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**Unraveling the gap between natural and rational numbers.**

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Summary: The foundations for more advanced mathematics involve a good sense of rational numbers. However, research in cognitive psychology and mathematics education has repeatedly shown that children and even adults struggle with understanding different aspects of rational numbers. One frequently raised explanation for these difficulties relates to the natural number bias, i.e., the tendency to inappropriately apply natural number properties to rational number tasks. This contribution reviews the four main areas where systematic errors due to the natural number bias can be found, i.e., their size, operations, representations and density. Next, we discuss the major theoretical frameworks from which rational number understanding is currently investigated. Finally, an overview of the various papers is provided.

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