



KEYWORD

Board game
Autism
Healthcare

PROJECT INFO

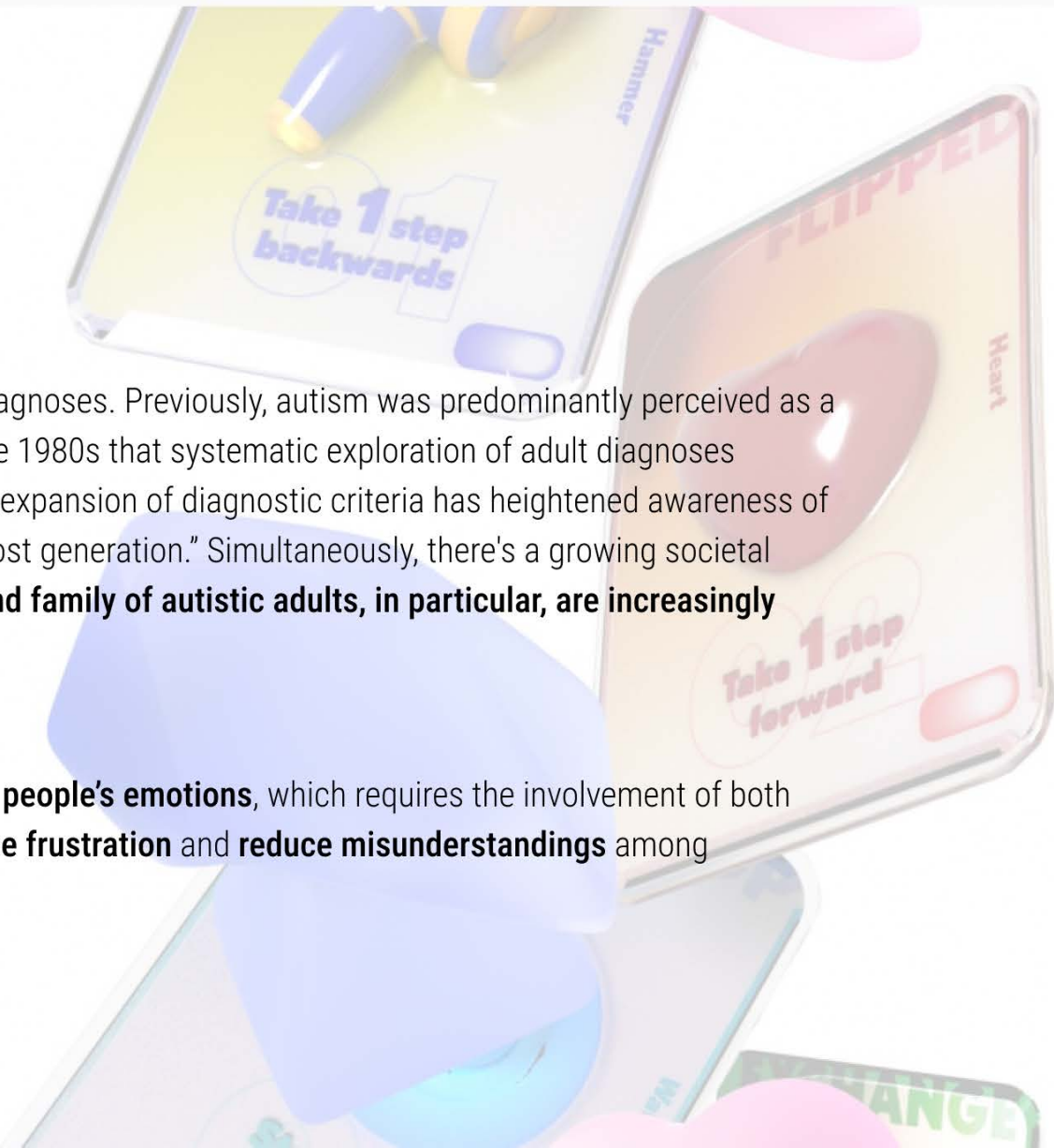
EMO+ is a set of board game designed to **help people with autism to better interpret other people's emotions**. This tool can also can be used to **ease frustration** and **reduce misunderstandings** among individuals who think and communicate differently.

