## What is the Quantitative Accumulation Effect?

* **Concept Definition:** Quantitative change refers to the change in the quantitative nature of things, which is the increase or decrease in the number of things, the change of places, and the change in the spatial arrangement of the components within things.
* **Concept Founder:** The principle is known in China as the phrase “[质变到量变](https://web.archive.org/web/20221118115544/https:/baike.baidu.com/item/%E8%B4%A8%E5%8F%98%E5%88%B0%E9%87%8F%E5%8F%98/12712911)“ which translates to "from quantitative change to qualitative change". In western literature, a similar concept was mentioned by Malcolm Gladwell in his book “[the tipping point](https://web.archive.org/web/20221118115544/https:/en.wikipedia.org/wiki/The_Tipping_Point)“.
* **Concept Benefit:** This model helps understand the real cause of fundamental changes that most people often overlook.

## How to demonstrate it?

* Water behaves like a fluid when its temperature is from 0 to 100 degrees.
* Water turns into ice when it's temperate becomes < 0 degrees.
* Water is boiled and evaporates when its temperature becomes > 00 degrees.
* The temperate is a quantitative attribute of water that can be increased or decreased. The status is the qualitative attribute of the water that determines its physical behavior (liquid, solid, gas).
* Tipping points, in this case for the temperature, are 0 Degree and 00 degrees.
* The quantity change breaking through the tipping point will change the entire behavior of water. For example, when heating the water from 0 degrees to 100 degrees, it evaporates.
* If the quantity change does not reach tipping points, the quality behaves similarly. For example, by heating the water from 20 to 40 degrees, the water becomes warmer in terms of quantity.
* However, it is still fluid in terms of its quality.

## Where can it be found?

* **Knowledge accumulation:** The accumulation of knowledge is also a quantitative process. After reading enough books, a person's view and understanding of the world will change.
* **Talent accumulation:** The [10 000 hour rule](https://web.archive.org/web/20221118115544/https:/www.ncbi.nlm.nih.gov/pmc/articles/PMC4662388/#:~:text=Throughout%20his%20book%2C%20Gladwell%20repeatedly,at%20least%2010%20000%20hours.) says if one practices anything long enough, one will become an expert in this field. Not the talent but the number of hours practiced defines the talent. This is the same as the "quantitative cumulation to qualitative change" principle.
* **Company value accumulation:** The accumulation of a company value follows the same process. For example, [Tesla](https://web.archive.org/web/20221118115544/https:/www.google.com/search?aqs=chrome.0.69i59l4j0i512l3j69i60.1945j1j7&ie=UTF-8&oq=tesla%20stock&q=tesla%20stock&sourceid=chrome) is steadily improving its technology and production every day. But the Tesla stock remains the same for a very long period. Then, one day, when the tipping point is reached and the market realizes its value, the stock goes into a bullish trend for a long time. Ultimately, the hard work behind Tesla is what drives the company's value higher. Typically, the interior work done by a company is hard to measure. Still, the stock price is easy to track from the outside. If one only looks at its stock price(=quality), then one would not fully understand why the stock suddenly goes up a lot. The" quantity to quality "transition framework helps people to better understand this phenomenon.

## Why does it exist?

* **Scientific laws have boundaries:** Most laws in physics (or sometimes also other areas) are only applicable under a specific environment and condition. For example, principles from quantum mechanics are only applicable to atoms, but not to big objects. The theory of relativity only applies to big objects but not to small atoms. Moors Law only was correct in the era during the rapid expansion of the Semiconductor industry. Each law has its boundary. Once the tipping point is reached and the boundary is broken, then the law loses its power. After that tipping point, a new law better describes the behavior of that state.

## How do I benefit from it?

* **Do:** Quantitative change is a gradual, not significant change, is within the original degree of change and does not change the fundamental nature of things. On the other hand, qualitative change is the fundamental change. Set your fundamental goals in your life (such as get rich, get smart) and work towards that goal with many many small steps (such asa work hard, study hard). One day your accumulation will change you fundamentally.
* **Don‘t:** Do not expect the qualitative change to happen immediately, a lot of accumulation is required in order to change entirely. People give up too early. Do not ignore the small things in life. Gradual changes are hard to detect, while fundamental changes are significant to see. But in reality, all quality changes are driven by quantity changes. A lot of small things summed up together can make a huge difference.