

# Breaking Myths about Autism through Performance-based practices. An Exploratory Analysis of the *Imagining Autism* Approach\*

## Sfatare alcuni miti sull'autismo attraverso le pratiche performative. Un'analisi esplorativa dell'approccio *Imagining Autism*

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Since the Seventies, the encounter between drama/theater/performance and disability has attracted a growing interest from both the world of art and theatrical critics and from the sciences of education and pedagogy, engendering a fertile research field. In recent years, autism spectrum disorders (ASD) have increasingly been the object and subject of these performative experimentations, riding the wave of popularity that this epidemiology is experiencing at the international level. After a preliminary review of the main approaches using participatory performance practices with persons with autism, this work focuses on one of these methods: *Imagining Autism*. Providing an overview of its history and implementation, the paper explores the use of performance-based activities and their characteristics as a venue for autism research which might contribute to de-mythologize this condition by challenging well-established stereotypes.

**Keywords:** Autism Spectrum Disorders, Special Education, Applied Theatre, Performance, *Imagining Autism*.

abstract

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a. meta-analisi; b. Evidence Based Education

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## 1. Introduction

Since the Seventies, the encounter between drama/theater/performance<sup>1</sup> and disability has attracted a growing interest from both the world of art and theatrical critics and from the sciences of education and pedagogy, engendering a fertile research field.

Strongly related to Disability Studies and their cultural, political and social proposals, persons with disabilities' claim for a new and emancipated social identity – what Brown called «the culture of disability» (Brown, 2002; 2003)<sup>2</sup> – corresponds to an ever-increasing presence on the international scene of both artists with disabilities and artistic productions that focus on the themes of the “world of the excluded” in the contemporary performing arts<sup>3</sup>. Both tendencies aim to give these “deformed”, “different”, “vulnerable” bodies a renewed aesthetic legitimacy through manifestos that reject traditional artistic canons and create “original” performative practices, thus reducing the isolation and stigma to which they are, usually and solidly, confined<sup>4</sup>.

In this kind of experimentation, the laying bare of suffering turns into a sort of social, cultural, and/or political “redemption”, achieved through the denunciation of traditional aesthetic models and the dominant ideals of body they propose (Kuppers, 2007). These artistic experiments seek their epistemological justification in the sciences of education and pedagogy, often in therapeutic and educational-formative terms (Costantino, 2019).

- 1 Though the encounter between drama/theatre/performance and education has been formally recognized and acknowledged as one of the ways of learning, in giving account of this kind of experiences, difficulties of vocabulary immediately arise. In order to go beyond this problem, the decision to use the term “performance” in this paper corresponds to a precise etymological and semantic choice rooted in the aesthetic proposal of the American director and scholar Richard Schechner and his *theory of performance* as the broadest level of expressive human manifestations (than drama, script, and theatre) that contains the whole constellation of events (Schechner, 1973; 1988).
- 2 In this process of cultural change, the social and political movement put in place by persons with disabilities has played a substantial role in terms of identity, political rights, social participation and representation and inclusion. These movements and associations of persons with disabilities introduced the social model into the public debate as a new approach to disability (Barnes, 1999; 2013).
- 3 In the twentieth century, we witness a process of disruption of representation in theatre, even disability and its “deformed” and “wounded” body (re)appears on the scene: it is no longer a common actor who plays the role of a person with disabilities but is the same person with disability who represents her/himself on the scene using their own body as *medium*, reducing to zero the representation and the traditional dichotomy for the performing arts person/character. In parallel, some disabled artists have re-taken the power to exhibit their body to challenge the idea of disabled as “other” – the same category of the “other” that has been placed at the center of twentieth-century theatrical research. This kind of body agency reflects also the new role of the actor within the performing art scenario in the second half of the XX Century and the shift in the perception of the body on the postdramatic scene described by Hans-Thies Lehmann (2006). In this sense, we could talk about *disability as performance* across a wide range of meaning – disability as a performance of everyday life, as a metaphor in dramatic literature, and as a work of disabled performing artists (Sandahl & Auslander, 2005).
- 4 In this regard, we recall the recent book by Tobin Siebers *Disability Aesthetics* (2010) in which the author attempts to demonstrate that, in his opinion, disability is not only a fundamental con-



In recent years, autism spectrum disorders (ASD)<sup>5</sup> have increasingly been object and subject of these performative experimentations, riding the wave of popularity that this epidemiology is experiencing (for better or for worse) at the international level in the scientific community and beyond.

In the seven decades since Kanner's scientific definition of Autism (1943) and Lorna Wing's pioneering work to introduce the concept of *spectrum* culminated in the new DSM 5 (2013), a real cultural "revolution"<sup>6</sup> has led to a re-definition of the disorder under the influence of psychiatry, psychology, epidemiology, behavioral genetics, neuroscience, etc. This has generated further controversy around the complexities of this multifaceted condition. Changing diagnostic criteria as well as theoretical and scientific debates contribute to the propagation of misleading stereotypes and the misrepresentation of the condition (Murray, 2008) that often have negative impacts upon the lives of persons with autism. This, combined with the specific characteristics of the condition, exacerbates the difficulties faced by this population and intensify the social isolation that is a defining feature of autism. Artistic practices are considered as means of enhancing agency and facilitating social connection for persons with autism, while also offering new insights into the experience of living with the condition. According to O'Sullivan (2015), this kind of interventions attempts to provide creative, enjoyable, and engaging opportunities for persons with ASD to practice a wide range of social skills in the safety and protective workshop environment.

Thus, an emerging scientific literature (see paragraph 2) has focused on using performance-based approaches to address core social deficits among children and youth with autism (such as *Imagining Autism*). These kinds of projects cast new light on creative capabilities and offer insights into the imaginative worlds of autism as a means of "perceiving differently" (Shaughnessy, 2013b).

cern of art but also a critical concept that helpfully raises questions about beauty and the appropriate content of art — in other words, questions about what art is (p. 20). Focused on the aesthetic and revolutionary potential of disability to transform our understanding of what constitutes beauty, Siebers wants to make claims about disability's status as part of the very notion of the aesthetic: if aesthetics is about bodies, then disabled bodies must figure in any account of the interaction between human bodies and the artistic bodies we create. In line with Koppers' suggestions (2000), when a disabled performer enters in the field characterized by fights with phisicality, her/his alignment with "trapped body" disrupts the conventional extention of bodies and inserts into culture new ways of conceptualising them.

- 5 In this paper, I use the term "autism" as a generic shorthand for the more specific diagnostic category of "Autism Spectrum Disorders (ASD)" (DSM 5, 2013). The two terms are used interchangeably.
- 6 In line with the media attention that ASD has received in recent decades, some scholars have committed themselves to transposing the categories of the social model that underlies the Disability Studies to autism. This research area was named by its founder *Critical Autism Studies* (Davidson & Orsini, 2013).

This paper responds to the recent call to recognise the value of drama/theatre/performance and their practical and embodied characteristics as a venue for autism research (Goldstein, Lerner & Winner, 2017). In order to study the impact of performance-based activities on children and young persons with ASD, the paper, after a preliminary review of the main approaches related to the use of participatory art practices in autism, will focus on the specific description of one of those methods, *Imagining Autism*, to develop new pedagogical insights into creative and educational strategies in ASD and share new questions and ways of working within this research field.

## 2. Autism and performative approaches: a preliminary review<sup>7</sup>

When disciplines based on performance and expression, such as theatre, begin to work with/on persons with disabilities, two main responses could happen (Besio, 2014). First, the scientific community (especially from the sciences of education), looking for alternative ways of treatment, engages theatre/drama/performance-based strategies for psycho-educational interventions aimed at long-term improving and empowering some basic features of ASD. Second, current or former professional performers or directors, sometimes motivated by personal experiences, decide to put their expertise and know-how at the service of laboratory (and other) initiatives, demonstrating how theatre/drama/performance, thanks to the specificity of its expressive and creative codes, could concretely help persons with cognitive, motorial or behavioural disabilities (e.g. self-awareness, attention, trust, regulation of emotions, motivation, socialization, etc.). As a matter of fact, several studies on the potential of theatre-like practices as an intervention in autism document both tendencies.