Context

Problem and Solution

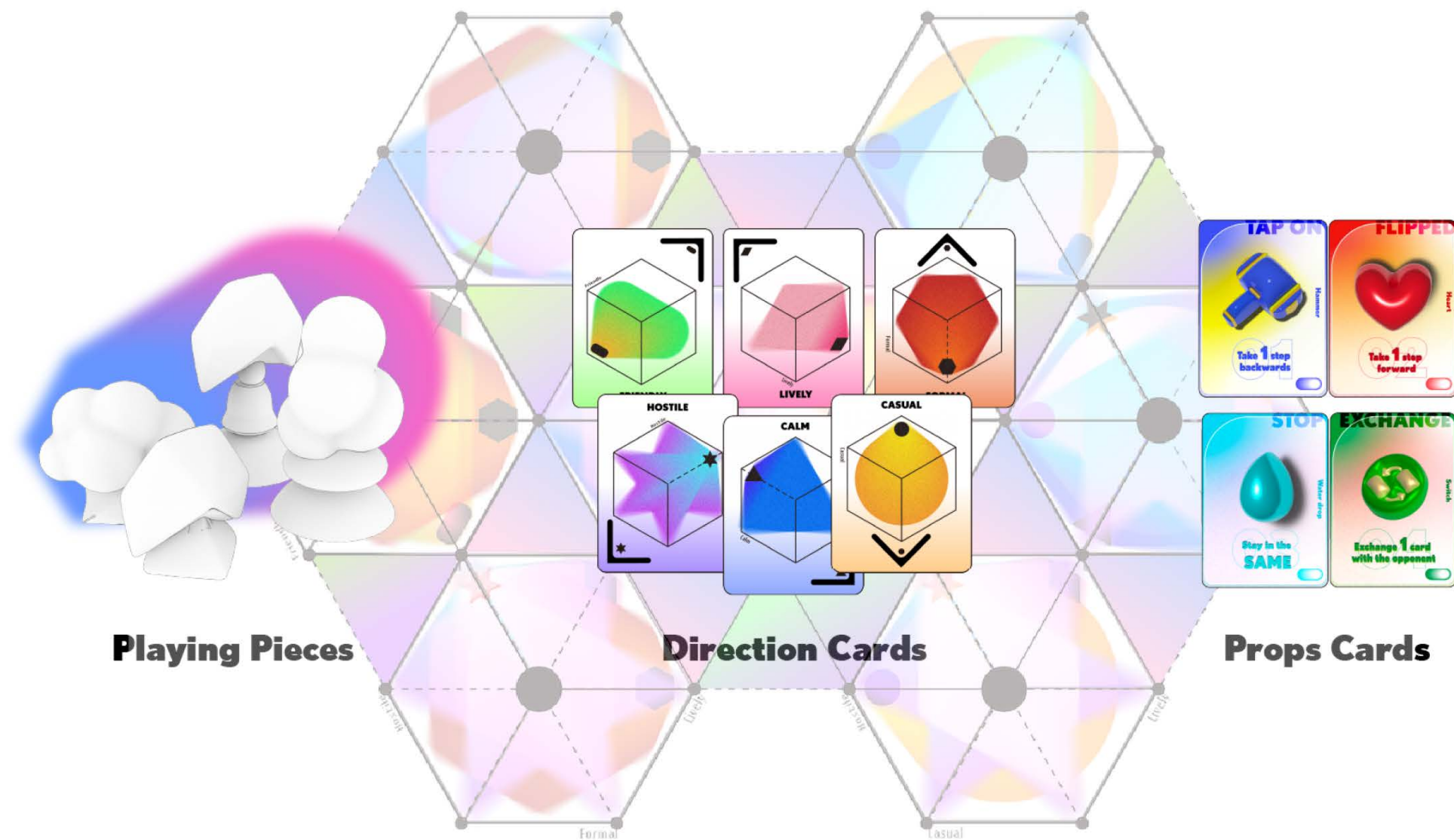
In contemporary society, there's a significant rise in autism spectrum disorder (ASD) diagnoses. Previously, autism was predominantly perceived as a childhood condition, shaping biases in research and media narratives. It wasn't until the 1980s that systematic exploration of adult diagnoses commenced, further expanding in the 1990s to encompass Asperger's syndrome. This expansion of diagnostic criteria has heightened awareness of undiagnosed adults, shedding light on a previously overlooked group often dubbed "a lost generation." Simultaneously, there's a growing societal effort to understand and embrace individuals within the autistic community. **Friends and family of autistic adults, in particular, are increasingly inclined to offer understanding, support, and encouragement.**

EMO+ is a set of board game designed to **help autistic adults to better interpret other people's emotions**, which requires the involvement of both autistic individuals and people who around them. This tool can also can be used to **ease frustration** and **reduce misunderstandings** among individuals who think and communicate differently.



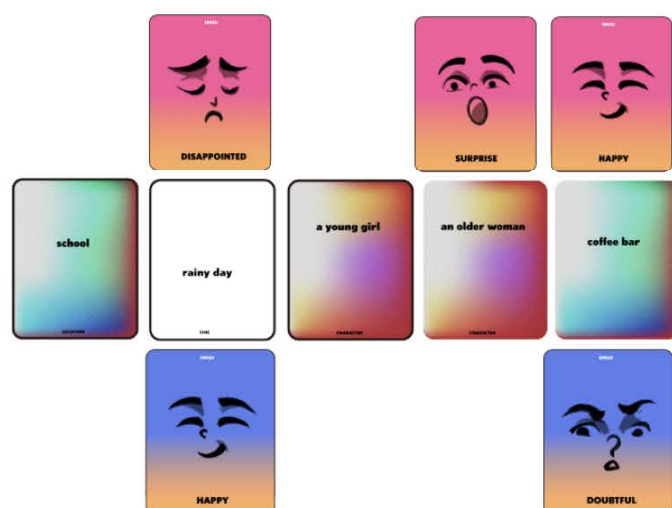
How to Play

The essence of the design is to illustrate the framework of emotions, enabling autistic individuals to enhance communication through visual tools that deconstruct emotions. This facilitates a deeper understanding of emotional distinctions between themselves and their friends and family, while also encouraging them to embrace new perspectives. There're two parts of the game: [\(See page 7, 8 for details on playing\)](#)



Game 1: Storytelling

During this **warm-up**, one user selects prompt cards from the card library representing various element (e.g. time, place) to create a story while the other places emotion cards (e.g. happy) on the story timeline to express emotions. Both users **use emotion cards to communicate their emotional perceptions of the event**, fostering understanding.



Game 2: Communication board game


This part features two sets of pieces, six movement cards, and item cards. **It's for post-argument or conflict analysis**, where players select starting positions representing their interpretations of the conflict. They navigate using movement cards, **aiming to understand each other's thoughts**, and win by reaching the opponent's position.



Understand Emotions

An Obstruction To Two-way Communication

To gain a deeper understanding of our users, we conducted interviews with two individuals who exhibit autism tendencies and delved into autism-related forums for insights. From this research, we developed two typical personas, which serve as the cornerstone for guiding our design process.




