DESCRIPTION

The journal publishes theoretical and research papers on cognitive brain development, from infancy through childhood and adolescence and into adulthood. It covers neurocognitive development and neurocognitive processing in both typical and atypical development, including social and affective aspects. Appropriate methodologies for the journal include, but are not limited to, functional neuroimaging (fMRI and MEG), electrophysiology (EEG and ERP), NIRS and transcranial magnetic stimulation, as well as other basic neuroscience approaches using cellular and animal models that directly address cognitive brain development, patient studies, case studies, post-mortem studies and pharmacological studies.

Benefits to authors
We also provide many author benefits, such as free PDFs, a liberal copyright policy, special discounts on Elsevier publications and much more. Please click here for more information on our author services.

Please see our Guide for Authors for information on article submission. If you require any further information or help, please visit our Support Center.

AUDIENCE

Neuroscientists and Neurologists

IMPACT FACTOR

2019: 4.966 © Clarivate Analytics Journal Citation Reports 2020

ABSTRACTING AND INDEXING

PubMed Central
Directory of Open Access Journals (DOAJ)
EDITORIAL BOARD

Editor-in-Chief
Beatriz Luna, University of Pittsburgh Department of Psychiatry, Pittsburgh, Pennsylvania, United States
Cognitive Development, Adolescence, Reward, Neuroimaging

Associate Editors
Eveline Crone, Leiden University Department of Psychologie, Leiden, Netherlands
adolescence, self-regulation, prosocial development, brain development, fMRI
Ece Demir Lira, The University of Iowa, Iowa City, Iowa, United States of America
Reading, math, education, language, parent-child interaction, prematurity
Katie A. Mclaughlin, Harvard University Department of Psychology, Cambridge, Massachusetts, United States
stress, childhood adversity, psychopathology, adolescence, affective neuroscience
Jennifer Pfeifer, University of Oregon, Department of Psychology, Center for Translational Neuroscience, Eugene, Oregon, United States
adolescence, fMRI, longitudinal neuroimaging, puberty, social-emotional processes
Victoria Southgate, University of Copenhagen Department of Psychology, Copenhagen, Denmark
Action processing, imitation and mimicry, Theory of mind, Motivation and learning, Group cognition
Moriah E. Thomason, New York University Grossman School of Medicine, New York, New York, United States
Infant, EEG, fNIRs, rs-t-s-fMRI studies
Linda Wilbrecht, Helen Wills Neuroscience Institute, Berkeley, California, United States
Prefrontal cortex, striatum, dopamine, adolescence, puberty

Editorial Board Members
Nick Allen, University of Oregon Department of Psychology, Eugene, Oregon, United States
Adolescence, Developmental Psychopathology, Brain Development, Sleep, Prevention Science
Torsten Baldeweg, University College London Institute of Child Health, London, United Kingdom
neuroimaging, epilepsy, cognitive outcomes, functional mapping
Yair Bar-Haim, Tel Aviv University Sagol School of Neuroscience, Tel Aviv, Israel
Anxiety Disorders, PTSD, Traumatic Stress
James Blair, Boys Town National Research Hospital, Omaha, Nebraska, United States of America
Psychopathy, amygdala, ventromedial frontal cortex, emotion
Kathrin Cohen Kadosh, University of Surrey Department of Psychology, Guildford, United Kingdom
Anxiety, Brain development, Face processing, Emotion regulation, Microbiome Gut-Brain Axis
Stanislas Dehaene, INSERM-CEA-University Paris Saclay, NeuroSpin center, Yvette, France
Cognitive Neuroimaging
Iroise Dumontheil, Birkbeck University of London Department of Psychological Sciences Centre for Brain and Cognitive Development, London, United Kingdom
cognitive control, adolescence, executive functions, neuroimaging, fMRI
Guinevere Eden, Georgetown University, Department of Pediatrics, Center for the Study of Learning, Washington, District of Columbia, United States
Brain-bases of the reading disability developmental dyslexia
Sarah Feldstein Ewing, Oregon Health and Science University Department of Child and Adolescent Psychiatry, Portland, Oregon, United States
adolescents; addiction; alcohol; cannabis; neurodevelopment
Nathan Fox, University of Maryland Department of Human Development and Quantitative Methodology, College Park, Maryland, United States
Temperament, Adversity, Brain development, Cognitive Control, Executive Functions
Uta Frith, University College London Institute of Cognitive Neuroscience, London, United Kingdom
autism, dyslexia, cognitive development, social cognition
Jay Giedd, University of California San Diego Department of Psychiatry, La Jolla, California, United States
Development, Genetics, Brain Imaging, Adolescence
Michelle de Haan, University College London Institute of Child Health, London, United Kingdom
Event-related potentials; infancy; memory; face processing; preterm
Antonia Hamilton, University College London Institute of Cognitive Neuroscience, London, United Kingdom
Clinical, Educational, and Health Psychology; Experimental Psychology; Institute of Cognitive Neuroscience; Language & Cognition; Linguistics Speech, Hearing & Phonetic Sciences
Torkel Klingberg, Karolinska Institute Department of Neuroscience, Stockholm, Sweden
Working memory, development, plasticity, training, mathematics
Cecile D. Ladouceur, University of Pittsburgh Department of Psychiatry, Pittsburgh, Pennsylvania, United States
Puberty, emotion regulation, affective disorders, event-related potentials, fMRI
Jennifer Lau, King’s College London Department of Psychiatry, London, United Kingdom
Understanding mood and anxiety problems in children and young people, neural and cognitive mechanisms, atypical emotional and social development
Frederique Liegeois, University College London Institute of Child Health, London, United Kingdom
Developmental cognitive neuroscience: paediatric neuropsychology; speech and language; MRI; paediatric neurological disorders