As regards the first trend aforementioned, more recently, alongside the consolidated cognitive-behaviorist oriented interventions, scientific studies have begun to emerge, especially from developmental psychologists and educationalists, using performative methods to engage in research on autism (Corbett et al., 2014; Gabriel, Angevin, Rosen & Lerner, 2015). They believe that performance-based

7 This review does not claim to be exhaustive, but it is certainly representative of an increased interest in this research field. The data presented in this paragraph have been selected starting from a *theoretical review* of scientific sources (primary/secondary) related to the main published theories and practices related to the use of performative practices in autism. All the works included (10 scientific articles and one volume) have been identified starting from the following databases: Psych ARTICLE, EBSCO host, PsychINFO, Science Direct. The research was conducted in the period between June and July 2019 and the databases were interrogated through an advanced search deriving from the combination of the following keywords (AND and OR represent the Boolean operators used): a) autism or asd or autism spectrum disorder; b) performance or theatre or drama; c) intervention or treatment or program or strategy. All the studies are mentioned in the paragraph and provide a useful context for the analysis of documentation from the *Imagining Autism* project, in order to establish its similarities and differences from other approaches and to focus on its pedagogical performance-based dimensions.



activities could help persons learn how to read others' beliefs and intentions within a safe, structured, and reinforcing environment (Guss, 2005), mainly in terms of rehabilitative and "therapeutic" interventions.

There are numerous documentaries (mostly available online) and workshops that testify – through the voices and experiences of experts, actors, educators, teachers, parents, as well as persons with ASD – that performative practices can concretely help to improve a series of communicative, sociorelational, and executive skills. However, the current evidence-based literature for drama techniques in autism is mostly a mixture of anecdotal and qualitative feedback from parents, caregivers, teachers, etc. who have participated in single-case or small-group studies. In spite of this lack of evidence, preliminary results have been positive enough to suggest that empirical enquiry be continued, and new research is beginning to show the effectiveness of drama interventions based on thoroughly researched projects (Beadle-Brown et al., 2018).

One of these psycho-educational interventions is *Social Emotional Neuroscience Endocrinology* (SENSE) Theatre (Corbett et al., 2011; 2014; 2016), an American programme designed by Blythe Corbett in 2009 to improve socioemotional functioning and reduce stress in children with ASD, using live and video peer modelling that took place through the medium of a musical-theatrical performance. As its founder underlined, SENSE Theatre incorporated a number of promising strategies for social skills training (such as modelling, which provides a nurturing and fun environment, natural reinforces, multiple trainers, etc.) that may facilitate social awareness and perspective taking demonstrating how a dynamic engagement with others in a skilled, supportive, and reciprocal manner can be effective (Corbett et al., 2011: 509).

Another program is the *Sociodramatic Affective Relational Intervention* (SDARI) designed by the American scholars Lerner, Levine, and Mikami, that adapts training activities taken from improvisational theater (e.g. "gibberish," "ball of emotions," "history of a word," etc.) to improve areas of social skill deficit among children with ASD and Asperger's Syndrome (Lerner, Mikami & Levine, 2011). The aim of performance-based approaches such as SDARI is to give the person the opportunity to experience "doing the behaviour" in more naturalistic ways (Lerner & Mikami, 2012): «rather than aiming to promote rote knowledge of social rules, [...] the goal of the model is to help participants to "flex" their social creativity "muscle" so that it is more practiced and well-developed when facing the complexities of social world» (Lerner & Girard, 2018: 207).

American scholars Guli and colleagues (2013) also focused on social competence and found significant improvements in observed prosocial behaviour in naturalistic settings following participation in the *Social Competence Intervention Program* (SCIP). SCIP combines current research from neuropsychology and drama-based techniques to help students accurately perceive and respond to the nonverbal aspects of social interactions, such as facial expressions, body language, and tone of voice.

Finally, another approach is the *Cognitive Behaviour Drama* (CBD). It is a research-based intervention model that was originally developed at Trinity College Dublin in Ireland by Haris Kernezi under the supervision of Kevin Tierney, supported by the Irish National Council for Special Education (Kernezi & Tierney, 2009; 2014). It is specifically designed to meet the needs of children on the high

end of the autism spectrum, uniquely combining concepts and techniques from cognitive and behavior therapies with the art form of drama. The overriding aim of the CBD model is to provide children with ASD the motivation to engage in the social world so that they can benefit from learning opportunities in their environment, as opposed to teaching them a set of skills. The method consists in engaging the participants in exciting fictional scenarios and encouraging them to seek various solutions to numerous problems (such as travelling to the place of the ice-cream mountains, the chocolate rivers, and the candy trees; flying with magic carpets; etc.), that would not only empower them to develop self-confidence but also lead them to an understanding of causal relationships, for instance how different courses of action or behaviours may yield different outcomes.

As mentioned, there are no fewer important experiments by (former) performers or directors who decided to dedicate their theatrical poetics and techniques, matured throughout their career, to laboratory and workshops initiatives for children and youth with ASD.

This is the case of Richard Hayhow, a British performer of the Open Theater Company (Coventry, UK) and inventor of *Mimetics* (Trowsdale & Hayhow, 2013), an interactive, nonverbal, psycho-physical theatre practice developed within special education contexts. For almost two decades, he has been developing theatre programs catered to young persons and children with learning disabilities, within the education field and beyond. His practice focuses on nonverbal, physical action and interaction, seen as the heart of all human communication and levellers of differences. As a matter of fact, much of the work undertaken within current theatre practice is heavily verbal and often conceptual at its heart, thus excluding young persons with learning disabilities who rely on nonverbal means of communication. Hayhow's mimetic approach, therefore, with its roots in psycho-physical ensemble actor-training, has been adapted to enable a genuinely collaborative approach to communicating and to making inclusive theatre with young persons with learning disabilities.

Kelly Hunter's drama-based proposal is similar to *Mimetics* but utilizes completely different workshop techniques. For more than thirty years, Hunter was an actress of the Royal Shakespeare Company and the acclaimed Vesturport and, for over a decade, she was the artistic director of the Flaute Theater. In this role, she conceived and directed, among others, Shakespeare's *Hamlet* and *The Tempest*, shows made for children and adolescents with autism. In her latest book, *Shakespeare's Heartbeat* (2015), she relates a synthesis of these personal and professional experiences while also providing a detailed account of the method she created—called, precisely, the *Shakespeare's Heartbeat Method*. The Shakespeare's Heartbeat Method addresses, through the use of precise theatrical practices, a series of difficulties experienced by children and youth with autism, for example, in expressing feelings and emotions or in establishing and maintaining eye contact. In particular, the Method draws from the complexity of Shakespeare's poetry and narration and uses it as "pre-text" to give life to a sequence of "dramatic games" (sensory and bodily) designed specifically to meet the needs of persons with ASD.

While this dual tendency (from the psycho-educational scientific community and from the world of theatre and performance studies) testifies the increasingly widespread use of performative practices with children and young persons with



ASD by experts, actors, educators, teachers and, parents, it also raises two sets of issues (Besio & Giraldo, 2019). On the one hand, the proposals offered by the scientific community, lacking a proper aesthetic foundation, are, in most cases, limited to a psycho-educative approach that is anchored to the therapeutic-rehabilitative dimension. On the other, performers and directors, while remaining faithful to their own aesthetics, lack that “pedagogical core” that would give a truly authentic educational value to their practices.

A solution to these lacks might come from the performance-based research project called *Imagining Autism: Drama, Performance and Intermediality as Interventions for Autism*, which is situated exactly at the crossroad of the two different aforementioned trends. Funded by the UK’s Arts and Humanities Research Council, this three-year interdisciplinary collaboration between the field of Drama and that of Psychology explores the potential of participatory performance to address the triad of impairments in autism: language and communication, social interaction and emotional regulation, and flexibility in thought or social imagination. In what follows, *Imagining Autism* method will be presented.