Frank
36 years old
3D Graphic teacher

Influenced by Autism since childhood

ABOUT
Frank, a 3D visual design teacher in France, has always been passionate about art and people-watching. Despite an autism diagnosis later in life, he initially struggled with understanding expressions and tones of voice, hindering his social interactions. Over time, he learned to interpret body language, improving his communication skills. Now, he effectively communicates with his students, enriching his teaching experience.

GOALS
Improving social skills, Integrating more naturally into conversations, and Raise social awareness about Autism



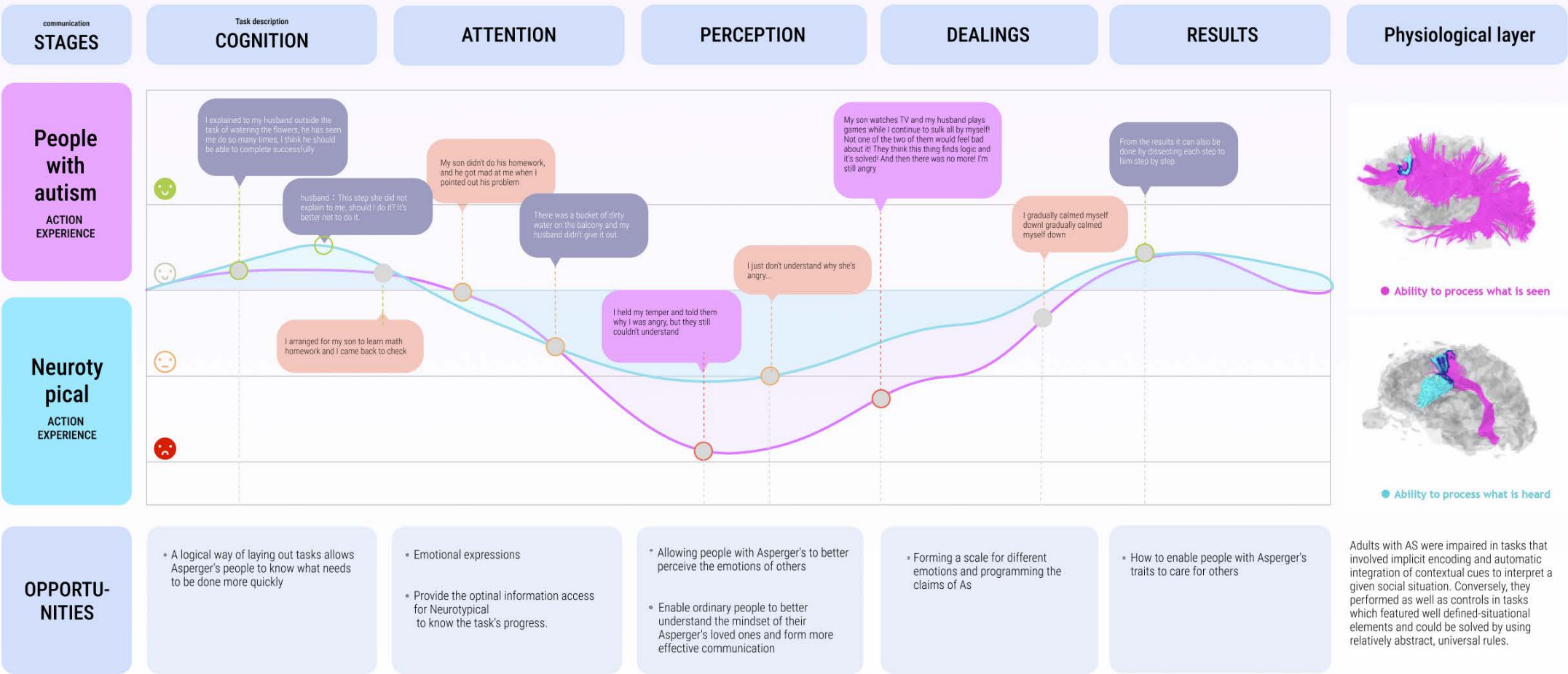
Mia
33 years old
Consultant

A neurotypical who already lived with aspie over 5 years

ABOUT
Mia is Frank's wife, and during their relationship, she was more considerate of his emotions. However, since they got married and faced family matters, Mia has felt increasingly misunderstood by Frank. Despite her efforts to communicate, she often finds herself feeling frustrated and helpless. While she notices Frank's attempts to change, she remains skeptical of their effectiveness.

GOALS
Maintain efficient interaction with her husband
Hope Frank can understand her emotions

By synthesizing these data and previous research, we produced Journey maps, persona, etc. to identify our users and find out their problems and needs

