

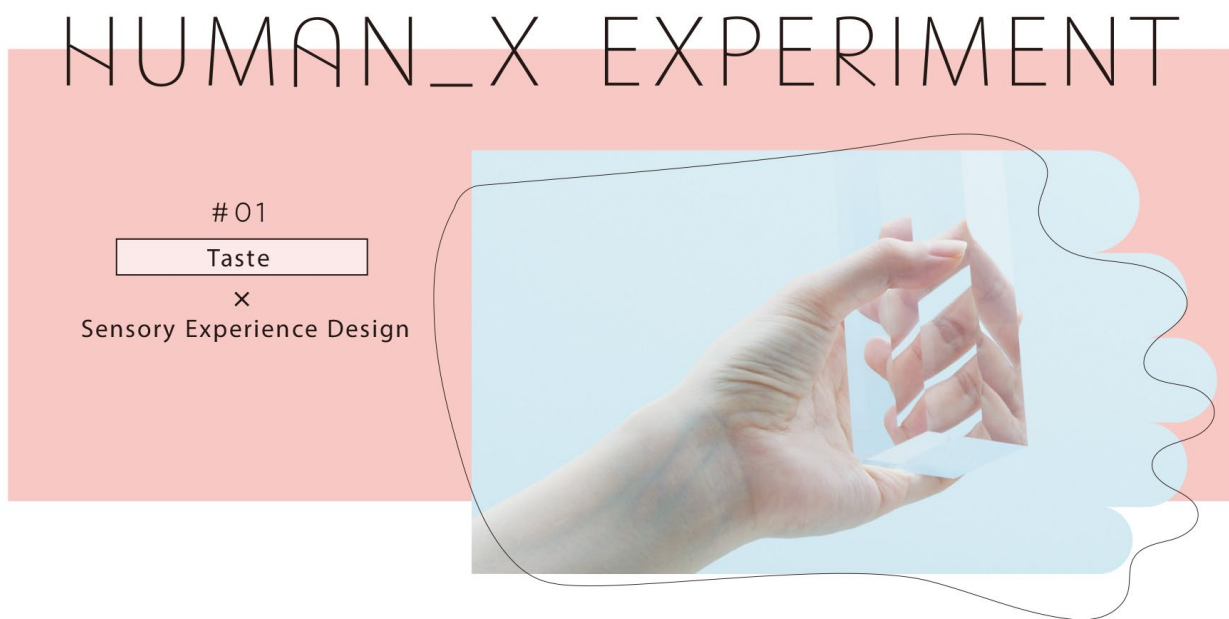
## Hakuhodo begins experimental activities to evolve brand experiences utilizing cross-modal perception (the interaction of the senses)

A collaboration with Associate Professor Takuji Narumi of The University of Tokyo

### Experiment 1: Music that Amplifies the Taste of Beer

Tokyo—May 25, 2022—Hakuhodo Inc., an integrated marketing and innovation company, is pleased to announce that its Human X (“human cross”) project team has commenced an experimental activity, Human X Experiment (“human cross experiment”), in collaboration with Associate Professor Takuji Narumi of The University of Tokyo’s Graduate School of Information Science and Technology to utilize cross-modal perception (the interaction of the senses) in the development of brand experiences for companies.

This is an initiative to design *sei-katsu-sha*<sup>1</sup> interfaces (points of contact between a company/brand and *sei-katsu-sha*) from the perspective of the human body and the senses using sensorial and scientific approaches.



Hakuhodo has defined brand-based business growth and business transformation through *sei-katsu-sha* insight as Brand Transformation (BX), and offers corporate support and solutions to achieve this goal. In an age when everything is connected digitally, to be chosen by *sei-katsu-sha* and remain connected with them over time, brands not only need to utilize technology and data, but also provide rich experiences that engage *sei-katsu-sha*’s senses and emotions.

Human X takes on the challenge of developing such new brand experiences. A team within the specialized organization Hakuhodo Brand & Innovation Design, Human X has been developing unique products and services using cross-modal perception since its inception in 2018. Its products, which combine different senses to address challenges faced by *sei-katsu-sha*, have gained wide support. They include Write More, a board that makes writing fun, and pacoo, a food education fork.

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<sup>1</sup> “*Sei-katsu-sha*” is a term we use to describe people not simply as consumers, but as fully rounded individuals with their own lifestyles, aspirations and dreams.

