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- [Physics](#)
- [Space & Earth](#)
- [Electronics](#)
- [Technology](#)
- [Chemistry](#)
- [Biology](#)
- [Medicine & Health](#)
- [Other Sciences](#)
  
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- [Spotlight news](#)
- [Latest news](#)
- [Week's top](#)
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# Right-handed and left-handed people do not see the same bright side of things

January 28th, 2010

Despite the almost universal association of the right with life, right, positive and good things, and the left with death, inadequacy, negative and bad things, recent researches show that left-handed people hold the opposite association. Thus, left-handers become a critical case in which conceptual associations, result of a sensory-motor experience, and those that rely on linguistic and cultural uses, are contradictory. A sensory-motor experience in itself is capable of creating abstract conceptual associations.

These are the conclusions derived from various studies compiled by professor Julio Santiago de Torres, from the Department of Experimental Psychology and Behavioural Physiology at the University of Granada, Spain, who has conducted a bibliographic review on the subject, published in *Ciencia Cognitiva: Revista Electrónica de Divulgación*.

One of the latest works on this subject was undertaken by researcher Daniel Casasanto (Stanford University), who found out that left-handers tend to associate the left with nice and good things and the right with ugly and bad things, which goes against the enormous power of cultural context in which they live and the language they use.

## Good things and bad things

In one of his experiments, Casasanto presented participants a diagram that depicts a character who was planning a trip to the zoo, and who loves zebras and thinks they are good, but dislikes pandas and thinks they are bad. The participant had to draw a zebra in the box that best represented good

things and a panda in the box that best represented bad things.

Most of right-handed people located good things in the box on the right while left-handers placed them in the box on the left. Interestingly, only 14% of participants thought that his election had to do with what his dominant hand was.

Then, to see whether the left or right location could affect rating dimensions on abstract personality, he asked another group of participants to rate pairs of objects depicted in another drawing, indicating which of the two seemed more intelligent, more honest, more attractive and happier. And in a final experiment, participants were asked to assess which candidate would they chose for a job, or what product would they buy in a store.

In all tasks, right-handers tended to evaluate the object on the right better, while left-handers favoured the one on the left. Therefore, UGR professor says, "these results demonstrate that perceptuomotor experiences, in this case the greater ease and fluidity of interaction with one or another side of space, are sufficient to generate stable associations between specific dimensions, such as space, and concepts of a high degree of abstraction, such as kindness, intelligence or honesty."

These data provide one of the first clear demonstrations that sensory-motor experience can exert a powerful influence on the conceptualization of even our most abstract ideas.

### **A wrong world**

As professor Santiago explains, "a left-handed person has often the feeling of having been born in a wrong world. From scissors to computer keyboards designs, everything is projected for right-handers. The fact that left-handed people are able to adapt quite well to these manual controls that are contrary to their nature, indicates a first interesting fact that it is often overlooked: undoubtedly, there is a difference in motor ability between the dominant and the non-dominant hand, but it is far from being a great difference."

In fact, the researcher points out, "speed and accuracy differences between the right and the left hand that are usually found, do not go beyond 10%. In addition, the left hand can be trained to high levels of implementation, as in the case of musicians or typists. In contrast with the intensive use of the right hand that characterizes an average right-handed person in over 90% of the tasks.

Julio Santiago recalls in his article that association between right and left with the symbolic systems of the world cultures "is deep, and reaches almost every aspect of life. Thus, right and left are respectively associated with aristocratic and common people, male and female, sacred and profane, good and bad. Eventually, these partnerships control aspects of life as varied as the position in which dead are buried, distribution of space in homes and churches, positions in which men and women sit at the table or in the temple and the hand chosen for saluting, swearing, eating or bathing."

Moreover, Santiago points out, "even vocabulary is also full of similar facts such as, for example, the word "sinistro", which derives from sinister, "izquierda" in Latin.

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