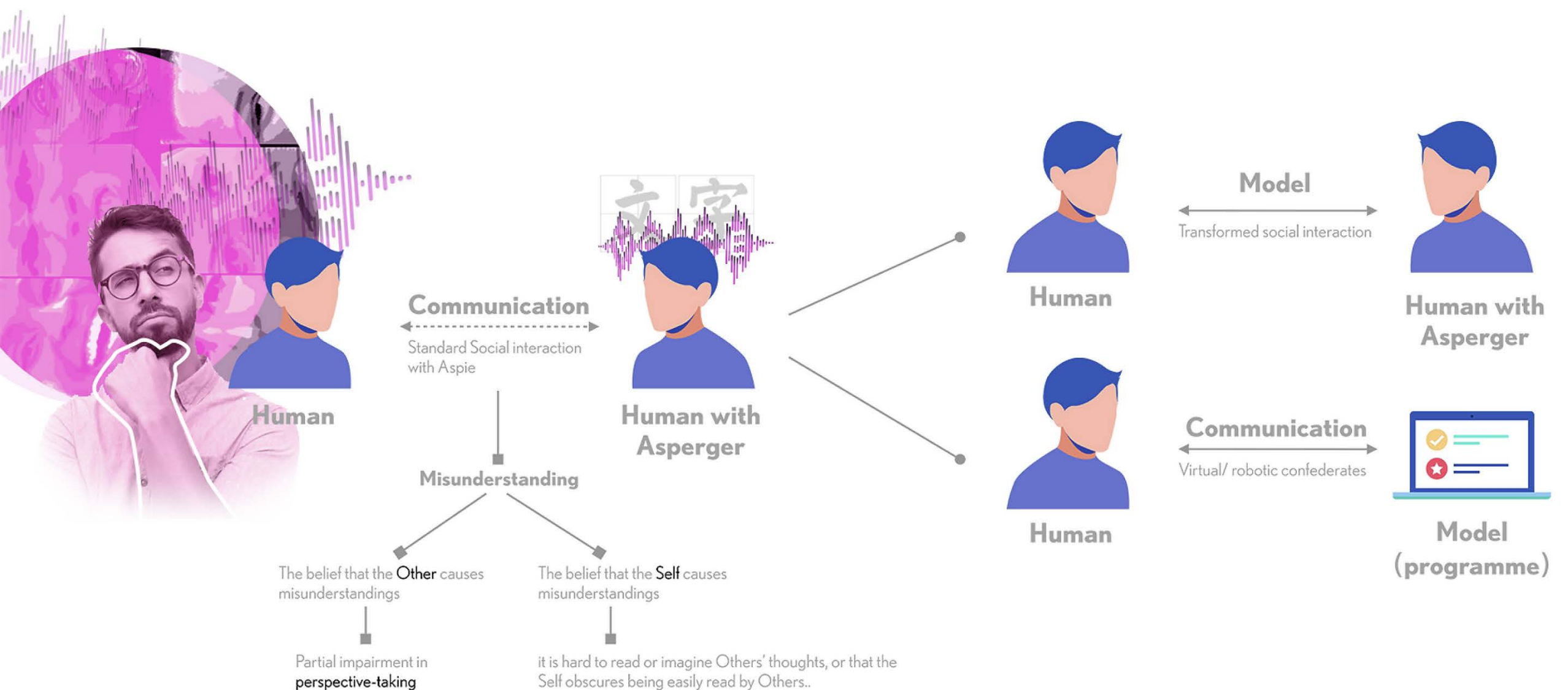


Understand Emotions

Transform findings into insights

We establish the core design goals and key features by analyzing the research from our interviews and dialogue analyses. These elements will serve as our primary focus when mapping out the designs for this project.

MOTIVATION (WHEN & WHY?)	USER PAINS (WHY NOT)	PRIMARY GOALS (LIST OF GOALS)
<ul style="list-style-type: none"> to improve the ability to interpret emotions and atmosphere in social communication situations (a logical way to create patterns and models) to Share their perceptions while seeing what friends & family members are also thinking about. To help Neurotypical make the replay process easier and more fun. 	<ul style="list-style-type: none"> If the product is high maintenance & doesn't easily fit into daily routines. If the expression/logic doesn't fit the Aspie's mindset Having no privacy for others & accidentally overshare embarrassing details. It is difficult for neurotypicals to analyze and explain their emotion in details. 	<ol style="list-style-type: none"> Enhance social ability. Improve their mood of perception. Enhance self-awareness. Discover emotions and atmosphere . Keep in touch with friends Pattern creation & recording. Easy to use. Privacy.