### 3. Imagining Autism: Drama, Performance and Intermediality as Interventions for Autism

Funded by the Arts and Humanities Research Council since October 2011, the project *Imagining Autism*<sup>8</sup> is based at the University of Kent and made possible thanks to the collaboration between specialists in drama, psychology, and learning disabilities coming from the School of Arts, the Tizard Centre, the Department of Psychology, and the Gulbenkian Theatre. In particular, the principal investigators are Nicola Shaughnessy and Melissa Trimmingham of the Centre for Cognition, Kinesthetics and Performance of the School of Arts, and Julie Beadle-Brown from the Tizard Centre.

It is a school-based interdisciplinary project that uses interactive, multisensory, immersive installations in conjunction with play-based performance. It researches and develops performance-based practices to address common difficulties among children and young persons with autism, aiming to de-mythologize the condition by challenging stereotypes and by suggesting that the modalities of performance can offer an appropriate space to improve communication skills, social interaction and imagination.

The education and professional profile of its creator are in line with its characteristics: Shaughnessy is a leading scholar in theatre and performance studies and successfully combines her education in Applied Theater<sup>9</sup> and contemporary

8 For further information on *Imagining Autism*, see [www.imaginingautism.org](http://www.imaginingautism.org). A film documentary arising from the project is featured in the Routledge Performance Archives series: <http://www.routledgeperformancearchive.com/search/video/1554>

9 *Applied Theatre* is an umbrella-term to refer to models of intervention capable of stimulating, through performative practices exercised “outside the theatre”, long-term learnings that can be generalized, transferred and translated from the performative situation into the real-life contexts



performance (theories and practices) combined with the scientific results achieved by neuroscientists and cognition scientists moving towards a model of neurodiversity<sup>10</sup> (see Shaughnessy, 2012; 2013a). In particular, thanks to the collaboration with the Tizard Centre and Julie Beadle-Brown, she explores the complexities of autism through the interaction between cognitive neurosciences and participatory performance, working especially on the potential of performance and its multimodalities to engage the multifacedness of the spectrum in health and educational contexts.

Especially, *Imagining Autism* is children-centred and values with the interests of its autistic participants, particularly their “detail focused processing style” (Frith & Frith, 1999; Frith, Happé & Briskman, 2001; Happé & Booth, 2010) and the “preferential orientation to inanimate objects” (Klin, Jones, Schultz & Volkmar, 2003: 351). Much like *Cognitive Behaviour Drama* (CBD), this approach elicits imaginative engagement in performative contexts (specially-designed and multisensory themed environments) through play-based activities that involve imitation and action, impacting positively on communication and social interaction (Shaughnessy & Tringham, 2016b). According to O’Sullivan (2015), this kind of interventions, operating on the basis of the creation of a fictional context, playfully capture the participants’ attention and encourage interaction and communication with others.

According to its founders, the stimulating yet not aggressive environments (a forest, the Arctic Circle, outer space, underwater, under the city, and so on) are designed to facilitate communication (verbal and physical), social interaction (with practitioners and peers), imagination (participating in fictional frameworks), and creativity (through improvisation) with respect of the common sensorial features of autism (Bogdashina, 2003). Working in conjunction with performers, autistic participants encounter a range of stimuli, triggers, responsive technologies, and all the material means of performance (including physical action, puppetry, lighting, sound, costume and masks, digital media, live feed, etc.) (Shaughnessy & Tringham, 2016b: 295).

Nevertheless, *Imagining Autism* is based on the methods developed by Melissa Tringham, a puppeteer and lecturer in contemporary performance and puppetry and object theatre. Although research into the relationship between puppetry and autism is lacking, thanks to her personal experience with her son, Tringham noticed that an external figure – someone from outside the situation – can help children with autism develop imagination, communication, and em-

of the person. It does not announce a specific set of dramatic methodologies nor a particular pedagogy but indicates a discursive practice and defines a scholarly field in which drama might be theorised and its ideological values debated (Nicholson, 2005). These kinds of interventions include: Drama Therapy, Story Drama, Princess Drama, TYA (Theatre for Young Audiences), TIE (Theatre in Education), Youth Theatre, Creative Drama, and so on (see Prentki & Preston, 2009).

10 This concept was introduced at the end of the Nineties by the Australian sociologist Julie Singer – herself with Asperger’s Syndrome – aimed to highlight the attitudes, qualities and skills of “neurodiverse people” recalling positive terms, that the neurological differences would be recognized simply as “human variations”. It is not by chance that this concept of “neurodiversity” has inspired the birth of a civil rights movement for people with ASD which has contributed to a notable proliferation of the term (Solomon, 2018).





pathy. As she put it: «puppets, when operated by someone who establishes a rapport with the child, and particularly when their use is sustained over time, are dependable quasi-“transitional objects” that offer a “break” from feeling so out of joint with the world. They are not internal objects over which the child has total control, but neither are they simply external objects the child cannot control. [...] They act as a safe bridge to the less predictable world of other objects and persons, helping them deal with that “otherness” and learn (and embody) crucial aspects of it – whether cleaning teeth, travelling in a car or learning to interact socially» (Trimingham, 2010: 265). Moreover, this encounter with the puppets «progresses to three-way communication that includes the puppeteer splitting off from the puppet, joining in and speaking to or doing actions with the child as themselves, a technique known as *manipulating*» (Shaughnessy & Trimingham, 2016b: 300). In this sense, *Imagining Autism* performances give participants an opportunity to act out social relations in a predictable, no threatening way.

Especially, after an initial play-based introduction to meet the practitioners and some of the characters and puppets that they would encounter during the performance, the children and young persons (usually in groups of three or four) participate in a 45-minute session during which they experience one or more immersive environments. This participatory performance is often based on a journey (e.g. to the moon and back) that gives them the possibility to lead the action as it develops. This is, for instance, how Shaughnessy describes the environment “Outer space”: «The “Space” environment is located within the “pod”, a portable tent structure containing the interactive performance installations that are the settings for the workshop program. Outer Space features a launch pad where the lighting and sound board are housed. This small enclosure is decorated with stars, a hanging moon, a translucent space ball, and practitioner astronauts who teach the brace position and moon walking as the participants prepare for lift off. On landing, they are invited to enter an imaginary planet with stars, moon rocks, an alien creature (a puppet from the Japanese Bunraku theatre tradition), and Professor Nucleus, a stereotypical eccentric professor who is undertaking space research» (Shaughnessy, 2016: 187).

These interactive sessions are intended to transport the participants into an “alternative” reality which engages their imagination and facilitates communication by providing a stimulating and original environment in which they can share and direct a narrative, and safely explore the social consequences of their actions.

Working with children who have different types and degrees of autism, the project team needs to adjust the workshop materials every time, in order to cater to children at the higher end of the spectrum. While practitioners work with a rough script during each session and the immersive environments and practical techniques remain the same in each work-session (improvisation with puppetry and interactive media), the project team works within flexible narrative structures to shape material and plot according to the children’s different abilities and interests.

This form of semi-structured activities recalls the *process drama* approach (O’Neill, 1995)<sup>11</sup> as it starts from a plot (mainly used as a pre-text) in order to ex-

11 It begins with a starting point (history, image, photography, etc.) used as a pre-text to personalize the story (Bolton, 1984). It is considered a form of story telling, which places its objective in the

plore a performance that arises from equal and mutual collaboration between practitioners and participants establishing a creative synergy useful for the learning process. This kind of performative activities doesn't aim at staging a performance in front of the public and is often linked to a learning goal that leads the practitioners in choosing the pre-text, the proposed characters, and the narrative path cocreated with the children. In much the same sense, *Imagining Autism's* structure and spontaneity are inextricably linked (Taylor & Warner, 2006: 1): the "structure" makes autistic children feel confident and not scared by an "unexpected event" because even this "unexpected event" is generated by their own action; the "spontaneity," even if guided (Heathcote & Bolton, 1994), asks the practitioners to step away from the plan, devise a work-in-progress, and follow what the participants want to act.

