaffective processes facilitated by subjects’ embodied relation to others are not altered, subjects increasingly and efficiently attune to and correspond with others’ embodied mental life [8]. Phenomenologists emphasize that this crucial feature of intersubjectivity is essential for coping with social environments as it supports second-person perspective-taking and grants the social space a sense of familiarity and stability [1, 47].

In ASD, the cycle of affective responses and feedback formed by the encounter of two (or more) embodied sub-
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What lessons, then, can be drawn from the events that led to the killing of Eyad al-Hallaq on how people with autism experience social spaces and how this is related to difficulty establishing holistic perception of social events? On the face of it, it appears that al-Hallaq’s responses to the dangerous situation he found himself locked in were related to a difficulty to perceive the context of the event and evaluate what was about to come by following and integrating verbal and nonverbal cues [48, 50]. Both these anomalies in the functioning of social perception can have a dramatic effect on how the social space shapes up for autistic subjects. The intertwining relationship between the existential feelings that influence the manners in which people with autism experience the space and social perception anomalies most likely resulted in al-Hallaq’s failure to immediately and prereflectively grasp the police officers’ intentions and commands. Overwhelmed and disoriented when faced with a dangerous situation, these feelings most likely amplified, which might help explain why he reacted to the situation in a manner that put his life at risk.

Examining this case through the lens of phenomenology emphasizes that what is at play in ASD in borderline situations is the amplification of four existential feelings that can arise in social encounters between autistic subjects and other people [43, 51]. These feelings and moods include (but are not limited to) unfamiliarity, uncertainty, confusion, and unsafeness. The unfolding and intensification of these negative feelings were seemingly critical for al-Hallaq’s experience of the social space on the morning of May 30, 2020.

Being unable to develop a familiar sense of intersubjective environments is a distinct marker of autistic subjects’ lived world. Facing ongoing difficulty to bodily inhabit the social space, the autistic subject may experience this space as unrecognizable, which may cause bodily disorientation and confusion in interpersonal situations [2, 5]. To begin with, then, al-Hallaq’s experience of the social space involved unfamiliarity. The sense of unfamiliarity [52] probably intensified when al-Hallaq encountered the police officers that asked him to stop. This is evident from the fact that although the road to the school was part of his daily routine and he most likely witnessed police officers in conflict situations along his route before, nevertheless, as reflected from his responses, he did not immediately grasp the situation and could not therefore anticipate the officers’ reactions to his odd behavior when they asked him to stop. It follows that being acquainted with the environment and its associated risks in ASD does not constitute a feeling of familiarity of the social space and...
that this lack significantly influences the subject's well-being in borderline situations.

The sense of unfamiliarity, which intertwines with the experience of social space in ASD, is geared, as our account shows, to the fragmented nature of social perception. The atypical gaze following and bodily attunement patterns of people with autism in interpersonal situations [50] impeded al-Hallaq’s ability to intuitively link the context of the event to the officers’ reactions. This disturbance must have grown significantly as he became more anxious as a result of the situation [53]. Bodily disoriented, feeling unfamiliar, and being unable to efficiently follow and link the officers’ verbal and nonverbal cues to the dangerous state of affairs most likely increased al-Hallaq’s difficulty to fully comprehend and evaluate the event. This also critically impacted the experience of inner and outer space. The overwhelming encounter seems to have amplified the feeling of not fitting in [5] and simultaneously deepened the feeling of uncertainty, confusion, and unsafeness, making it even more difficult for him to integrate the different aspects of the situation into a whole scene.

al-Hallaq’s case helps demonstrate that for the autistic subject, the social space is frequently burdened with unfamiliarity, confusion, uncertainty, and sometimes unsafeness. The interplay between these feelings is fueled, it seems, by the difficulties in establishing gestalt perception of social scenes that are typical to autistic persons. Borderline situations considerably amplify this vicious circle. Experiencing a recurrent problem to grasp the wholeness of a situation, which is bound up with the sense of unfamiliarity of the social space, amplifies feelings of confusion and uncertainty. These feelings further impede the autistic subject’s capacity of prereflectively grasping where things stand and what is about to come [3]. In unstable environments, this facilitates a constant feeling of unsafeness that affects the subject’s reactions to dangerous situations.

For al-Hallaq, confusion, uncertainty, and unsafeness that often accommodate autistic subjects’ social spaces must have played a key role in shaping his responses to the danger he encountered. al-Hallaq’s reactions testify that he was overwhelmed and anxious from a situation he could not fully grasp. Confused and frightened by the officers’ reactions, instead of stopping and taking his hands out of the pocket of his jacket as he was ordered, al-Hallaq fled and hid in a garbage room in the dead-end alley where he was killed.

### Concluding Remarks

Neurobiological approaches posit that the atypical social predispositions and patterns exhibited by people with autism come about due to reduced social reward sensitivity and diminished capacity for empathy that circle around mentalizing deficits [54, 55]. This prevailing view in the study of ASD disregards the phenomenal nature of changes in social perception and their consequences on how social space is experienced and felt by the autistic subject.

In this article, we addressed this gap in the understanding of the experiential world of the autistic subject by focusing on the phenomenal characteristics of social perception anomalies in ASD and the existential feelings these anomalies entangle and amplify. The evidence we discuss suggests that in ASD, difficulties in gaining the wholeness of social events are continuously intertwined with the experience of the social space [1]. This relationship appears to form a vicious cycle (see Fig. 1) that revolves around feelings of unfamiliarity, uncertainty, confusion, and unsafeness. Recurrent difficulties in establishing gestalt perception of social events may result in the social space being loaded with such feelings for autistic subjects, which in turn increases the problems they have in perceiving the wholeness of the event. In borderline situations,
situations, the negative feelings that arise from the embodied-affective encounter between the autistic subject and other people intensify significantly. Consequently, as demonstrated by the tragic story of Eyad al-Hallaq, the subject might be exposed to substantial risks. Disoriented and anxious from an event whose meaning they cannot fully grasp, autistic subjects might fail to evaluate the situation and respond to it in a manner that corresponds with other people’s reactions, which significantly increases the danger they face.

Shedding light on the interlocking relationship between difficulties to establish gestalt perception and modifications to the experience of the social spaces can benefit both the research on ASD and other mental disorders. Insofar as mental disorders involve alterations in the intercorporeal and interaffective building blocks of social perception, it might be helpful for clinical approaches to pay close attention to the impact of these changes on the way others are perceived and the shaping of social space.

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