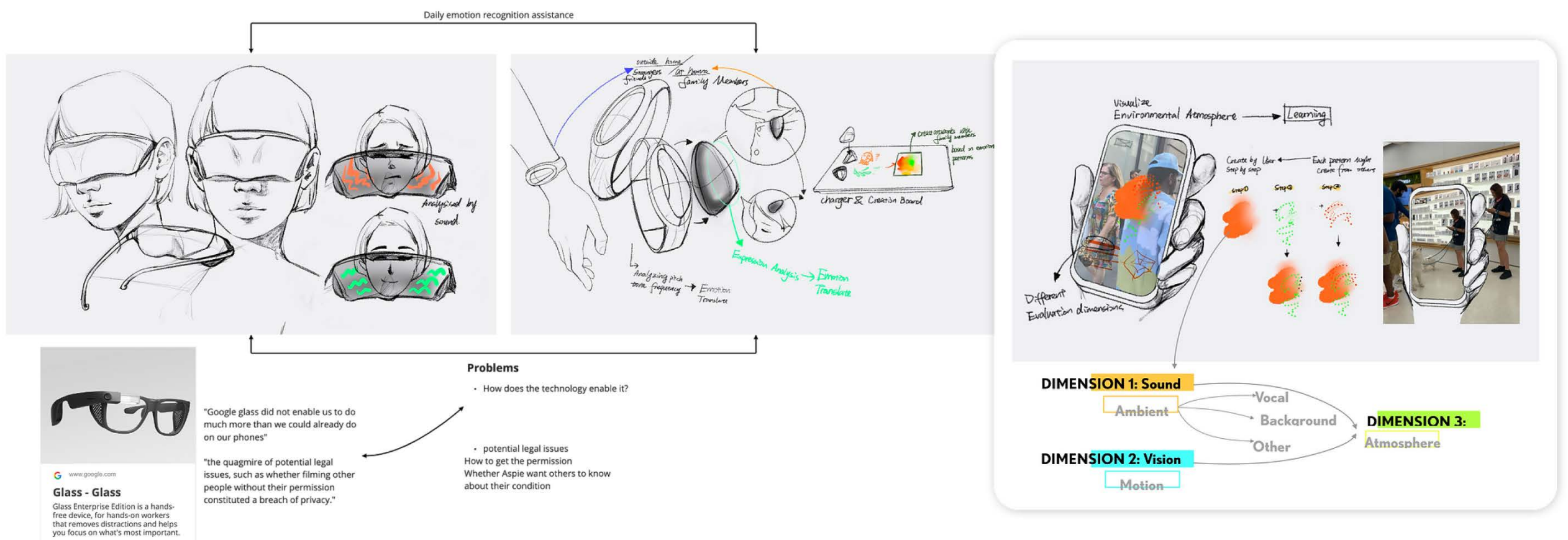


After the research and synthesis, we realized that we needed to narrow down the scope and reframe the problem. By combining literature with interview data, we are reassessing the communication dynamics between autistic adults and their families. **Effective communication frequently adheres to a logical pattern**, resembling computer programming language, to achieve desired outcomes.

Ideation

During the ideation process, we explored various approaches to tackle the identified problems and insights.

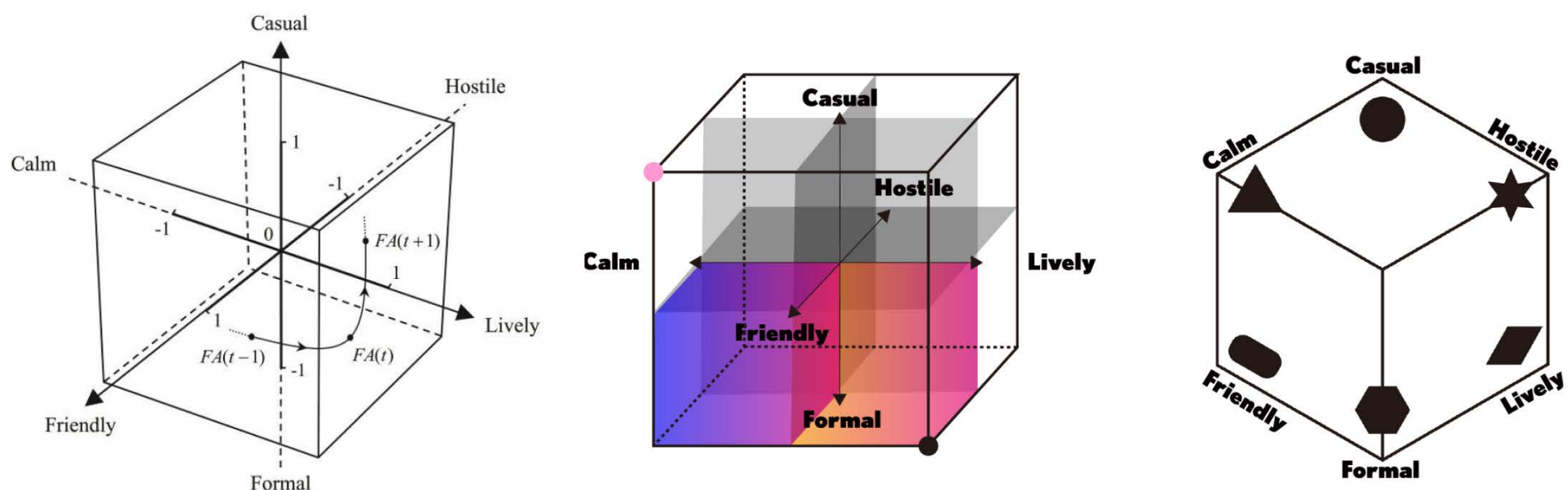
Initially, we considered creating a technology-based tool to assist users in recognizing emotions when needed. However, we faced challenges along the way. Subsequently, we shifted our focus to **understanding the mindset and communication patterns of individuals with autism in interactions with neurotypicals**. This led us to our final design direction, which aims to **visualize the structure of emotions**. Through visual props that **deconstruct emotions**, our goal is to facilitate better communication, foster appreciation for differences, and promote new perspectives.



