

# You just got to love the rhythm: Listen to our right hemisphere!

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**A**ll experience/knowledge comes from three sources: (1) perception, (2) the past (consolidated perception in memory, or mediated by "technology": stories, writing, photo, etc.), or (3) judgment/argument based on perception and past (analogy). There is something special going on with our 'judgments'. Our judgements are not only fooled on the basis of perceptual traces created in our brain, as shown in perceptual illusions when we see or hear things that are not actually shown, it also seems that our two hemispheres judge differently. What's up with that?

The American neuropsychologist and Nobel Prize winner Robert Sperry conducted neuropsychological research on patients whose brain surgeon had cut the brain bar to prevent their very serious generalized epilepsy from spreading throughout the brain. After disconnecting both hemispheres, the patients were found to have virtually lost their epilepsy and to experience virtually no negative effect from the operation. Sperry performed his tests (experiments) very accurately, for example by making glasses that completely eliminated the left or the right image field of both eyes. In this way he could, for example, only present the right hemisphere a picture of a hammer (via the left image field of the left eye: that crosses counter-laterally in the optical chiasm). When asked what was shown on the picture, this had to be converted into language. Because the language / speech center of most adults was in the left hemisphere of the brain and the image information could not be transmitted through the brain bar (the corpus callosum) to the language center, the patients were unable to name the pictures. However, they could indicate with gestures what can be done with a hammer.

Sperry and his successful PhD student - neurologist Gazzaniga - discovered through this so-called split-brain method that people actually have two more or less independent brain systems, a left and a right system. The left system is often called dominant because it plays a leading role in articulating experiences and verbal argumentation (especially also because in most adults the "language center" is found in the left hemisphere. In daily life, the "Split-Brain patients" actually did not notice either of their two unconnected brains (at most, some patients reported that they were slightly more tired after the operation at the end of the day).

Returning to our question, it turned out that both hemispheres have different judgement strategies. When it comes to forecasting, our dominant left hemisphere is often worse than our right hemisphere, which judges like many other animals. Gazzaniga found out via the Sperry method that if, for example, pushing lever A gives a 60% chance of winning and lever B a 40% chance of winning, the right hemisphere notices this as quickly as the left hemisphere, but chooses a different strategy. The right side of the brain chooses the winning lever all the time and therefore also takes 100% of the profit (ie 60%). The "analytical" left half of the brain neatly chooses 60% for the 60% lever A and 40% for lever B, so that a maximum of 60% of the 60% is caught:  $0.62 + 0.42 = 52\%$  ). Many animals seem to choose according to the optimal strategy of the right hemisphere. The experiment has been repeated countless times, even with small differences (52 versus 48%) the right brain chooses 100% for the most promising opportunity. Apparently both hemispheres (like many animals) have a flawless intuition for number - or better - rhythm, but only our left brain actually has the ability to manipulate with the number.

This example shows that optimization through analysis and numerical insight may not be the best strategy, certainly not when judging in the context of forecasting. And that while all our knowledge can again be traced back to three sources, perception, past (consolidated perception) and judgment. Should we come up with something to give our right hemisphere a little more voice? You just got to love the rhythm!