For these reasons, practitioners (usually four or five for each session) are trained to follow the children's cues rather than requiring them to follow theirs (Beadle-Brown et al., 2014; Shaughnessy & Trimmingham, 2016b), confirming other performance-based programs for persons with disabilities such as The Social Therapy Group by Christine LaCueva, The Miracle Project of Aroon Feinstein or The DisAbility Project, that require adaptability from the adults in the setting as well as the children and youth enrolled in the program.

## 4. Beyond the stereotypes, understanding autism

In line with the most recent studies (e.g. Barbara Donville, Brigitte Harrison and Jacqueline Nadel) that, through a practical approach, question some of the main well-established and effective (also in terms of learning) intervention models, *Imagining Autism* is designed to elicit and support persons with autism through techniques of interactive and participatory performance practices which are experiential, physical, and immersive. These activities are not aimed at teaching the children skills *per se* but, rather, to draw out relevant behaviours and support their development in a play-based environment, allowing the child to initiate and lead the action as much as possible (Shaughnessy, 2016).

Despite the experimental nature of the project, *Imagining Autism* gives us the opportunity to question some of the "myths" that have been generally associated to autism in the last decades, particularly in the areas of imitation and imagination, body and action, communication and social skills.

### 4.1 Imitation and imagination

Within the narrative structure of the script, the children, entering the "special environments", plot and characters, get in touch with practitioners (and puppets or objects), imitate their actions, and start to "be" his/her version of the characters,

process itself, since it is interested in the relational, social, emotional, as well as personal and intersubjective dynamics that take place during the performance.



actively playing their role in the story and changing it according to their intentions, perceptions, sensations, etc. (e.g.: helping the camera-man to film the performance session; playing and “stealing” the role or the puppets from the practitioners; making eye contact with the puppets and talking with them; etc.). Recalling Vygotsky’s «insightful imitation» (1990), this process involves a form of *spontaneous imitation* that is never just a copy.

Although the problem of spontaneous imitation in children with autism remained unanswered and contradictory (Sevlever & Gillis, 2010), the literature does not find evidence to support a general deficit of imitation in autism (Whiten & Brown, 1999). Today, neurosciences can help to solve this dilemma. In particular, the *embodied simulation theory* (Gallese, 2005; 2014; 2016; 2017a; 2017b; Gallese & Goldman, 1998; Gallese & Sinigaglia, 2011; Gallese & Guerra, 2012) states that, thanks to the mirror neurons system, all the possible levels of interpersonal interaction, whatever the degree of complexity of the relationships that define them, lie essentially on a functional embodied mechanism: thanks to the presence of neural networks, the observation of others’ actions or behaviors induces in the observer’s brain the activation of the same nervous circuits deputed to control their execution. This automatic, unconscious, not meta-representational and pre-reflective mechanism is a direct form of understanding of others from within through intercorporeity. For this reason, according to this neuroscientific perspective, the embodied simulation theory provides a unitary description of the basic aspects of the “shared manifold” of intersubjectivity.

Applying this theory to autism and refusing the conclusions reached by the supporters of the *theory of the mind* (Baron-Cohen, Frith & Leslie, 1985; Baron-Cohen, 1988; 1995) or the *broken mirror theory* (Keller, Bugiani, Fantin & Pirfo, 2011; Hamilton, 2012), the known difficulties of persons with ASD in imitation – i.e. deficit in symbolic and non-symbolic imitative behavior of bodily movements, in the imitation of the use of objects, in vocal imitation or even in the imitation of facial expressions (Rogers, 1999; Rogers & Bennetto, 2000; Rogers & Williams, 2006; Sevlever & Gillis, 2010; Williams, Whiten & Singh, 2004) – would be due to a deficit in *affective consonance* (Hobson & Lee, 1999) or, rather, in *intentional consonance* (Gallese, 2006): a particular quality of familiarity with other individuals, produced by the collapse of the intentions of others in those of the observer; it is an important component of empathy. Recently, Dapretto et al. (2006) show that persons with ASD (especially high-functioning individuals) can recognize and imitate emotions using completely different strategies from that used by typical subjects. What is “lacking” in autism is an affective attunement, the process of attribution of meaning to the emotions of others. In other words, they can’t give an experiential content to the affective world of others, which remains uniquely accessible (when possible) through a theoretical-cognitive reconstruction.

Based on these assumptions, Nadel, for example, claims that imitation deficits have not been fully demonstrated in autism and that scholars should be cautious with intervention programs based on the hypothesis of a mirror neuron dysfunction (Nadel, 2014: 126), for three main reasons: first, the heterogeneity of autism; second, the fact that many children with autism can imitate sounds (echolalia); and third, the fact that a deficit in imitation is absent from the descriptions of the disorder of Kanner and Asperger. The problem, according to Nadel, lies in the fact that many psycho-educational programs based on imitative processes reduce im-

itation to a “do-as-I-do” activity, obliging children with autism to replicate and copy gestures and sounds that they have not chosen and have no meaning for them (Nadel, 2014: 99). In fact, Nadel demonstrates that these children have better results in situations of spontaneous imitation than in “provoked imitation”: in a situation of spontaneous imitation, the child chooses what to imitate, looks at how the chosen object or the person moves, and selects his/her sensory and motor experiences; the whole development is thus configured as a continuous and interactive adaptive process (Nadel, 2014: 144). These results are also confirmed by Brooke Ingersoll’s *Reciprocal Imitation Training* (RIT) theory (Ingersoll, 2011; 2012).

Similarly, Shaughnessy and her team stress the importance of spontaneous imitation as they organize a shared environment in which toys, puppets and all other kinds of media allow children to imitate and look at each other by imitating each other. Indeed, differently from Hayhow’s *Mimetics* properly based on imitation through copying and responding to another’s physical action, in *Imagining Autism* «the role of the practitioners in conjunction with the media (e.g. puppetry, costumes, cameras) facilitates encounters with and between an objectified “other”, understood as not real by the participants, within the safe space of a fictional framework» (Shaughnessy & Trimmingham, 2016b: 303). This encounter, this “shared mainfold” (me and you) «manifests in participants joint attention and joint action between the child and the adult – and (perhaps uniquely for a sensory-based intervention) between each other» (Shaughnessy & Trimmingham, 2016b: 295).

As already mentioned, puppets play an important role in the process of spontaneous imitation (Trimingham, 2010; 2011). Operated by someone real, they contain some details that are human and, at the same time, have sensory characteristics (such as color, shape, or rattles) that, as various eye-tracking studies reported, are attractive for persons with autism. In addition, following Winnicott’s theory (1971) about transitional object in babyhood, in *Imagining Autism* as well working with puppets allows for opportunities to engage with object versions of the human (or animal) operating in a “transitional space”.

Therefore, the spontaneous imitation encouraged by *Imagining Autism* approach is beyond a mere copy, a faithful reproduction of what exists or happens, but always concerns a selective and interpretative operation that engages creativity and imagination, or better *creative imagination* (Currie & Ravenscroft, 2002). *Imagining Autism* develops insights into the «fantasy world» of autism (Bleuer, 1983) as a means of “perceiving differently” and rewrite the traditional script of autism (Baron-Cohen & Craig, 1999) as focussed on imitation and imagination deficit claims.

#### 4.2 Body and action

There is no whatever performance-based practice that does not pose, even unconsciously, the theme of corporeality. In it, the body is involved both in the intrapsychological process of interpreting the world and in the interpsychological one of the relationships between the person with the other (Besio & Giraldo, 2019). And this body is in action and this action «is the pretext for sharing, for



constructing a scenario to follow together, to be both oneself and another person at the same time» (Nadel, 2014: 198).