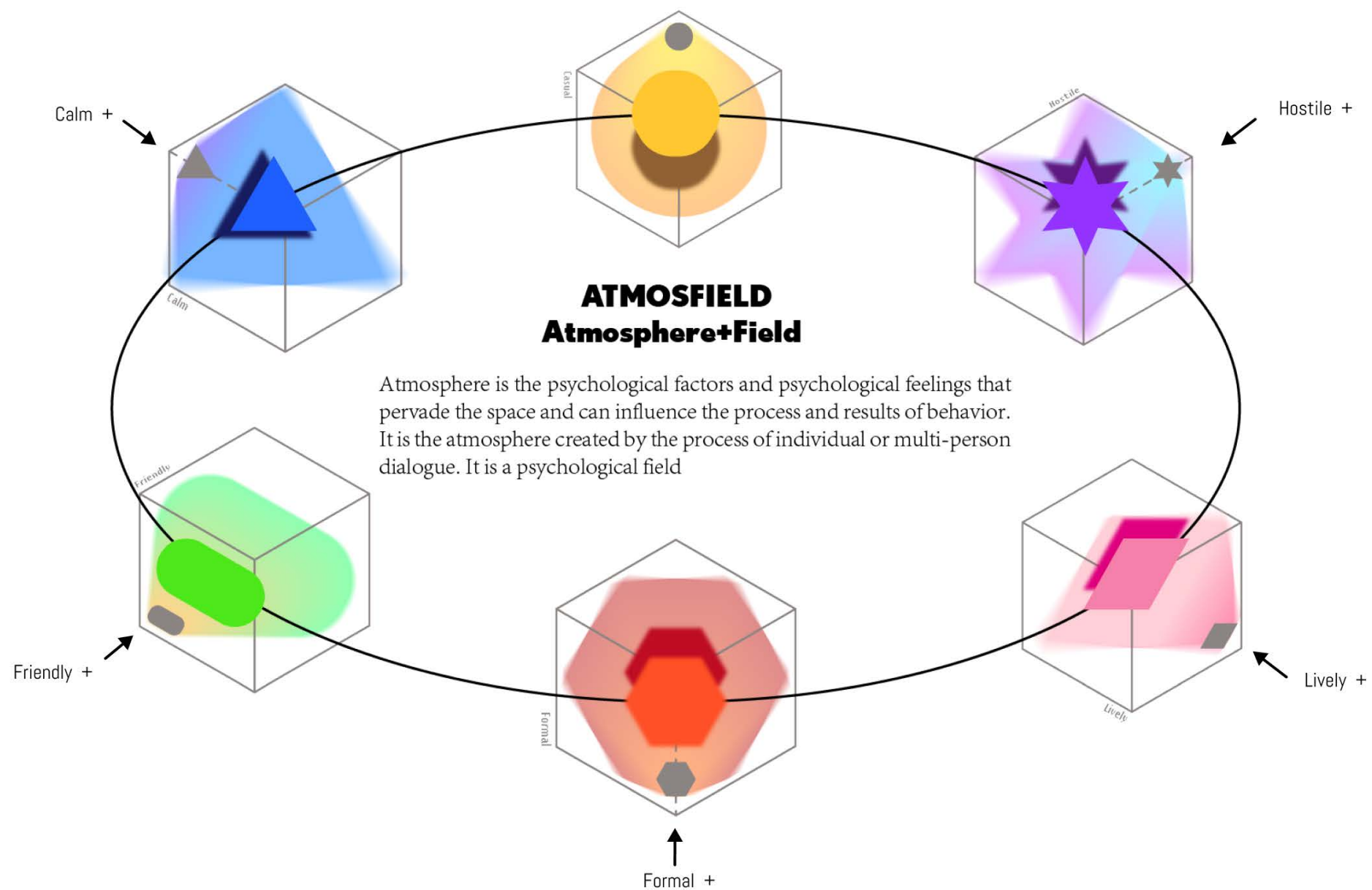
Concept Development

AtmosField

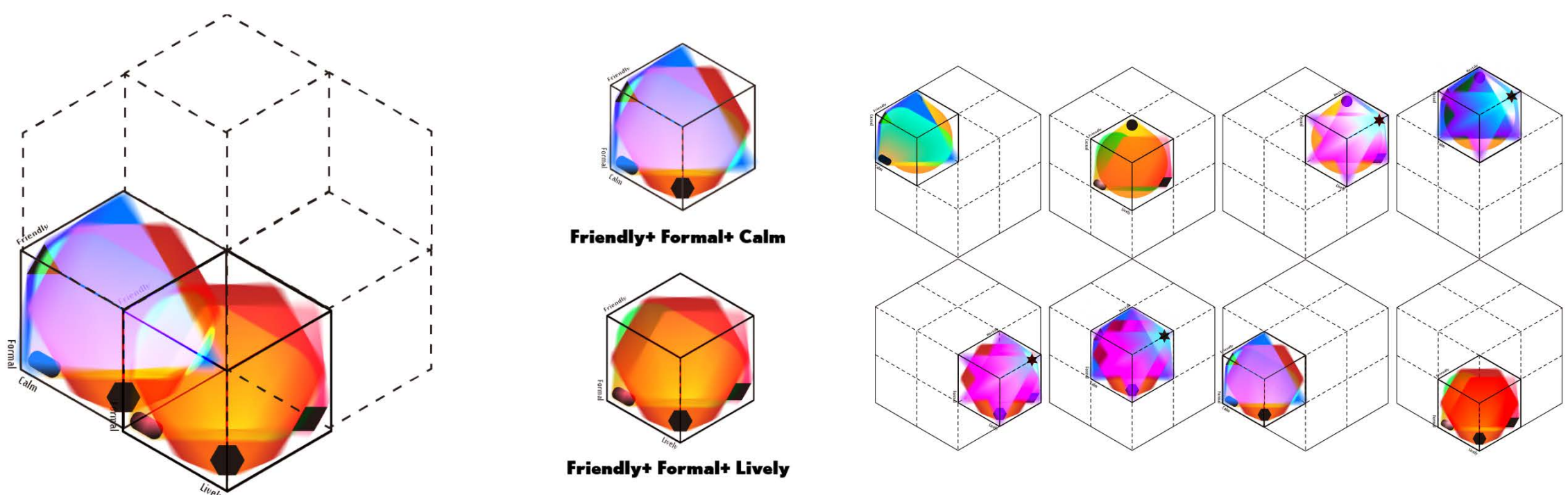
Because of the uncertainty and ambiguity inherent in communication, we propose defining the communication atmosphere as an "Atmosfield," derived from the fusion of "atmosphere" and "field."