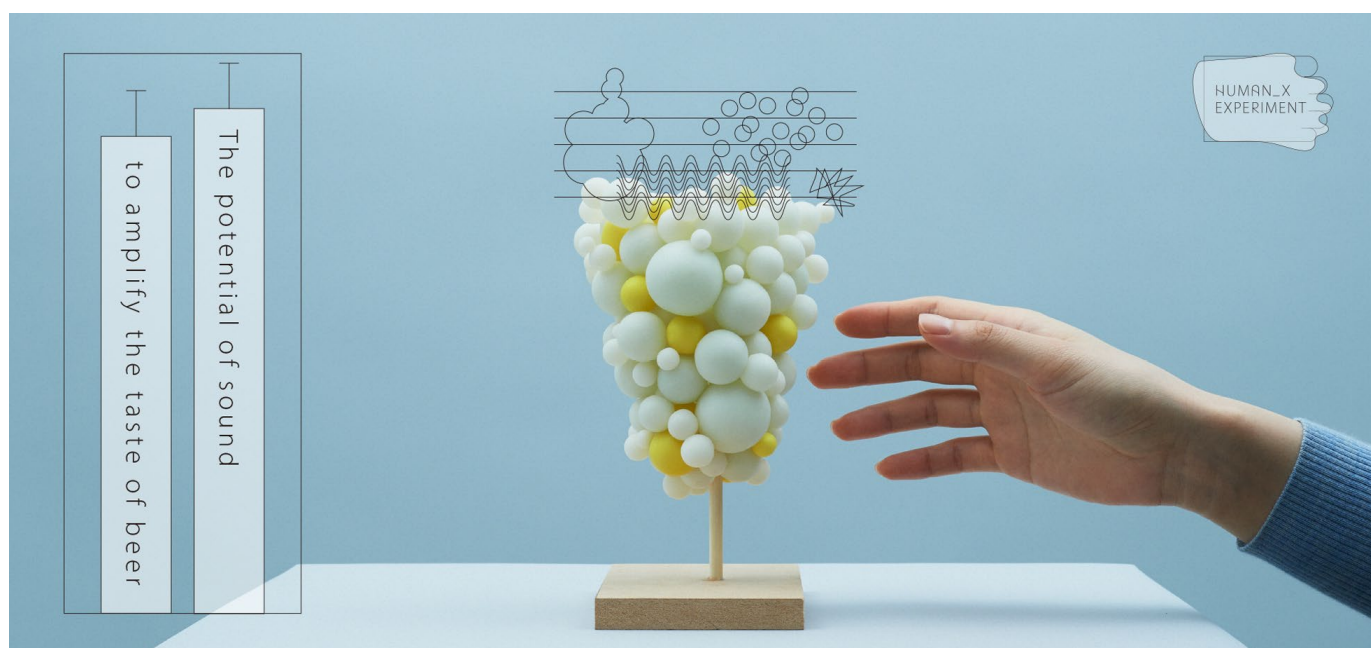
In a new initiative for the Human X team, a collaborative framework has been established with The University of Tokyo Associate Professor Takuji Narumi, a pioneer in cross-modal interface research, which has commenced **Human X Experiment** to conduct empirical research on how cross-modal perception could be used in brand experience and Brand Transformation.

One specific activity is a series of experiments titled “XX × Sensory Experience Design,” which will study topics closely related to *sei-katsu-sha*’s everyday lives. Under the supervision of Associate Professor Narumi, it will develop mechanisms for enriching lives with combinations of different senses using sensorial and scientific approaches. The results of the experiments will be made public periodically.

At the same time, by combining cross-modal knowledge gained from these activities with the company's brand personality, the Human X team will also engage in brand development, worldview creation, experience creation, R&D, and new business development that focus on the physicality and emotions of *sei-katsu-sha*, to help companies transform their brands.

## Prototype from the first empirical experiment, “Taste x Hearing,” unveiled

### The potential of sound to amplify the taste of beer



Today, a prototype from the first round of empirical research, “Taste x Hearing,” was unveiled. **Music that Amplifies the Taste of Beer** was developed using scientific and sensory approaches based on scientific evidence that was verified using existing academic research.

When listened to while drinking beer, the music enhances the various textures of the beer, creating a new taste experience. Focusing on sensory amplification through attention control, the music magnifies deliciousness by creating heightened feelings of being in the moment through the exaggeration of real sounds and by evoking mouthfeel with a combination of different sound effects.

From the intro, which raises expectations before the first mouthful, to a series of musical clips that amplify the sensation of creaminess, intensify the feeling of frothiness, and boost the sensation of the beer going down the throat, listening to the music while enjoying a beer enables experiencing new tastes, including with the passage of time.