According to Jousse (1979), a “gesture” is never chaos, but “order”; it is never the external result of an internal “project” or “mental” intention that directs the body for mere execution. As attested by neurosciences, there is a kind of intrinsic teleological tendency in the action and, through the action, individuals have an active role in determining the sense of the reality: thanks to the mirror neurons, observing an object is like to automatically think about what we can do with it, how we can handle it, etc. And, as aforementioned, this is also valid for persons with autism: simply this cognitive process follows unconventional, different but not diminished rules.

Nevertheless, embracing the complex *embodiment theory* that, in line with main phenomenological theories (e.g. Husserl and Merleau-Ponty’s distinction between *Leib* and *Körper*), challenges established habits of thought about “having a body”, active participation and the “sensuous acts of meaning making” (Willis & Trondman, 2000: 9) that performance enables are *embodied* (in a subject), *embedded* (with the environment), *extended* (to the social relations), and *enacted* (Clark, 2008; Varela, Thompson & Rosch, 1991).

These *four E’s* (Newen, De Bruin & Gallagher, 2018) characterize the action of the performers/participants as well as the education practice (Francesconi & Tarozzi, 2012). For this reason, performance-based activities should be considered as educational experiences (Costantino, 2015), as “spaces” of education itself, thanks to the intrinsic reflective mode in which the external (objective) and internal (subjective) dimensions are deeply connected (see Berthoz, 1997; Berthoz & Andrieu, 2010).

Body and action are crucial features in *Imaging Autism*: children and young persons with ASD are actively engage and physically involved in the slapstick; they create their own characters shaping their intentions into the actions staged; it is a body/action-based interaction that opens up to the relationships between self and reality/other. Not a repetitive or systematic exercise, not the acquisition of specific techniques or tools, but “just” acting in an “as-if” context with a high density of informative feedback, recognizing a communicative dimension to that body in action (Carboni, 2013).

In this sense, *Imaging Autism* could be considered an “alternative” psycho-educational approach that proposes an adaptable and “enactive” approach which recognises that each individual is on a spectrum (of both abilities and difficulties), thus adapting to each individual (Beadle-Brown et al., 2018). The method is a form of situated learning (Lave & Wenger, 1991) that confirms the value of experience in learning, which was already recognized pedagogically by Dewey (1998) and neuroscientifically by Varela (Varela, Thompson & Rosch, 1993). It offers an example of an “active learning approach” moving from abstract to grounded learning and corroborates the studies that show benefits for learning when different types of active bodily engagement are involved (Cook, Mitchell & Goldin-Meadow, 2008). Performance-based practices is no longer exclusively a way of “seeing someone doing something”, but above all it concerns acting in first person abandoning the classic modes of relationship and creation and experiencing new ways (Besio & Giraldo, 2019).

### 4.3 Communication and social skills

As mentioned, in recent years, there has been an increasing interest in using performance-based activities to improve the social and communication challenges that generally occur with ASD. According to Reading and colleagues (2016): acting can be used to teach emotion recognition, emotion expression, nonverbal behaviors and gestures, listening skills, eye contact, conversation skills, and strategies to handle social situations; other aspects of theatre such as set design, staging and choreography, and lighting also rely on social and language skills that lead to collaboration, compromise, and cooperation (p. 1).

According to the definition of communication as network of information exchange and social relations that has in itself a relational aspect and intertwines verbal and non-verbal behaviors (Anolli, 2006), the example offered by *Imagining Autism* uses the modalities of a performative practice as a means for researching *pre-expression* and *expressiveness* in the different languages; as a channel that allows the person, as well as the performer, to become aware of their creative dimension and creatively communicate their emotions or social meanings. Especially, the multicodicity of the performance, which represents its aesthetic richness, guarantees even to individuals with ASD: a multiplicity of communication codes (verbal as well as no-verbal, such as sound, voice, body, image) that can be used; an even more flexibility in their use and exercise; and a greater possibility of finding a way to interact with the other through its proper “language”. Therefore, *Imagining Autism*, as performative approach, engages a *prelinguistic level of communication*, a sort of tacitly shared communication opened up to interaction.

Therefore, beyond any categorisations and any impairments, *Imagining Autism* recalls that, as stated by Watzlawick, Beavin and Jackson’s axioms (1971), it is impossible not to communicate – as every behavior is a form of communication – and every communication has a content and relationship aspect. Performance-based practice, whatever forms it takes, is always an artistic creation as a communicated, shared and participatory act (Costantino, 2019).

As a matter of fact, through a grounded performative, creative, participatory, and imitative practice, the children involved in *Imagining Autism* workshops have the opportunity to improve and empower their social skills across many domains of functioning. It sounds like a paradox if we think about the traditional approaches to autism according to which the inability to understand the “perspective of others” underlies all social interactions (Baron-Cohen, 1988). But welcoming the studies of Goldstein and Winner (2012), Corbett and colleagues (2011; 2014; 2016), and others (Guli et al., 2004; 2013; Lerner, Mikami & Levine, 2011), *Imagining Autism* confirms that the controlled social environment of performance may indeed offer a “safe space” for persons with ASD to practice social skills within a “likelihood” context in ways that are unavailable to them in typical interaction or in traditional instruction (Goldstein, Lerner & Winner, 2017: 1509). A subsequent and further effort to generalize these skills allows the person to transfer the results achieved during these performances workshops to the context of real life of the person. In this sense, performance-based approaches can serve as valuable tools to strengthen core social functioning in ASD: «acting teaches social awareness, cognition, communication, perception and expression» (Corbett et al., 2014:





6) thanks to its intrinsic mimetic feature. It pushes communication into a “different” space, different from the real because it is fantastic, apparently far but inseparably linked to those who share the same fiction, to those who let themselves be led on the ground of fascination.

## 5. Conclusions: to be continued...

As Francesca Happé recalled (Happé & Frith, 2012), some epidemiological and cognitive characteristics of the autistic syndrome “prepare” for talent, such as its detailed-oriented processings trend, poor coherence, and enhanced perceptual functioning (Happé & Vital, 2009). Although the reason of the association between “special” skills and autism remains obscure and there is no solid epidemiological data to support it, it strikes the extraordinarily high amount of individuals who associate this disorder with exceptional artistic and performative skills (e.g. musical and theatrical) (O’Connor & Hermelin, 1986; 1988; Treffert, 1989). Such are, for instance, the patients described by Oliver Sacks (1986; 1995) and the noted nineteenth- and twentieth-century artists, scientists and political figures written about by Michael Fitzgerald (2004).

In this perspective, *Imagining Autism* represents, within the international studies of performance-based practices for ASD, a methodology that invites to go beyond the diagnostic labels, because “different but not less” (Grandin, 2006). Shaughnessy and her team question some intervention models (mainly cognitive-behaviorist) and welcome instead most recent theories aimed at undermining long-lived prejudices about the syndrome. In many cases, these stereotypes determine misrepresentations of the autistic condition and compromise the real social inclusion of the person with autism spectrum disorder.

Indeed, this analysis of *Imagining Autism* opens up an opportunity to reflect once again on the use of performance in the context of disability and, above all, on what idea of performance-based practice is carried on by the multitude of experiences which characterize today’s relation between drama/theatre/performance and education.

Most contemporary scholars dealing with performance in educational contexts tend to justify its use based on two different, but connected, perspectives.

First, some experiments validate the use of performance-based practices in terms of emotional, affective, and cognitive self-awareness arising from sensations felt or impressions received from reality (Bailin, 1993). This strategy is widely used, for example, by drama therapy, and translates performance-based activities into a subjective experience; it is a form of unbridled subjectivism in which what counts is the performer/participant’s freedom to express him/herself, his/her feelings, the mood or thoughts that torment him/her. Second, performative interventions are considered for their potential positive effects on the construction and adaptation of social roles as means of acquiring or exhibiting social skills. Related to Disability and Cultural Studies perspectives, these second kinds of experiments – including, among the others, Theatre of the Oppresses or sociodrama techniques – while «questioning the parameters of normalcy, including who defines and enforces those borders» (Gallagher, Connor & Ferri, 2014:



1125), work as collective process actively promoting individual learning and cultural, social, and political participation. These two tendencies share the similar “laboratorial forms” and as process-centered approach enforce an idea of performance as extemporaneous, improvised and spontaneistic experience, at the expense of its aesthetic and poietic core. The risk is to include in the larger “container” of performance a multiplicity of liveness activities (Schechner, 1973; 1988) that opt for improvisational methodologies working on emotions and/or socialization. As a result, they give back a weak, or diminished, sense of performative action and, according to Schechner (2010), they may lead to confused results that characterize «postmodern performative drift» (Valentini, 2007) the at the threshold of the new millennium. *Imaging Autism* approach share with the aforementioned trends some aspects: liveness, process-centered approach, self-referential operations, distance from the product (work), spontaneous engagement and so on.