Similar to traditional electric and magnetic fields, an Atmosfield occupies space and exerts influence on the emotional state of communicators within it. To represent this concept, we utilize multidimensional space, including two-dimensional, three-dimensional, and higher-dimensional models. **Among these, the three-dimensional model is particularly useful for its ability to encompass all emotional states simultaneously.** Just as any color of light can be formed through a combination of three primary colors, **the communicative atmosphere of any state can be described through a linear combination of attributes within the Atmosfield.**



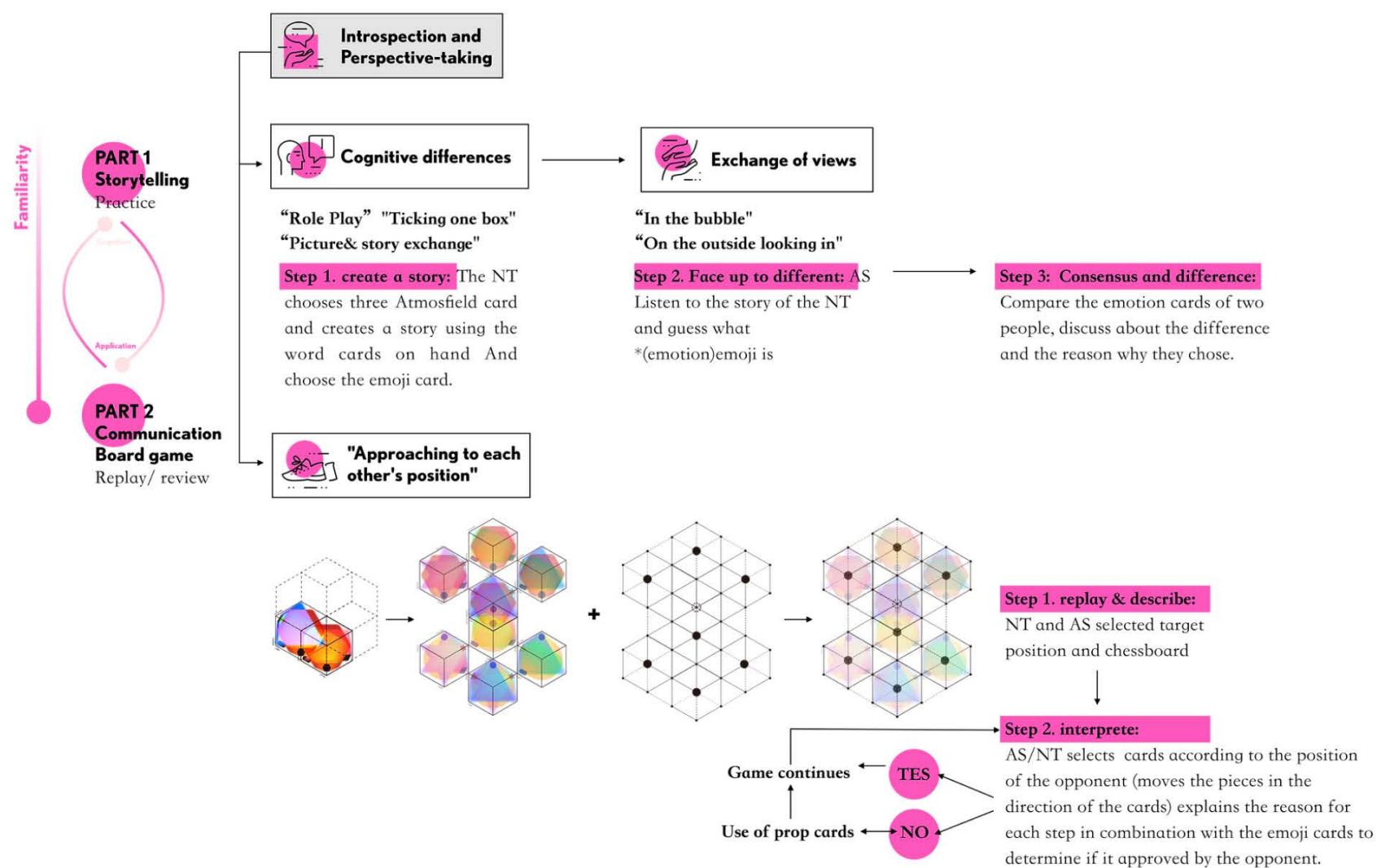
We cut the 3D cube representing the atmosfield into 8 cubes along the coordinate axes, with each small cube representing an atmosfield described by the three attributes together.



Interaction Design

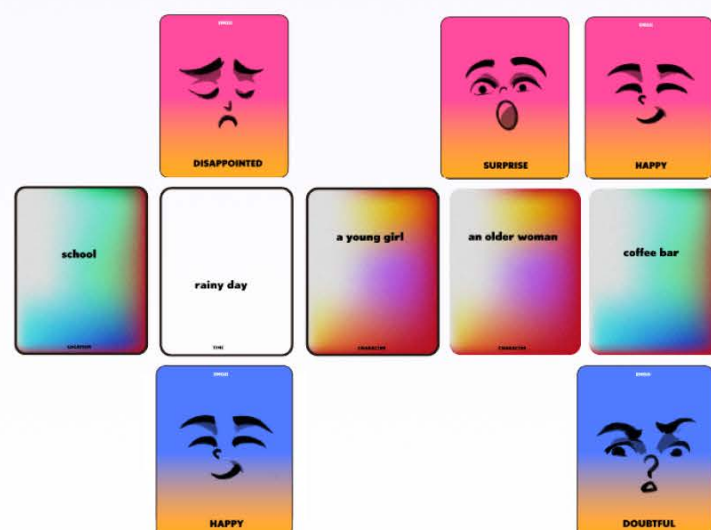
Introspection and Perspective-taking

Cognitive reasons for misunderstanding are well-documented, as autistic adults may face challenges in being adequately 'readable' to others due to limitations in theory of mind, executive control, emotion perception and regulation, and pragmatic language. From the perspective of the 'neurotypical' perceiver, **autistic adults may appear idiosyncratic and disconnected from socio-cultural norms**, making them difficult to understand. **This lack of understanding is mutual**: Neurotypicals struggle to comprehend autistic adults, just as autistic adults find it challenging to understand neurotypicals.



