

Editorial 2021

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For the Journal of Numerical Cognition (JNC), 2021 starts as a year full of changes; JNC has changed to a new version of its management and submission software (Open Journal Systems [OJS] 3.x), has overhauled its website, and installed a new editorial board with a new organisation. It is an honour and privilege to be part of this and serve as the next editor of JNC. In the following I want to briefly lay out my motivation to take on this position, introduce my goals and ambitions for the upcoming term, and briefly introduce the new editorial board.

But before I even start, I wish to thank on behalf of the incoming editorial board John Towse and Wim Fias for their outstanding work for the journal. We also want to thank all editorial board members for their energy and service for the journal. JNC would not stand where it is today without your efforts and engagement.

When John Towse started the Journal of Numerical Cognition, not everybody was convinced of the idea of having a dedicated platform for research in the domain of numerical cognition. Despite the outstanding importance of numerical competencies for professional as well as private success, the domain still counts relatively few researchers compared to more established research fields such as visual attention, for example. But the community is growing and displays a remarkable dynamism and enthusiasm. As correctly pointed out by Wim Fias (Fias, 2019), John Towse launched the JNC at the right moment in time. From its very start, I was convinced that the community needs a dedicated platform for in-depth discussion of specific matters. At the same time, I liked the idea of bridging the gap between fundamental cognitive research on one hand and applied educational research on the other.

Since its (re-)emergence in the late 1990s, the field of numerical cognition is an inherently interdisciplinary area of research that aims at elucidating the neural and cognitive mechanisms underlying numerical and mathematical processing and applying this knowledge to improve educational practices and remediation measures. It spans diverse disciplines such as computational modelling, animal cognition and neurophysiology, cognitive psychology, mathematical didactics and educational psychology. This list – that does not claim to be exhaustive – illustrates that discipline-specific terminology, research traditions, and practices can sometimes make communication across disciplines difficult. Against this background, my vision for JNC is to continue establishing it as a truly interdisciplinary journal of numerical cognition, giving a voice to all disciplines and encourage scientific discussions across discipline borders. I conceive of the term ‘numerical cognition’ in its largest possible scope, unifying all of the above disciplines in their focus on delineating the cognitive principles underlying the processing of numerical and mathematical content. My goal is to make JNC an example journal to demonstrate what the joint effort of multiple disciplines centred on a circumscribed topic can achieve to fill the term *educational neuroscience* with life. JNC will continue to provide a scholarly forum for the focused discussion of numerical cognition research. I want to emphasize its role as a platform to render respective contributions from psychology and cognate disciplines visible and accessible across communities.

As a first step into this direction, the newly installed editorial board has been chosen to reflect the ambition of the journal and to balance the editors’ competencies with the disciplinary variety of submissions. I am highly delighted to



announce (in alphabetical order) the following Section Editors who have accepted to take on this role for the upcoming three-year term: Sara Hart, Tali Leibovich-Raveh, Andreas Obersteiner, Joonkoo Park, Geetha Ramani, and Lieven Verschaffel. I am very much looking forward to working together on strengthening the role of JNC as a key outlet for high-quality research in the domain of numerical cognition.

The structure of the editorial board has changed to better cope with the increasing number of contributions. JNC now adopts a classical three-layer organisation of the editorial board with Editor, Section Editors and Board Members. Section Editors will handle the submitted manuscripts, select reviewers, evaluate the manuscripts in light of the reviews and make the editorial decisions. Board Members will actively contribute to the maintenance of the high publication and quality standards in JNC by agreeing to provide up to around 4 reviews per year, providing the editors with decisive input to make their editorial decisions.

I plan on different actions to foster discipline-spanning exchange, such as special issues focusing on specific aspects around the question of how to build bridges between disciplines and domains in numerical cognition. I will encourage contributions that will help systematize state-of-the-art knowledge in the field and provide inspiration for researchers coming new to the field such as theoretical contributions on currently debated issues in numerical cognition or review papers on important issues. The aim is to make JNC the go-to site for state-of-the-art knowledge in numerical cognition. I want to increase the journal's visibility on social media, knowing that 'scientific twitter', for example, reaches many practitioners who do not regularly screen scientific publications. You will find JNC on Twitter under @jnc_mcls.

I want to further increase the attractiveness of JNC as a research outlet. When deciding where to submit a manuscript, many researchers are torn between journals that are in the hands of profit-seeking publishers on one hand and journals that support open science on the other. One important factor that influences this decision is whether the journal can provide quantified metrics that PIs can communicate to funding agencies or during job interviews. Although highly disputed and far from being free from errors and biases, metrics such as the Impact Factor (based on Web of Science by Clarivate) are often used to inform the decision process where to submit a manuscript. I am therefore happy to announce that PsychOpen has agreed to apply with JNC to be listed in the Emerging Sources Citation Index of Web of Science which will – should it be accepted – eventually lead to an Impact Factor. JNC is already listed in PubPsych, Scopus, Google Scholar and other databases.

JNC is member of the Free Journal Network that promotes scholarly journals run according to the Fair Open Access model. JNC is free from financial interests which means that the decision of accepting or rejecting a submitted manuscript can exclusively be based upon scientific criteria. Profit-oriented publishers seek to publish attention-grabbing studies with ground-breaking results which sometimes leads to overselling of results that do not replicate. On the other hand, journals that rely on author processing charges have a high motivation to publish as many papers as possible which may sometimes undermine the gatekeeping quality control that peer-review represents (e.g. Siler, Lee, & Bero, 2015). JNC adopts a publication policy with no monetary barriers to authors or readers. This allows focusing on scientific quality and in turn favours studies that otherwise receive little attention from profit-oriented publishers such as replication studies or studies with null effects. At the same time, it allows free and open access to the research for everybody. My mission will be to further and promote the open access and open science policy of JNC while at the same time maintaining rigorous quality control.

With these changes and objectives in mind, I hope that JNC will continue to attract submissions from every corner of the planet and look forward to your contributions.

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The logo for the Mathematical Cognition and Learning Society (MCLS) consists of the letters 'MCLS' in a bold, blue, sans-serif font.

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