

# International workshop

Friday, June 14, 2024

From 9am to 4pm

–

English/LSF interpretation

–

CNRS Site Pouchet (Paris, 17th), Conference room

Registration (in person participation) : <https://forms.gle/9mjVBGMVB4g98tp96>

–

Zoom : <https://cnrs.zoom.us/j/92620771925?pwd=UWJQSTNvZERpeURyR0hBZTE2M2p1UT09>

ID de réunion: 926 2077 1925

Code secret: pSCGN5



## « *Using sign language by and for people with neurodevelopmental disorders (NDD): from the field to research and back* »

This international study day is the third scientific event organized in France on this theme. It follows on from two international study days similarly organized by the SFL (Université Paris 8 and CNRS) and Grhapes (INSEI) laboratories, both at the Maison de la Recherche in Paris 8:

- in July 2022, "Exposition à une langue des signes de personnes avec troubles du spectre de l'autisme : bilan des recherches et expérimentations"<sup>1</sup>, and,
- in June 2023, "Non-verbal adults with neurodevelopmental disorders (NDD): feedback on the experience of exposure to French sign language (LSF)"<sup>2</sup>.

Since the 1970s, a small number of international scientists have been investigating the use of sign language with atypically-developed people, particularly those with neurodevelopmental disorders (NDD). The aim of this study day, open to all, is to benefit from the knowledge of the guest speakers, and more specifically, to cross-fertilize experience and knowledge on the question of the use of a sign language by and for people with a neurodevelopmental disorder.

This scientific event is a continuation of activities carried out at Paris 8 (UFR de sciences du langage) and within the Sourds et Langues des Signes team of UMR 7023 SFL (Paris 8 and CNRS), which have always been at the forefront in France, both in research into sign languages and in training related to the Deaf and their languages. One of the planned spin-offs is the creation of a training course for deaf trainers in LSF for this particular audience. At the same time, the theme of this day is fully in line with the research actions carried out by Grhapes (INSEI), a member of the Groupement d'intérêt scientifique (GIS) autisme et troubles du neurodéveloppement, whose aim is to "amplify the research dynamic and accelerate the dissemination of knowledge to all players" (Commitment n°1 of the French national strategy 2023-2027 for neurodevelopmental disorders: autism, DYS, ADHD, IDD).<sup>3</sup>

<sup>1</sup> Available online: <https://www.canal-u.tv/chaines/cnrspouchet/exposition-a-une-langue-des-signes-de-personnes-avec-troubles-du-spectre-de-l?t=120>

<sup>2</sup> The recording and rebroadcast of this second day will be available on the University of Paris 8's Canal-U during the first half of 2024.

<sup>3</sup> [https://handicap.gouv.fr/sites/handicap/files/2023-11/DP%20strat%C3%A9gie%20nationale%20TND%202023\\_2027.pdf](https://handicap.gouv.fr/sites/handicap/files/2023-11/DP%20strat%C3%A9gie%20nationale%20TND%202023_2027.pdf)

## *Program*

---

**9h00 – 9h15** : Workshop's opening

### **Imitation, gestures, sign language in NDD**

**9h15 – 10h00** :

*Jacqueline Nadel, Sorbonne-Université, Paris*

Synchronic imitation as a powerful tool for non-verbal communication in ASD.

**10h – 10h45** :

*Olga Capirci, Institute of Cognitive Sciences and Technologies, Roma*

The body at the center: starting from actions and gestures to understand autism

**10h45 – 11h00** : BREAK

**11h – 11h45** :

*Aaron Shield, Miami University, United States*

The manual modality as a channel for communication for children with developmental disorders: From single signs to fluent sign language

**11h45 – 12h30** :

*Christelle Gérard, SFL (University of Paris 8 and CNRS), Sabine Zorn, Grhapes (INSEI), et Brigitte Garcia, SFL (University of Paris 8 and CNRS)*

Microanalysis of imitation in the context of an LSF workshop for non-verbal adults with NDD

**12h30 – 14h00** : LUNCH BREAK

### **Towards a LS pedagogy adapted to NDD**

**14h00 – 14h45** :

*Sandrine Burgat, SFL (University of Paris 8 and CNRS)*

LSF didactics and deaf pedagogues: Which pedagogical approach to teach LSF to autistic people?

**14h45 – 15h15** : Testimonials from field professionals

**15h15 – 15h45** :

*Katia Piery LSF Trainer and Christelle Gérard*

Reflections on an experimental educational program for LSF and NDD

**15h45 – 16h00** : Workshop's closing

## Abstracts

---

Jacqueline NADEL, *Emeritus CNRS Research Director, La Salpêtrière, Sorbonne-Université, Paris*

### **Synchronic imitation as a powerful tool for non-verbal communication in ASD.**

Imitation is tightly related to the perception of biological movement. Perception-action coupling, supported among others by the Mirror Neuron System, is active during imitative occurrences. However, imitation is not a unitary phenomenon. Besides perception-action coupling, it includes a hierarchy of mechanisms underlain by different brain structures depending on the kind of imitation in play. At the light of a two-person psychology, we see synchronic imitation as a dynamic interactive phenomenon fitting the specific communicative problems of non-verbal children with ASD or NDD. Indeed, imitation-based communication is available using the two facets of imitation: imitate and be imitated. Preverbal infants take advantage of the two roles that they exchange as a turn-taking whilst they synchronize matched activities. Via this coordinated alternation of imitating and being imitated, infants can share the other's intention at the first person, here and now, and see their intention performed at the third person. Although a deep impairment in imitation has been classically claimed in ASD, and a broken mirror hypothesis has been built on this basis, our studies demonstrate that non-verbal persons with ASD can spontaneously imitate familiar actions and recognize be imitated. Within this framework, imitation affords ASD an opportunity to develop interactions via simply relating their motor patterns to the others.