Details on playing

Game1 - Storytelling: One user selects prompt cards from a card library representing time, place, etc., to create a story or share personal experiences. The other user chooses emotion (emoji) cards of a certain color and places them at different points in the story timeline based on their interpretation of emotions. Similarly, the storyteller uses emotion cards of another color for the same purpose, fostering communication about each other's emotional perceptions of the same event.

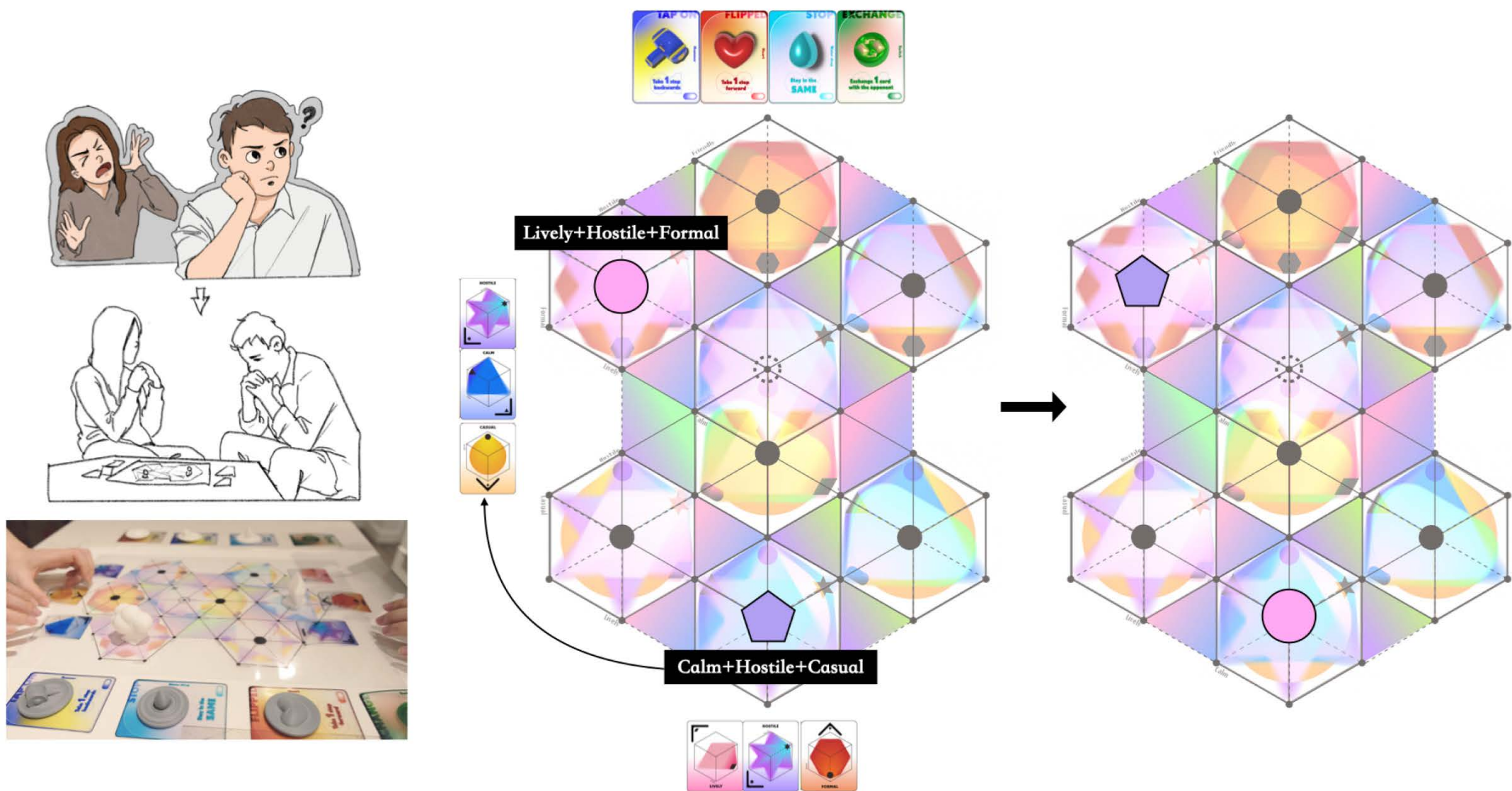


Pick as many cards as you like, **make up a story** based on the prompt words on the cards, and **place the cards in order** on the table.



Just after **school** on a **rainy day**, a **young girl** saw an **elderly woman** fall down in front of the school, so she helped her up. The old woman thanked the little girl and bought her a cup of **coffee**.

Game 2 - Communication board game: This part consists of two sets of pieces, six movement cards representing various directions and atmospheres, and item cards. It's mainly designed for post-argument or conflict analysis. The key rule involves both players selecting a starting position, representing their interpretation of the previous conflict, and using movement cards to navigate and understand each other's perspectives. Victory is attained by reaching the other player's position.



Each movement symbolizes mutual interaction: one person steps forward, considering the other's emotions (using a card representing direction and the other's emotional state), requiring approval to proceed. The metaphorical logic is that both players gradually approach each other, becoming aware of differences and striving to understand each other's perspectives.

When one party is dissatisfied or very satisfied with the other's interpretation, they can use an item card, such as this hammer card, to make the other party take a step back.