Monica Luciana, University of Minnesota Department of Psychology, Minneapolis, Minnesota, United States
adolescence; executive function; reward processing; neuroimaging; neurochemistry

Mortimer Mishkin, National Institute of Mental Health, Bethesda, Maryland, United States
BEHAVIOR HEARING/SPEECH MEMORY/COGNITIVE PROCESSES NEUROBIOLOGY PERCEPTION/ AWARENESS PHYSIOLOGY

Angela T. Morgan, Murdoch Children's Research Institute, Speech and Language, Melbourne, Australia
child speech disorder, child language disorder, neurobiology, genetics

Charles A. Nelson, Boston Children's Hospital, Laboratories of Cognitive Neuroscience, Boston, Massachusetts, United States
Cognitive Neuroscience, Pediatric Developmental Medicine Research

Eric Nelson, Center for Biobehavioral Health - Nationwide Children's Hospital, Columbus, Ohio, United States
Biobehavioral health, pediatrics, chronic diseases, functional and structural neuroimaging (fMRI), intracranial EEG, eye-tracking, and performance on computer based tasks

Tomáš Paus, Holland Bloorview Kids Rehabilitation Hospital, Toronto, Ontario, Canada
population neuroscience, brain development, adolescence, mental health

Kevin Pelprey, George Washington University, Autism and Neurodevelopmental Disorders Institute, Washington, District of Columbia, United States
Neuroscience; Neurodevelopment and Regeneration; brain basis of autism; neurodevelopmental disorders

Koraly Pérez-Edgar, The Pennsylvania State University Department of Psychology, University Park, Pennsylvania, United States
Temperament, Anxiety, Attention, Electrophysiology, Eye-Tracking

Brad Peterson, Columbia University Irving Medical Center, New York, New York, United States
Community Health, Neurosciences

Daniel Pine, National Institute of Mental Health, Bethesda, Maryland, United States
Psychopathology and brain function

Cathy Price, UCL Queen Square Institute of Neurology, The Wellcome Centre for Human Neuroimaging, London, United Kingdom
Expert in the use of structural and functional brain imaging for understanding cognitive processing in the neurologically healthy and damaged brain

Vincent Reid, University of Waikato Department of Psychology, Hamilton, New Zealand
Infancy, EEG, social development, perceptual development, prenatal development

Rick Richardson, University of New South Wales School of Psychology, Kensington, New South Wales, Australia
memory, fear, extinction, early life adversity, rodent models

Bradley Schlaggar, Kennedy Krieger Institute, Baltimore, Maryland, United States
functional connectivity, reading, language, Tourette syndrome, executive function

Beate Sodian, Ludwig Maximilian University Munich Faculty of Psychology and Educational Sciences, Munich, Germany
Young children, theory of mind, memory, reasoning skills

Elizabeth Sowell, University of Southern California Keck School of Medicine, Los Angeles, California, United States
Developmental Neuroscience/Neurodevelopmental Disorders; Neuroimaging/Radiological Sciences; Psychiatric Disorders/Childhood mental health; Children, Youth and Families

Larry Steinberg, Temple University Department of Psychology, Philadelphia, Pennsylvania, United States
Adolescence, Risk Taking, Decision Making

Regina Marie Sullivan, Emotional Brain Institute, Orangeburg, New York, United States
Attachment, fear, learning, amygdala, adversity

Susan F. Tapert, University of California at San Diego Department of Psychiatry, La Jolla, California, United States
Neuropsychological assessment, functional neuroimaging, adolescent neurodevelopment, alcohol, cannabis

