

Echos of Chaos:

A Simulation Study on Fostering Understanding between Neurodivergent and Neurotypical Individuals based on an Office Environment

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INTRODUCTION

There exists a barrier between neurotypical (NT) and neurodivergent (ND) individuals in understanding each other's emotional experiences due to differences in sensory perception and cognitive processing. A lack of awareness and understanding about neurodiversity can lead to social misunderstandings and hinder healthy relationships. Recognizing that neurodiversity exists on a spectrum and affects everyone to some degree, it is crucial to inform the broader community about these variations to foster empathy and inclusiveness.



Sensory overload

IMPACT

This project has the potential to enhance social inclusion and understanding of neurodiversity by educating people about the spectrum of sensory experiences. By reducing stigma and promoting acceptance, we aim to create a more inclusive and empathetic society. The focus on open dialogue encourages collaborative learning and empathy. Ultimately, the project seeks to build a supportive environment that respects and values all individuals, regardless of their sensory or cognitive differences.

METHODOLOGY

We aim to address the communication gap by the following processes:

Phase 1: VR Experience

Transmit real-time data collected from user#1, using ambisonics to induce sensory overload. The data derived from a biosensor (EDA) and an environmental sensor enable user#2 to experience comparable levels of crowdedness and noise within a VR environment—an experience that may be previously unfamiliar to them.

Phase 2: In-Person Exchange

The two individuals will engage in an open dialogue to explore how different sensory experiences influenced their feelings and perceptions, and to further establish effective communication practices that accommodate diverse sensory sensitivities.



Enhanced human-human interaction with the help of VR

HIGHLIGHT

Bridge the communication gap:

This project serves as a tool to bridge different sensory perceptions and improve mutual understanding.

Interdisciplinarity:

This project is conducted in diverse backgrounds: Human Computer Interaction, Computer Science, Media art, Cyber Security, Business Administration and Data Science, and Medicine, which showcases how interdisciplinarity brings together ideas and expertise from specific areas, breaks the boundaries of single subjects, and fosters creativity.