Alongside working to avoid this performative drift, it could be interesting for the further development of *Imagining Autism* approach to consider other three kinds of possible implementations. Firstly, Shaughnessy and her team should try to make more systematic and evidence-based the results already obtained in the areas previously considered (imitation and imagination; body and action; communication and social skills) (Beadle-Brown et al., 2018). Secondly, to design more personalized scenarios and environments that, according to the specific educational goals of the children or young persons people with ASD involved in the workshops, simulate the real-life contexts and prepare them for real social situations, behaviours and interactions. And, finally, according to the recents studies which confirm Peer Mediated Intervention (PMI) as a promising approach to address and increase social skills in children with ASD (Chang & Locke, 2016), it may be interesting to engage in *Imaging Autism* performative sessions not only autistic participants, but also typically developing peers.

Indeed, the presentation and the analysis of *Imaging Autism* approach recalls the now more than ever need to reconsider the epistemological and aesthetic conditions of performance within educational contexts, by reformulating, starting from the aforementioned implementations, this relation in rigorous terms in order to “rehabilitate” performance from the therapeutic and/or recreational purposes to which it is often relegated.

## References

- Anolli, L.M. (2006). *Fondamenti di psicologia della comunicazione*. Bologna: Il Mulino.
- Armstrong, T. (2015). The myth of the Normal Brain: Embracing Neurodiversity. *AMA Journal of Ethics*, 4 (17): 348-352.
- Bailin, S. (1993). Theatre, drama education and the role of the aesthetic. *Journal of Curriculum Studies*, 25(5): 423-432.
- Barnes, C. (1999). Disability Studies: the new and not-so-new directions. *Disability&Society*, 14(4): 577-580.
- Barnes, C. (2013). Understanding the social model of disability: past, present and future. In N. Watson, A. Roulston, C.T. (Eds.). *Routledge Handbook of Disability Studies* (pp. 12-29). London: Routledge.



- Barnes, C., Oliver, M., & Barton, L. (Eds.) (2002). *Disability Studies Today*. Cambridge: Polity Press.
- Baron-Cohen, S. (1988). Social and pragmatic deficits in autism: Cognitive or affective?. *Journal of Autism and Developmental Disorders*, 18(3): 379-402
- Baron-Cohen, S. (1995). *Mindblindness. An essay on Autism and Theory of Mind*, Cambridge: MIT Press.
- Baron-Cohen, S., & Craig, J. (1999). Creativity and imagination in autism and Asperger syndrome. *Journal of Autism and Development Disorders*, 29(4): 319-326.
- Baron-Cohen, S., Leslie, A.M., & Frith, U. (1985). Does the autistic child have “theory of mind”?. *Cognition*, 21: 37-46. Baron-Cohen, S. (1988). Social and pragmatic deficits in autism: cognitive or affective? *Journal of Autism and Developmental Disorders*, 18: 379-402.
- Beadle-Brown, J. et al. (2014). Imagining Autism: impact of a drama-based intervention on the social communicative and imaginative behaviour of children with autism. in: *4th IASSID-Europe congress*. Wiley-Blackwell, pp. 343-343.
- Beadle-Brown, J., Wilkinson, D., Richardson, L., Shaughnessy, N., Trimmingham, M., Leigh, J., Whelton, B., & Himmerich, J. (2018). Feasibility of a drama-based intervention on the social, communicative and imaginative behaviour of children with autism. *Autism*, 22(8): 915-927.
- Berthoz, A. (1997). *Le sens du mouvement*. Paris: Odile Jacob.
- Berthoz, A., & Andrieu, B. (Eds.) (2010). *Le corps en act*. Nancy: Presses Universitaires de Nancy.
- Besio, S. (2014). *Art Labo. Fare Arte con la Disabilità. Analisi di un Percorso Educativo e Artistico*. Le Château Edizioni. Aosta.
- Besio, S., & Giraldo, M. (2019). La drammatizzazione nella scena scolastica. Utilizzi didattici contemporanei e sfide future in ottica inclusiva. In M.A. Galanti, M. Pavone, (Eds.). *Didattiche da scoprire. Linguaggi, disabilità, inclusione*. Milano: Mondadori (in press).
- Bleuler, E. (1983). *Lehrbuch der psychiatrie. 15. Aufl. Neubearb. Von Manfred Bleuler*. Berlin-Heidelberg-New York: Springer.
- Blume, H. (1998). Neurodiversity. *The Atlantic*, September 1998. Retrieved January 2018 from <http://www.theatlantic.com/magazine/toc/1998/09/>
- Bodgashina, O. (2003). *Sensory Perceptual Issue in Autism and Asperger's Syndrom. Different sensory experiences – different perceptual word*. London: Jessika Kingsley Publishers.
- Bolton, G. (1984). *Drama as education. An argument for placing drama at the centre of the curriculum*. Burnt Mill, Harlow: Longman Higher Education.
- Breckenridge, C.A., & Vogler, C. (2001).
- Brown, S.E. (2002). What is Disability Culture?. *Disability Studies Quarterly*, 2(22): 34-50.
- Brown, S.E. (2003). *Movie Stars and Sensuous Scars: Essays on the Journey from Disability Shame to Disability Pride*. New York: Persons with Disabilities Press.
- Carboni, M. (2013). Sulle “tracce” della corporeità nella pedagogia speciale. *Italian Journal of Special Education for Inclusion*, 1(1): 49-64.
- Chang, Y.C., & Locke, J. (2016). A systematic review of peer-mediated interventions for children with autism spectrum disorder. *Research in autism spectrum disorders*, 27, 1–10.
- Clark, A. (2008). *Supersizing the Mind: Embodiment, Action, and Cognitive Extension*, New York: Oxford University Press
- Cook, S.W., Mitchell, Z., & Goldin-Meadow, S. (2008). Gesturing makes learning last. *Cognition*, 106(2): 1047-1058.
- Corbett, B.A., et al. (2011). Brief report: theatre as therapy for children with autism spectrum disorder. *Journal of Autism and Developmental Disorders*, 41(4): 505-511.
- Corbett, B.A., et al. (2014). Improvement in Social Deficits in Autism Spectrum Disorders Using a Theatre-Based Peer-Mediated Intervention. *Autism Research*, 7(1): 4-16.
- Corbett, B.A., et al. (2016). Improvement in Social Competence Using a Randomized Trial