The sound source of the music is available free of charge on Spotify:

<https://open.spotify.com/album/1c0oSU6A5SG2sINfrZ156b>



## ALBUM

Intro - imagine BEER -

Texture 1. CREAMY CREAMY

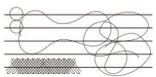
Texture 2. LIGHT SODA

Texture 3. HEAVY NODOGOSHI

Outro - Texture Journey -

Texture 1:

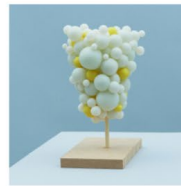
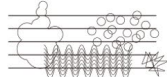
CREAMY  
CREAMY



Sounds with low sound properties and smooth transitions amplify the sensation of creaminess

Texture 2:

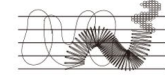
LIGHT  
SODA



High-pitched properties reflect the speed of bubbles, intensifying the sensation of frothiness

Texture 3:

HEAVY  
NODOGOSHI



Sensory amplification through the sounds and rhythms of beer going down the throat

## HOW TO LISTEN

Intro  
- imagine BEER -

Texture 1. CREAMY CREAMY  
Texture 2. LIGHT SODA  
Texture 3. HEAVY NODOGOSHI

Outro  
- Texture Journey -



Get your beer, snacks, headphones, etc. ready



Play the Human X album on the music website and pour a beer



Feel the difference in the taste of your beer



Savor the aftertaste

**Music Links** ([Album: "BEER"](#)) \* You will need to log in to Spotify first.

♪ Intro: Imagine BEER

♪ Texture 1: Creamy Creamy

♪ Texture 2: Light Soda

♪ Texture 3: Heavy Nodogoshi

♪ Outro: Texture Journey

### Note 1

In Japan, drinking alcohol under the age of 20 is prohibited by law. This experience has been developed for use by persons 20 years of age and older.

### Note 2

The sound sources developed in this experiment were created without elements specific to any beer brand. When developing a brand for a company using this technology going forward, we will design an individual experience that takes into consideration the personality of the brand.

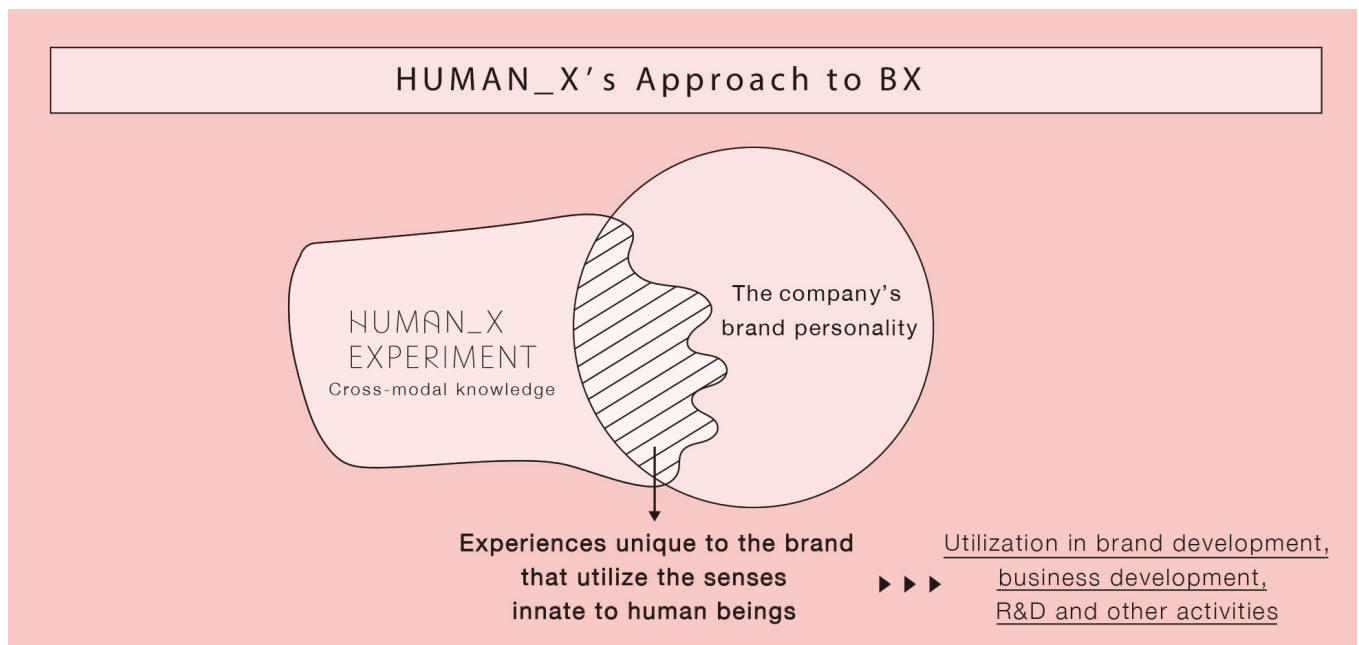
Reference:

### About cross-modal perception (interaction of the senses)

Seeing a wind chime swinging and hearing the sound it emits can make you feel cooler, even if the actual temperature does not change. In addition, shaved ice comes in a variety of flavors: red for strawberry, green for melon, and so forth. But, many of these syrups differ only in color, with the ingredients from which the flavors are derived the same. People do not sense taste only with their tongues, nor do they sense temperature only with their skin. The five senses intersect and interact with each other to create sensations. This sensory mechanism is called *cross-modal perception*, and it has been attracting attention in recent years as a reference for freely designing during the manufacturing or service design process the sensations and experiences that *sei-katsu-sha* will experience.

