Daniela Bulgarelli (Ed.)

# Perspectives and research on play for children with disabilities

**Collected papers** 

Managing Editor: Daniela Bulgarelli



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### Daniela Bulgarelli and Serenella Besio **Preface**

This book is one of the outcomes of the work conducted by several scholars and professionals belonging to the COST Action TD1309 "LUDI–Play for Children with Disabilities"<sup>1</sup>. LUDI was established in 2014 and financed until 2018, thanks to COST–European Cooperation in Science and Technology, an intergovernmental organisation that supports research and innovation networks. LUDI was characterised by the multidisciplinary contribution of more than 100 members living in 32 countries: they were researchers and practitioners in the fields of psycho-pedagogical sciences, health and rehabilitation sciences, humanities, assistive technologies and robotics, as well as representatives from end-users' organizations aimed at granting the right to play for every child, and specifically for children with disabilities.

In fact, LUDI started from the awareness that children with disabilities still need support to fully experience play as a crucial activity. At an international level, play has been recognised as a right for everyone: the Convention on the Rights of the Child declares that: "1. States Parties recognize the right of the child to rest and leisure, to engage in play and recreational activities appropriate to the age of the child and to participate freely in cultural life and the arts. 2. States Parties shall respect and promote the right of the child to participate fully in cultural and artistic life and shall encourage the provision of appropriate and equal opportunities for cultural, artistic, recreational and leisure activity" (Article 31; United Nations, 1989). The Convention on the Rights of Persons with Disabilities reinforced this concept even more, by stating that: "States Parties shall take appropriate measures [...] to ensure that children with disabilities have equal access with other children to participation in play, recreation and leisure and sporting activities, including those activities in the school system" (Article 30, clause 5d; United Nations, 2006). In 2013, pressure groups' activities in favour of the specific needs of children with disabilities lead to the release of the 'General Comment' on the Article 31 of the UNCRC by the United Nations Committee on the Rights of the Child. The comment highlighted the need to enhance the overall understanding of the importance of such article and to strengthen its application: children with disabilities are among those who require particular attention, given their difficulties in enjoying play on an equal basis with their peers.

**<sup>1</sup>** Serenella Besio, Full Professor in Special Education at the Università degli Studi di Bergamo (I), has been the Chair of the COST Action TD1309 "LUDI–Play for Children with Disabilities". Daniela Bulgarelli, Assistant Professor in Developmental Psychology at the Università degli Studi di Torino (I), has been Grant Holder Representative and Communication Manager of the Action. More information about LUDI are available at https://www.ludi-network.eu/ and https://www.cost.eu/actions/TD1309/#tabs|Name:overview

Due to the peculiar characteristics of their functioning, children with disabilities might not be able to play: they might not want to play or not know how to do it; they might not recognize a situation as play or an object as a toy; they might isolate themselves from others or be scared by a ludic situation; they might feel uncomfortable in unusual conditions and prefer to repeat the same play in the same way, in the same place, over and over. This is likely to happen especially if the environment in which they play is not accessible for them: the right tools and instruments for play are not available, knowledge about inclusive contexts is not adequate, related practices are not effective. Barriers to play for children with disabilities may come both from the built environment (i.e., places and areas where play may take place are not accessible to their needs) and from people's attitudes and knowledge, that are not based on experience and that are not in-depth informed about play, in general, and about play for children with disabilities, in particular. Specifically, play can be considered a waste of time when children with disabilities' lives are dominated by medical and rehabilitative practices. In such situations, those children are more likely to lack the possibility to play for the sake of play (Besio, 2017), i.e. to participate in intrinsically motivated activities, during which the child can make his/her own decisions about what to do, how to do it and when. Given that the possibility to freely explore the dimension of play for the sake of play is crucial for the child's relational, cognitive, affective and social development, LUDI wants to spread the message that children with disabilities need to be supported in their ludic experiences (Besio et al., 2017).