- of a Theatre Intervention for Children with Autism Spectrum Disorder. *Journal of Autism and Developmental Disorders*, 46(2): 658-672.
- Costantino, V. (2015). *Teatro come esperienza pedagogica*. Roma: Anicia.
- Costantino, V. (2019). Il corpo non stereotipo nella relazione pedagogica e teatrale. *Filosofi(e) Semiotiche*, 6(1): 64-74.
- Currie, G., & Ravenscroft, I. (2002). *Recreative Minds*. Oxford: Oxford University Press.
- D'Amico, D. (2014). Il corpo della vulnerabilità. *Elephant&Castle*, n. 10: 5-29
- Dapretto, L., Davies, M.S., Pfeifer, J.H., Scott, A.A., Sigman, M., Bookheimer, S.Y., & Iacoboni, M. (2006). Understanding emotions in others: mirror neuron dysfunction in children with autism spectrum disorders. *Nature Neuroscience*, 9: 28-30.
- Davidson, J., & Orsini, M. (2013). *Worlds of Autism: Across the Spectrum of Neurological Difference*. Ann Arbor: University of Minnesota Press.
- Davis Lennard, J. (2006). *The Disability Studies Reader*. New York: Routledge.
- Dewey, J. (1998). *Experience and Education*. Indianapolis: Kappa Delta Pi (Original work published 1938).
- Fitzgerald, M. (2004). *Autism and creativity: is there a link between autism in men and exceptional creativity?*. New York: Routledge.
- Francesconi, D., & Tarozzi, M. (2012). Embodied Education: A Convergence of Phenomenological Pedagogy and Embodiment. *Studia Phaenomenologica*, XII: 263-288.
- Frith, C., & Frith, U. (1999). Interacting minds. A biological basis. *Science*, 286: 1692-1695.
- Frith, U., Happé, F., & Briskman, J. (2001). Exploring the cognitive phenotype of autism: weak "central coherence" in parents and siblings of children with autism: II. Real-life skills and preferences. *J Child Psychol Psychiatry*, 42(3): 309-316.
- Gabriel, J., Angevin, E., Rosen, T.E., & Lerner, M.D. (2015). Use of theatrical techniques and elements as interventions for autism spectrum disorders. In C. Falletti, G. Sofia, V. Jacono, J. Lutterbie (Eds.), *Theater and Cognitive Neuroscience* (pp. 163-176). London: Bloomsbury Academic.
- Gallagher, D.J., Connor, D.J., & Ferri, B.A. (2014). Beyond the Far Too Incessant Schism: Special Education and the Social Model of Disability. *International Journal of Inclusive Education*, 18(11): 1120-1142.
- Gallese, V. (2005). Embodied simulation: from neurons to phenomenal experience. *Phenomenology and the Cognitive Sciences*, 4: 23-48.
- Gallese, V. (2006). La molteplicità condivisa. Dai neuroni mirror all'intersoggettività. In S. Mistura (Ed.), *Autismo. L'umanità nascosta* (pp. 206-270). Torino: Einaudi.
- Gallese, V. (2014). Bodily Selves in Relation: Embodied simulation as second-person perspective on intersubjectivity. *Philos Trans R Soc Lond B Biol Sci*, 369(1644): 20130177.
- Gallese, V. (2016). Finding the body in the brain. In B.P. McLaughlin, H. Kornblith (Eds.). *Goldman and His Critics* (pp. 297-317). Hoboken: John Wiley & Sons, Inc.
- Gallese, V. (2017a). Visions of the body. Embodied simulation and aesthetic experience. *Aisthesis. Pratiche, Linguaggi E Saperi Dell'Estetico*, 10(1), 41-50.
- Gallese, V. (2017b). Mirroring, a liberated embodied simulation and aesthetic experience. *Mirror Images. Reflections in Art and Medicine*. 1: 27-37.
- Gallese, V., & Goldman, A. (1998). Mirror neurons and the simulation theory of mind-reading. *Trends in Cognitive Sciences*, 2: 493-501.
- Gallese, V., & Guerra, M. (2012). Embodying Movies: Embodied Simulation and Film Studies. *Cinema: Journal of Philosophy and the Moving Image*, 3: 183-210.
- Gallese, V., & Sinigaglia, C. (2011). What is so special with Embodied Simulation. *Trends in Cognitive Sciences*, 15(11): 512-519.
- Goldstein, T.R., Lerner, M.D., & Winner, E. (2017). The arts as a venue for developmental science: realizing a latent opportunity. *Child Development*, 88(5): 1505-1512.
- Goldstein, T.R., & Winner, E. (2012). Enhancing empathy and theory of mind. *Journal of Cognition and Development*. 13(1): 19-37.
- Grandin, T. (2006). *Pensare in immagini e altre testimonianze della mia vita di autistica*. Trento: Erickson.



- Guli, L.A. (2004). *The effects of creative drama-based intervention for children with deficits in social perception*. Unpublished PhD Thesis. The University of Texas at Austin.
- Guli, L.A., Semrud-Clikeman, M., Lerner, M.D., Britton, N. (2013). Social Competence Intervention Program (SCIP): A pilot study of a creative drama program for youth with social difficulties. *The Arts in Psychotherapy*, 40: 37–44.
- Guss, F. (2005). Reconceptualizing play: Aesthetic self-definitions. *Contemporary Issues. Early Childhood*, 6(3): 233-243
- Hamilton, A. (2012). Reflecting on the mirror neuron system in autism. A systematic review of current theories, *Developmental Cognitive Neuroscience*, 3: 91-105.
- Happé, F. Frith, U. (Eds.) (2012). *Autismo e talento. Svelare il mistero delle abilità eccezionali*. Trento: Erickson.
- Happé, F., Vital, P. (2009). What aspects of autism predispose to talent?, *Philosophical Transactions of the Royal Society B: Biological Sciences*, 364(1522): 1369–1375.
- Happé, F., Booth, R. (2010). “Hunting with a knife and ... fork”: Examining central coherence in autism, attention deficit/hyperactivity disorder, and typical development with a linguistic task. *J Exp Child Psychol*, 107(4-5): 377–393.
- Heathcote, D., Bolton, G. (1994). *Drama for learning: Dorothy Heathcote's Mantle of the Expert approach to education*. Portsmouth: Heinemann Press.
- Hobson, R.P., Lee, A. (1999). Imitation and identification in autism. *Journal of Child Psychology and Psychiatry*, 40: 649-659.
- Hunter, K. (2015). *Shakespeare's Heartbeat. Drama games for children with autism*. London: Routledge.
- Ingersoll, B. (2012). Brief Report: Effect of a focused imitation intervention on social functioning in children with autism. *Journal of Autism and Developmental Disorders*, 42: 1768-1773.
- Ingersoll, B., Meyer, K. (2011). Examination of correlates of different imitative functions in young children with autism spectrum disorders. *Research in Autism Spectrum Disorders*, 5: 1078-1085.
- Jousse, M. (1979). *Antropologia del gesto*, tr. it., Roma: Edizioni Paoline (Original work published 1969).
- Kerenzi, H., & Tierney, K. (2009). A Novel Intervention to Address Fears in Children with Asperger Syndrome: A Pilot Study of the Cognitive Behaviour Drama (CBD) Model. *Behaviour Change*, 26(4): 271-282.
- Kerenzi, H., Tierney, K. (2014). Cognitive Behavior Drama: An Innovative Intervention Model that Combines Established Psychological Methods with the Art Form of Drama to Provide Young Children on the Autism Spectrum with the Motivation and Confidence to Overcome Their Fears. *Advances in Research*, 2(7): 393-408.
- Keller, R., Bugiani, S., Fantin, P., Pirfo, E. (2011). Neuroni specchio e autismo. *Giornale Italiano di Psicopatologia*, 17: 404-412.
- Klin, A., Jones, W., Schultz, R., Volkmar, F. (2003). The enactive mind, or from actions to cognition: lessons from autism. *Philos Trans R Soc Lond B Biol Sci*, 358(1430): 345-360.
- Kuppers, P. (2000). Aesthetics, bodies and disability. *Research in Dance Education*, 1(2): 119-131.
- Kuppers, P. (2007). *Disability and Contemporary Performance: Bodies on Edge*. Minneapolis: University of Minnesota Press.
- Lave, J., Wenger, E. (1991). *Situated Learning. Legitimate Peripheral Participation*. Cambridge: Cambridge University Press.
- Lehmann, H-T. (2006). *Postdramatic Theatre*. New York: Routledge.
- Lerner, M.D., Girard, R.M. (2018). Appreciating and promoting social creativity in youth with Asperger's Syndrome. In S. Barry Kaufmann (Ed.), *Twice exceptional: supporting and educating bright and creative students*. Oxford: Oxford University Press.
- Lerner, M.D., Mikami, A.Y., (2012). A preliminary randomized controlled trial of two social skills interventions for youth with high-functioning autism spectrum disorders. *Focus*