### Human X (“Human cross”)

Human X is a project team that utilizes cross-modal and multi-modal techniques to design sensory experiences for *sei-katsu-sha* that expand human sensations and perceptions. It engages in a wide range of research, product and service development, and other activities to enrich people's lives, using scientific and sensory approaches, from the perspectives of *sei-katsu-sha*'s bodies and senses.



### Human X's products

#### Write More

A board that makes writing fun. The scratchy, scribbly, free-flowing “writing sounds” that occur when writing can be amplified. A University of Tokyo graduate school study found that listening to the sound of their own writing engages people in writing and helps them to draw and write beautiful lines and letters faster. Write More is a product of the desire to help children to enjoy writing more.

#### pacoo

pacoo is fork-shaped food education device. The food education fork makes eating vegetables more fun for young kids by stimulating their motivation to eat with the sounds and rhythms of onomatopoeia and mimetic words that play along in time with each mouthful. It provides a new eating experience that positively affects children's memories of vegetables before they are old enough to realize what is going on around them, giving them an enjoyment from eating them that was not possible until now.

## **Brand Transformation (BX)**

### ***Sei-katsu-sha* insight-based business growth and transformation for the digital era**

With the expansion of the *Sei-katsu-sha* Interface Market, where *sei-katsu-sha* and goods are constantly connected and new interfaces are created at the points of contact between them, the nature of business is also changing dramatically to co-creation and participatory styles. Hakuhodo believes that the key to future business transformation and growth lies in brands, and defines the transformation of businesses based on *sei-katsu-sha* insight as *Brand Transformation*. We support and advance companies' Brand Transformation leveraging the creativity of *sei-katsu-sha* insight and with *sei-katsu-sha* interface technology.

## **Takuji Narumi**

### **Associate Professor, Graduate School of Information Science and Technology, The University of Tokyo**

Associate Professor Narumi graduated from the Department of Systems Innovation, Faculty of Engineering, The University of Tokyo in 2006. He received his Masters from the Graduate School of Interdisciplinary Information Studies at the same university in 2008, and completed his Doctorate at the University's School of Engineering in 2011. He was Assistant Professor in the Department of Mechano-Informatics, Graduate School of Information Science and Technology at The University of Tokyo from 2011. He has been a Lecturer in the same department from 2016, becoming Associate Professor in 2019. He is a Doctor of Engineering.

Combining virtual reality and augmented reality technologies with knowledge from cognitive science and psychology, he is engaged in research into cross-modal interfaces that allow people to experience various senses with limited sensory stimuli, as well as research into human augmentation technologies that change human behavior, cognition, and abilities by working on the senses. Associate Professor Narumi has received many awards, including the Virtual Reality Society of Japan's Best Paper Award and the Good Design Award.

## **About Hakuhodo**

Founded in 1895, Hakuhodo is an integrated marketing solutions company headquartered in Tokyo, Japan. With offices in 20 countries and regions, and over 10,000 specialists working in Japan and around the world, Hakuhodo is the world's second largest advertising agency according to *Ad Age's* "Agency Report 2022." The company is the core agency of the Hakuhodo DY Group.

*Sei-katsu-sha* insight is the foundation for Hakuhodo's thinking, planning, and brand building. It reminds us that consumers are more than shoppers performing an economic function. They have heartbeats. They are individuals with distinct lifestyles. Hakuhodo introduced this term in the 1980s to emphasize its commitment to a comprehensive, 360-degree perspective on consumers' lives.

With *sei-katsu-sha* insight as its cornerstone, Hakuhodo combines creativity, integrative capabilities, and data and technology to play a leading role in evolving companies' marketing activities and generating innovation for the digitalized era. This enables the company to impact and provide value to *sei-katsu-sha* and society.

Renowned for its creativity, Hakuhodo has won the Grand Prix at Cannes Lions International Festival of Creativity twice, and was named Network of the Year at ADFEST 2021.

To learn more, visit: [www.hakuhodo-global.com](http://www.hakuhodo-global.com)

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