Let’s do a quick exercise. Are you ready? Draw a circle.

Did you start at the top or bottom? Clockwise or counterclockwise?

Two Reporters from Quartz Magazine used the public database from Quick, Draw! which is an online game released by Google in order to compare how people draw basic shapes around the world.

Americans tend to draw circles counterclockwise. Of nearly 50,000 circles drawn in the US, 86% were drawn this way. People in Japan, on the other hand, tend to draw circles in the opposite direction. Of 800 circles drawn in Japan, 80% went clockwise.

British, Australian, French, German and Finnish circles were drawn in the counterclockwise direction. In Vietnam, a full 95% were drawn this way.

Most of the world, it seems, draws circles counterclockwise, with just two exceptions: Taiwan and Japan.

So what sets them apart?

Let’s start with Japanese. There are three types of writing used in Japanese: hiragana, katakana, and kanji. Kanji is based closely on Chinese character system, while hiragana and katakana are phonetic. Hiragana, the closest to the English alphabet, has the most circular strokes, and most of its curvy characters are drawn with the curve going clockwise.

In written languages based on Chinese, these rules are drilled into pupils’ heads from the moment they pick up a pencil, making a strong case for the possibility that people in Taiwan and Japan draw circles based on their shared system of writing.

we can also identify other patterns. Korea’s Hangul writing system, for example, is full of circles. Of the 1,500 circles collected there, 72% were drawn counterclockwise. You might expect South Korea to fall closer to Taiwan and Japan. But as a rule, circles in Hangul go counterclockwise, the opposite direction of the curves in Chinese or Japan. Likely as a result, South Korea is closer to the rest of the world.

The remaining 50 odd countries tend to draw their circles counterclockwise. Nearly all of these use the Latin alphabet, which runs left-to-right and is not especially circular. English has a stroke order, too, though it’s far less rigid: Perhaps it’s writing counterclockwise “c” and “g” over and over as kids that has most of the Latin-alphabet world drawing circles that way.

So this analysis clearly hints at the way you draw a simple circle is linked to cultural upbringing, deep-rooted in hundreds of years of written language, and significant in developmental psychology.

Intentional action comprises of (1) a reference value or goal toward which the system acts, (2) the ability to change the environment, and (3) the ability to perceive the environment so as to know when there is change in environment. For example, a thermostat can regulate the temperature of a room. It does this by (1) having a reference value set by a human (e.g., 25 degrees), (2) being able to turn on or off an air heater or cooler, and (3) being able to sense the room temperature (e.g., with a thermometer) and compare it to the reference value.

Tomasello defines the goal as external goal as a certain state of the environment and internal goal as an internal entity that guides the person’s behavior. He also tries to make a clear distinction between goal and intention. An intention is a plan of action that someone chooses and commits itself in pursuit of goal.

So lets X be the goal and the intention is to do A, So to do A he will consults his knowledge and mental models of current reality – aspects that are relevant to the goal.

This was his model of intentional action. But his concern is not with the question of whether organisms themselves

produce intentional actions, which many do, but rather it is with the question of how they understand the intentional actions of others. This question becomes more evident in children, their first year of life. He tries to explain this by introducing three concepts—animate actions, pursuing goals and choosing plans.

Animate actions -- An observer perceives that the actor has generated his motion autonomously. By around 6 months of age, infants have developed sufficient expectations about human animate action to be able to predict what others will do in familiar situations

Pursuing Goals-- An observer perceives and understands that the actor has a goal and behaves with *persistence* until reality matches the goal;

that 9- to 12-month-old infants understand the basics of goal-directed action. They understand that actors try to achieve goals, they keep trying persistently after failed attempts and accidents and around obstacles, and when they succeed they stop acting toward the goal

**Choosing plans.** An observer perceives and understands that the actor considers action plans and *chooses* which of them to enact in intentional action. infants understood that the actor perceived and evaluated

reality rationally before choosing an action plan designed to accommodate this reality in pursuit of the goal.