# Fostering play for the sake of play for children with disabilities through LUDI

LUDI aimed at fostering play for the sake of play for children with disabilities, addressing three main objectives: a) collecting and systematizing the existing competence and skills in this field; b) developing new knowledge related to settings, tools and methodologies associated with the play of children with disabilities; c) disseminating the best practices emerging from the joint effort of researchers, practitioners and users. Operationally, LUDI was organized into four Working Groups, each of them focused on specific topics related to the core theme of the Action: WG1 "Children's play in relation to the types of disabilities"; WG2 "Tools and technologies for the play of children with disabilities"; WG3 "Contexts for play of children with disabilities"; WG4 "Methods, tools and frameworks for the development of the child with disabilities' play". The Working Groups were composed by a leader, a vice-leader and several other members of the Network, who took care of drafting deliverables and documents, each of them related to the LUDI's main goals.

With respect to the first aim, i.e. collecting and systematizing the existing competence and skills, LUDI invited both parents of children with disabilities and representatives from some of the most important associations of persons with disabilities in Europe to be part of the Advisory Board. Secondly, the Action brought on a scientific work that ended in the publication of four books. "Play development in children with disabilities" aimed to contribute to the creation of a common language on the topic, sharing the definition of types of play, reviewing the literature devoted to play and the use of toys in children with different disabilities (intellectual disabilities, hearing impairment, visual impairment, communication disorders, physical impairment, autism spectrum disorders and multiple disabilities) and reporting the contribution of occupational therapy, special education and early intervention on the ludic activities of children with impairments (Besio, Bulgarelli, & Stancheva-Popkostadinova, 2017). The book "Evaluation of children's play: Tools and methods" presented a review of instruments and procedures that were internationally available to assess play (Besio, Bulgarelli, & Stancheva-Popkostadinova, 2018). The book "Barriers to Play and Recreation for Children and Young People with Disabilities: Exploring Environmental Factors" was meant to report about the literature dealing with barriers to play in everyday contexts (Barron et al., 2016). Finally, "Users' Needs Report on Play for Children with Disabilities: Parents' and children's views" was a report on the view of children with disabilities, their families and representatives of associations in the field about the play needs (Allodi Westling & Zappaterra, 2019). Moreover, the special issue "Play and Children with Disabilities. Interdisciplinary Perspectives" was published in the journal "Today's Children Tomorrow's Parents" in 2018, reporting 11 studies conducted by members of the LUDI Network.

The second LUDI aim was developing new knowledge related to settings, tools and methodologies associated with the play of children with disabilities. To pursue such goal, the network supported 30 Short-Term Scientific Missions of LUDI members who had the possibility to run some research hosted in institutions belonging to the network. Also, LUDI financed the two Training Schools "Play and Toys for All" that took place in 2017 in Herleen (NL) and in 2018 in Bergamo (I). About 100 trainees coming from all over the world worked together with a group of trainers chasing two goals: the first was to deepen the LUDI theoretical approach to the play of children with disabilities and the second was to develop customized solutions (using both low and high technology) to a challenge in play of 12 different children with disabilities, who participated in the Schools together with their families. It is worth noting that those Schools enabled to establish a training model of the LUDI approach towards play (Besio, Bulgarelli, Iacono, Jansens, Mizzi & Perino, 2018). More recently, a new tool to evaluate the usability of toys by children with hearing, visual and upperlimb motor impairment was delivered, the "Toys and game Usability Evaluation Tool" (Costa, Périno, & Ray-Kaeser, 2018); it is available in English, French and Spanish (Costa et al., 2018), in Italian (Besio, Bianquin, & Bulgarelli, 2019) and in Portuguese (Encarnação, 2020). Finally, in the current book, Chapter 6 is devoted to new "Guidelines for parents, professionals, designers, makers and researchers on toys and technologies for play for children with disabilities: How to take usability and accessibility aspects into consideration?" by Jansens and Bonarini.

The third aim was disseminating the best practices emerging from the joint effort of researchers, practitioners and users. Over the project period, LUDI members participated in 20 international conferences to present the Network and its work. Moreover, LUDI created connections with other stakeholders: on one hand, toy companies that produce mainstream ludic materials and objects; on the other, the Chair and other representatives of LUDI had the possibility to access twice the European Parliament, to come into contact with politicians involved in the promotion of the rights of persons with disabilities. To address the third aim, LUDI members also wrote some documents. The Position Statement was delivered in 2017 and was one of means of the Network to interact with European organizations and institutions. It stated that topics related to play and childhood, to the children's needs, especially in case of disability, should be taken into account more deeply in the future at a European level. Finally, the book "Guidelines for supporting children with disabilities' play: Methodologies, tools, and contexts" was specifically meant for parents and professionals wishing for a theoretical-based vet easy-to-read introduction to the theme of play of children with disabilities (Encarnação, Ray-Kaeser, & Bianquin, 2018). The last chapter of this book was also delivered in 2018 as the LUDI Manifesto: a list of key ideas and statements about play for children with disabilities that the Network would like to underline and to share with those interested in dealing with our issue.