Nadel, J. (2014). *How imitation boosts development in infancy and autism spectrum disorder*, Oxford University Press.

∞

Olga CAPIRCI, *Research Director at the CNR's Institute of Cognitive Sciences and Technologies, Roma*

### **The body at the center: starting from actions and gestures to understand autism.**

The presentation addresses the theme of the body in relation to Autism through a review of studies that concern two particular areas: motor deficits and gestures. In particular, the relationships between motor development and gestures and subsequent linguistic development will be highlighted and, in conclusion, the implications that these studies have for the clinic will be considered.

Today it is widely recognized that gestures represent for everyone, even for children with typical development, a useful support for communicative and linguistic development and there is various evidence showing how the use of gestures can improve communication and social interaction even for children with autism at a very early age.

There is certainly still a long way to go to "give autism a body", and therefore discover the link between sensorimotor characteristics and the way in which autistic people give meaning to their world. In the future we should try to move towards an evolutionary approach to autism that seeks to integrate the three key elements, namely the body (perception, action), interactions and development, with the communicative, emotional-affective and social aspects.

**Aaron SHIELD**, Ph.D. *Associate Professor of Speech Pathology & Audiology, Director Sign Language and Autism at Miami (SL@M) Lab, Miami University*

**The manual modality as a channel for communication for children with developmental disorders: From single signs to fluent sign language.**

Manual signs have long been proposed as an alternative mode of communication for various populations, including hearing babies before they can speak, children with severe apraxia of speech, and children with autism. In this talk I will review some of the evidence for the use of manual signs with each of these populations, highlighting the ways that signs can improve communication as well as the specific challenges of sign language acquisition.

∞

**Christelle GÉRARD**, *PhD Student, Structures Formelles du Langage (SFL) Lab, University of Paris 8*, **Sabine ZORN**, *Research group on disability, accessibility, educational and school practices (Grhapes), National institute of training and research for inclusive education (INSEI)* and **Brigitte GARCIA**, *SFL*.

**Microanalysis of imitation in the context of an LSF workshop for non-verbal adults with NDD.**

As part of a doctoral research project, an LSF workshop was organized for three adults with a neurodevelopmental disorder (NDD) who were considered non-verbal. This initiative took place in an ecological environment, more specifically in a residential home, over a period of 10 months. All of the workshop sessions were captured by five cameras, forming a video corpus of around 50 hours, which constitutes the main material for the doctoral research.

Initial video analyses identified manifestations of imitation, in line with the conceptual frameworks developed by Nadel (2011, 2016, 2021). These observations highlight significant advances in the areas of communication and socialization in the three adults involved.

As part of this presentation, video excerpts will be shown to illustrate the results of our analyses. We will also propose a discussion on the interpretation of these images and on the notion of imitation as it manifests itself in this specific context.

**Sandrine BURGAT**, *Senior Lecturer in Linguistics, Didactics and Interpretation of French Sign Language (LSF), Structures Formelles du Langage Lab, University of Paris 8*

### **LSF didactics and deaf pedagogues: Which pedagogical approach to teach LSF to people with NDD?**

The didactics of LSF is a field of study that is still emerging and which is attempting to discover how to teach LSF to deaf (as first language) and hearing (as second language) audiences. People with NDD raise this question from a different angle.

How can LSF be taught to people with NDD? We will consider this question by looking at various possible approaches: “intuitive teaching”, teaching LSF and teaching IN LSF (immersive pedagogy). Of course, the role of deaf pedagogues is central. We will explain the notion of “deaf pedagogy” and what the “deaf advantage” (deaf gain) is in language teaching. We will also reflect on the gain that the experience of deafness (or deafhood) can represent for people with NDD.

∞

**Katia PIERY**, *LSF Trainer* and **Christelle GÉRARD**

### **Reflections on an experimental educational program for LSF and NDD**

As part of the doctoral research described above, which focused on the creation of an LSF workshop for adults with neurodevelopmental disorders (NDD) who are considered non-verbal, a collaboration was established between Katia Piery, the deaf LSF trainer involved in the workshop, and doctoral student Christelle Gérard.

The aim of this collaboration was to develop and fine-tune an LSF exposure program adapted to the particular needs of this audience.

We will discuss the terms of this collaboration, as well as the evolution of the experimental educational program implemented in the field. We will highlight the adjustments and adaptations made over the course of the sessions, drawing on valuable feedback from participants and accompanying professionals.