- on *Autism and Other Developmental Disabilities*, 27: 145-155.
- Lerner, M.D., Mikami, A.Y., Levine, K. (2011). Socio-dramatic affective-relational intervention for adolescents with asperger syndrome and high functioning autism: pilot study. *Autism: the international journal of research and practice*, 15(1): 21-42.
- Murray, S. (2008). *Representing Autism: culture, narrative, fascination*. Liverpool: Liverpool University Press.
- Nadel, J. (2014). *How imitation boosts development in infancy and Autism Spectrum Disorder*. Oxford: Oxford University Press.
- Newen, A., De Bruin, L., Gallagher, S. (Eds.), *The Oxford Handbook of 4E Cognition*. Oxford: Oxford University Press
- Nicholson, H. (2005). *Applied drama. The gift of theatre*. Basingstoke: Palgrave MacMillan.
- O'Connor, N., Hermelin, B. (1986). Idiot savant calendrical calculators: rules and regularities. *Psychological Medicine*, 16: 885-893.
- O'Connor, N., Hermelin, B. (1988). Low intelligence and special abilities. *The Journal of Child Psychology and Psychiatry*, 29: 391-396.
- O'Neill, C. (1995). *Drama Worlds. A framework for process drama*. Portsmouth: Heinemann.
- O'Sullivan, C. (2015). Drama and Autism. In R.F. Volkmar (Ed.), *Encyclopedia of Autism Spectrum Disorders* (pp. 1-13). New York: Springer.
- Prentki, T., Preston, S. (Eds.) (2009). *The Applied Theatre Reader*. London, New York: Routledge.
- Reading, S., Reading, J., Padgett, R-J., Reading, S., Pryor, P. (2016). The Use of Theatre to Develop Social and Communication Behaviours for Students with Autism. *Journal of Speech Pathology & Therapy*, 1(1).
- Rogers, S.J. (1999). An examination of the imitation deficit in autism. In J. Nadel, G. Butterworth (Eds.), *Imitation in infancy* (pp. 254-283). Cambridge: Cambridge University Press.
- Rogers, S.J., Bennetto, L. (2000). Intersubjectivity in autism: The roles of imitation and executive function. In A.M. Wetherby, B.M. Prizant (Eds.), *Autism spectrum disorders. A transactional developmental perspective* (pp. 79-107). Baltimore: Paul H. Brookes.
- Rogers, S.J., Williams, J.H.G. (2006). Imitation in autism: Findings and controversies. In S.J. Rogers & J.H.G. Williams (Eds.), *Imitation and the social mind: Autism and typical development* (pp. 277-309). New York: The Guilford.
- Sacks, O. (1986). *L'uomo che scambiò sua moglie per un cappello*. Milano: Adelphi.
- Sacks, O. (1995). *Un antropologo su Marte. Sette racconti paradossali*. Milano: Adelphi.
- Sandahl, C., Auslander, P. (Eds.) (2005). *Bodies in Commotion. Disability and Performance*. University of Michigan: University of Michigan Press.
- Schechner, R. (1973). Drama, Script, Theatre and Performance. *The Drama Review*, 17(3): 5-36.
- Schechner, R. (1988). Performance Studies: the broad spectrum approach. *The Drama Review*, 32(3): 4-6.
- Schechner, R. (2010). The conservative avant-garde. *New Literary History*, 41: 895-913.
- Schonmann, S. (Ed.). (2007). *Key concepts in Theatre/Drama Education*. Rotterdam: Sense Publishers.
- Sevlever, M., M Gillis, J. (2010). An examination of the state of imitation research in children with autism: Issues of definition and methodology. *Research in developmental disabilities*, 31: 976-984.
- Shaughnessy, N. (2012). *Applied Performance. Live Art, Socially Engaged Theatre and Affective Practice*. London: Palgrave MacMillan.
- Shaughnessy, N. (2013a). *Affective Performance and Cognitive Science. Body, Brain and Being Practice*. London: Bloomsbury Methuen.
- Shaughnessy, N. (2013b). *Imagining Otherwise: Autism, Neuroaesthetics and Contempo-*



- rary. *Interdisciplinary Science Reviews*, 38(4): 321-334.
- Shaughnessy, N. (2016). Curious Incidents: Pretend Play, Presence, and Performance Pedagogies in Encounters with Autism. In P. Smagorinsky (Ed.). *Creativity and Community among Autism-Spectrum Youth Creating Positive Social Updrafts through Play and Performance* (pp. 187-216). London: Palgrave Macmillan.
- Shaughnessy, N., Trimmingham, M. (2016a). Autism in the wild: bringing the gap between experiment and experience. In P. Garratt (Ed.). *The Cognitive Humanities. Embodied mind in Literature and Culture* (pp. 191-211). London: Palgrave MacMillan.
- Shaughnessy, N., Trimmingham, M. (2016b). Material Voices: intermediality and autism. *Research in Drama Education: the Journal of Applied Theatre and Performance*, 21(3): 293-308
- Siebers, T. (2010). *Disability Aesthetics*. Ann Arbor: University of Michigan Press.
- Silverman, S. (2015). *NeuroTribes. The legacy of Autism and the future of Neurodiversity*. New York: Avery Publishing.
- Solomon, A. (2008). The autism rights movement. *New York Magazine*, May 25th. Retrieved January 2018 from: <http://nymag.com/news/features/47225/>
- Taylor, P., Warner, C.D. (2006). *Structure and spontaneity. The process drama of Cecile O'Neill*. Stoke on Trent: Trentham Books.
- Treffert, D.A. (1989). *Extraordinary persons: understanding savant syndrome*. New York: Ballantine Books.
- Trimingham, M. (2010). Objects in transition: the puppet and the autistic child. *Journal of Applied Arts in Health* 1:251-265. Retrieved January 2018 from: [http://dx.doi.org/10.1386/jaah.1.3.251\\_1](http://dx.doi.org/10.1386/jaah.1.3.251_1)
- Trimingham, M. (2011). How to Think a Puppet. *Forum Modernes Theater*. Retrieved January 2018 from: [http://periodicals.narr.de/index.php/forum\\_modernes\\_theater/article/view/792](http://periodicals.narr.de/index.php/forum_modernes_theater/article/view/792)
- Trowsdale, J., Hayhow, R. (2013). Can mimetics, a theatre-based practice, open possibilities for young persons with learning disabilities? A capability approach. *British Journal of Special Education*, 40(2): 72-79.
- Valentini, V. (2007). *Mondi, corpi, materie: teatri del secondo Novecento*. Milano: Mondadori.
- Varela, F.J., Thompson, E., Rosch, E. (1993). *The embodied mind. Cognitive Science And Human Experience*. London: The MIT Press.
- Vygotskij, L.S. (1990). *Pensiero e linguaggio. Ricerche psicologiche*. Roma-Bari: Laterza.
- Watzlawick, P., Beavin, J.H., Jackson, D.D. (1971). *Pragmatica della comunicazione umana*. Roma: Astrobio.
- White, G. (Ed.) (2015). *Applied Theatre. Aesthetics*. London: Bloomsbury.
- Whiten, A., Brown, J. (1999). Imitation and the reading of other minds: Perspectives from the study of autism, normal children and non-human primates. In S. Braten (Ed.), *Intersubjective communication and emotion in early ontogeny*. (pp. 260-280). Cambridge: Cambridge University Press.
- Williams, J.H.G., Whiten, A., Singh, T. (2004). A systematic review of action imitation in autistic spectrum disorder. *Journal of Autism and Developmental Disorders*, 34, 285-298;
- Willis, P., Trondman, M. (2000). Manifesto for ethnography. *Ethnography*, 1(1): 5-16.
- Wing, L., Gould, J. (1979). Severe impairments of social interaction and associated abnormalities in children: Epidemiology and classification. *Journal of Autism and Developmental Disorders*, 9(1): 11-29
- Winnicott, D. (1971). *Playing and reality*. London; New York: Tavistock Publications.