The strengths and contributions of the Network to the field of play of children with disabilities were acknowledged in three different occasions. In 2017, LUDI participated in the International Play Association Triennial World Conference in Calgary and received the "IPA Right to Play Award". In 2018, at the end of the fouryear funding period, LUDI's outcomes, impacts and successes were evaluated by an independent Rapporteur (i.e., dr. Ute Navidi), addressed by COST to judge the quality of the work done. Navidi commented: "The Action has clearly met and exceeded its main objective of raising awareness of the importance of giving children with disabilities the opportunity to play on an equal basis with their peers. This has been achieved by tackling long-standing attitudes and physical barriers that mitigated against such participation, and creating a valuable evidence base for future changes. The international, interdisciplinary collaborative efforts benefited from the active and varied engagement of a range of professional disciplines which supports wider buy-in and appropriate further dissemination activities. The Action's tangible results are inspirational and practical. Impact at the policy and decision making entities at EU level has benefited from a position statement and a manifesto. It is now up to the LUDI members in the Action's extensive networks to contribute to the pursuit of practical implementation in their respective countries." Finally, in 2019, LUDI received the "Premio Inclusione 3.0" [Inclusion 3.0 Award] by the Università di Macerata (Italy) and the SIPeS (Italian Society of Special Education) as it "represents one of the most important networks of researchers and professionals from 32 different European countries. LUDI supports the right to play of children with disabilities, fostering the possibility to experience play for the sake of play".

#### References

- Barron, C., Beckett, A., Coussens, M., Desoete, A., Cannon Jones, N., Lynch, H., Prellwitz, M., & Fenney Salkeld, D. (2016). *Barriers to Play and Recreation for Children and Young People with Disabilities: Exploring Environmental Factors*. Warsaw, PL: De Gruyter Open.
- Besio, S. (2017). The need for play for the sake of play. In: S. Besio, D. Bulgarelli & V. Stancheva-Popkostadinova (Eds.), *Play development in children with disabilities* (9-52). Warsaw, PL: De Gruyter Open.
- Besio, S., Bianquin, N., & Bulgarelli, D. (2019). *TUET Toys & games Usability Evaluation Tool. Manuale & Questionario. Traduzione italiana*. Alicante, E: AIJU.
- Besio, S., Bulgarelli, D., Iacono, I., Jansens, R., Mizzi, M., & Perino, O. (2018). Becoming Expert in Playing with Children with Disabilities. The LUDI Training School "Play and Toys for All". *Today's Children Tomorrow's Parents*, 47-48, 62-73.
- Besio, S., Bulgarelli, D., & Stancheva-Popkostadinova, V. (2017, Eds). *Play development in children with disabilities*. Warsaw, PL: De Gruyter Open.
- Besio, S., Bulgarelli, D., & Stancheva-Popkostadinova, V. (2018, Eds.). *Evaluation of children's play: Tools and methods*. Warsaw, PL: De Gruyter Open.
- Costa, M., Périno, O., & Ray-Kaeser, S. (2018). *TUET Toys and games Usability Evaluation Tool. Manual, Questionnaire and Development Process*. Alicante, E: AIJU.
- Encarnação, P. (2020). *TUET Toys & games Usability Evaluation Tool. Manual & Questionário.* Versão portuguesa. Alicante, E: AIJU.
- Encarnação, P., Ray-Kaeser, S., & Bianquin, N. (2018, Eds.). *Guidelines for supporting children with disabilities' play: Methodologies, tools, and contexts*. Warsaw, PL: De Gruyter Open.
- Allodi Westling, M., & Zappaterra, T. (2019, Eds.). Users' Needs Report on Play for Children with Disabilities: Parents' and children's views. Warsaw, PL: De Gruyter and Sciendo.