Pictograms with universal design for equity and inclusion

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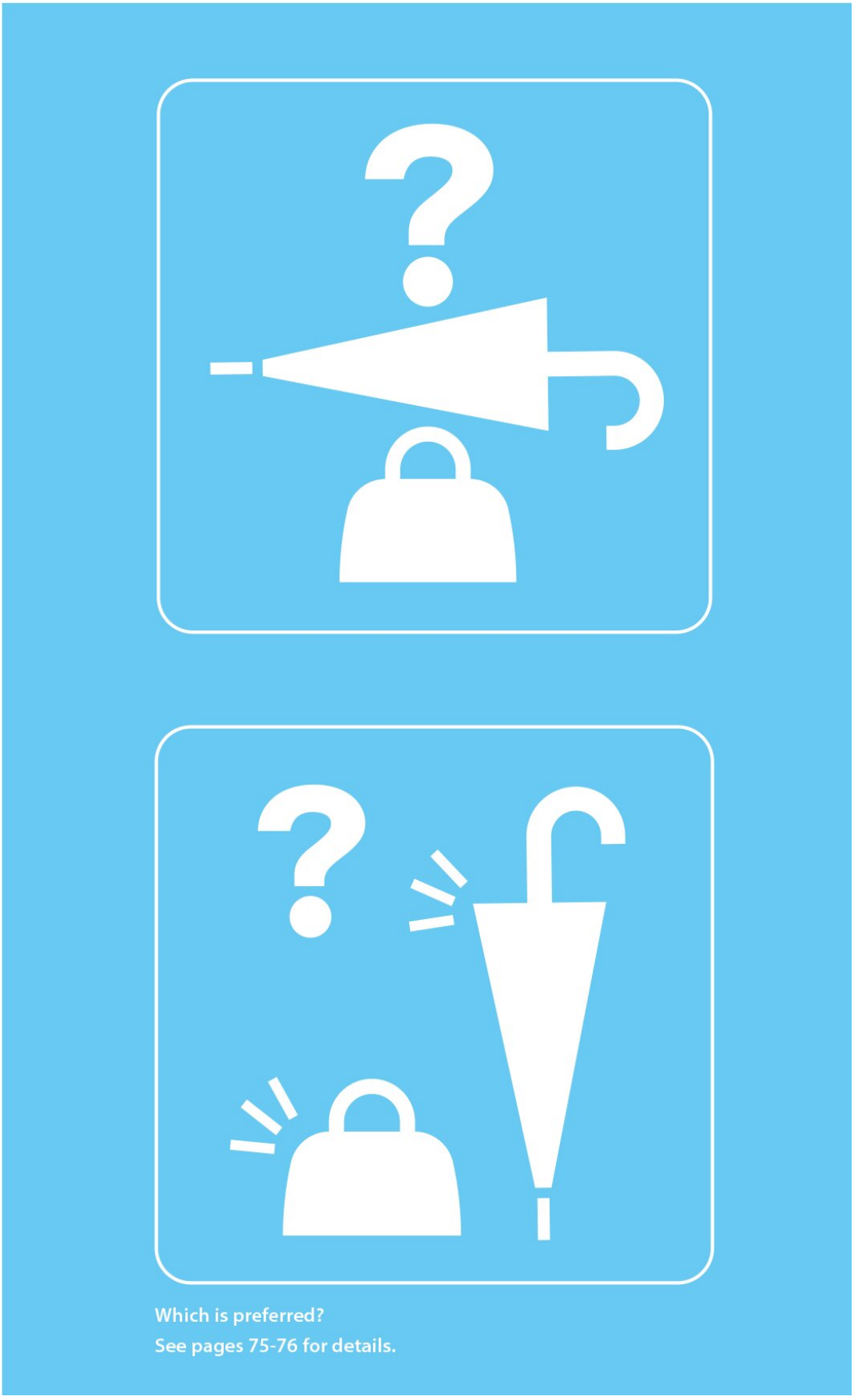
Which is preferred?
See pages 75-76 for details.

Motion lines and actual orientation. Credit: *Visible Language*

Do you want to create a society through design where people with and without disabilities can live together as they are? Prof Mao Kudo of the Department of Media Design hopes that her research results are not just used to research further but that they become rooted in the fabric of society in transportation systems, and educational and public facilities. With her paper published in *Visual Language*, she set out to clarify the elements of graphic design in pictograms that make them easy for people with intellectual disabilities to understand.

People with intellectual disabilities rely on pictograms in public spaces to circumvent their difficulty understanding textual information. Pictograms in public places are support tools for receiving necessary information. There are efforts to standardize the JIS design of pictograms, but more surveys and feedback must be incorporated into the designs to make them more effective.

People with intellectual disabilities have difficulty learning or understanding the meaning of existing pictograms, so surveying elucidates which designs are more intuitively understood.

Through the study, Prof Kudo clarified five design elements that are factors in increasing pictogram comprehension.

1. Adding a person to symbolize the location: adding a person asking another person questions instead of "i" symbol for "information."
2. The location element: adding the platform for the train station

and the bus stop pole for the bus stop.
3. The actual orientation: show items as they are oriented in real life, key, and locker in their actual orientation.
4. Motion line: adding three little lines to represent movement or sound.
5. Arrow: the longer the axis, the easier it is to understand. (1.9 times the length of the standard pictogram)

Although the graphic elements that increase the comprehension of pictograms were elucidated, they did not apply to every circumstance. For example, there were some IQ groups (21 to 35 versus the 36 to 50) that were found to differ in their preference of pictograms as the position and directions of "stand in two lines" and "please stand on the right or left." Further investigation into the conditions of the pictograms is needed.

For example, the addition of the motion line was effective in increasing the understanding of the emergency button by (p