Kathleen Thomas, University of Minnesota College of Education and Human Development, Minneapolis, Minnesota, United States
Cognitive development, attention, implicit learning, early experience, pediatric neuroimaging, functional magnetic resonance imaging

Ken Towbin, National Institute of Mental Health, Bethesda, Maryland, United States
Depression in teens and pediatric mood disorders

Faraneh Vargha-Khadem, University College London Great Ormond Street Institute of Child Health Library, London, United Kingdom
developmental amnesia, memory, language, cognition, FOXP2

Essi Viding, University College London Division of Psychology and Language Sciences, London, United Kingdom
Antisocial behaviour, Psychopathy, Emotion, Amygdala, Prosocial

Laurie Wakschlag, University of Illinois at Chicago, Institute for Innovations in Developmental Sciences, Chicago, Illinois, United States
Child and Adolescent Psychiatry; Developmental Alterations; Developmental Methods; Developmental Origins of Disease; Developmental Psychopathology; Disruptive/Antisocial Behavior; Gene-Environment Interactions; Prenatal Environment and Developmental Outcomes

Kate Watkins, University of Oxford Department of Experimental Psychology, Oxford, United Kingdom
speech, language, stuttering, stammering, developmental language disorder

Philip Zelazo, University of Minnesota College of Education and Human Development, Minneapolis, Minnesota, United States
Developmental cognitive neuroscience; executive function; consciousness; rule use; self and social understanding; EEG/ERP; neuroimaging; affective decision making; problem solving; cultural differences in cognitive development; thought and language
GUIDE FOR AUTHORS

Your Paper Your Way
We now differentiate between the requirements for new and revised submissions. You may choose to submit your manuscript as a single Word or PDF file to be used in the refereeing process. Only when your paper is at the revision stage, will you be requested to put your paper in to a 'correct format' for acceptance and provide the items required for the publication of your article. To find out more, please visit the Preparation section below.

INTRODUCTION
The journal will publish theoretical and research papers on cognitive brain development, from infancy through childhood and adolescence to old age. It will cover neurocognitive development and neurocognitive processing in both typical and atypical development, including social and affective aspects. Appropriate methodologies for the journal will include, but are not limited to, functional neuroimaging (fMRI and MEG), electrophysiology (EEG and ERP), NIRS and transcranial magnetic stimulation, as well as other neuroscience approaches which are applied in animal studies, patient studies, case studies, post-mortem studies and pharmacological studies.

Types of paper
(a) Research Reports (up to 6 printed journal pages or about 6,000 words), and (b) Reviews (up to 10 printed journal pages or 10,000 words).

Research papers: must report new empirical data.

Reviews: should provide critical accounts and comprehensive surveys of topics of major current interest within the scope of the journal, and are limited to 10,000 words.

Next-Gen Tools: should thoroughly describe either new methodological approaches, analytical techniques, best practices, or understandings that are directly relevant to empirical work in the scope of the journal.

Registered Reports (RRs), which are designed to minimize publication and research bias in hypothesis-driven research, describe hypotheses, methods, and proposed analyses of a pre-registered report prior to research and/or analyses being conducted. First, the proposal is reviewed and if accepted are provisionally accepted for publication. Three types of RRs will be considered: primary RRs for which data collection has not yet commenced, Secondary RRs which propose to analyze already available data, and registered replication reports (RRRs). RRs of secondary data analysis are expected to be particularly prevalent in DCN given the field's emphasis on large, longitudinal datasets, and are encouraged as a method to increase transparency in research. Exploratory (unregistered) analyses, when identified as such, can be added. A detailed authors guide to Registered Reports is available here.

Note that the Editors also invite Reviews or Next-Gen Tools on specific topics which they feel will be of interest to the readers of the journal. Please contact the editors if you would like to suggest a topic for an invited Review or Next-Gen Tool. All manuscripts, whether invited or not, go through the same peer review process.

Contact details for submission
Authors should submit manuscripts online to https://www.editorialmanager.com/dcn. When submitting online, authors are requested to select the article type (Research paper, Review) and preferred Editor to handle the paper.

Submission checklist
You can use this list to carry out a final check of your submission before you send it to the journal for review. Please check the relevant section in this Guide for Authors for more details.

Ensure that the following items are present:

One author has been designated as the corresponding author with contact details:
• E-mail address
• Full postal address
All necessary files have been uploaded:

**Manuscript:**
- Include keywords
- All figures (include relevant captions)
- All tables (including titles, description, footnotes)
- Ensure all figure and table citations in the text match the files provided
- Indicate clearly if color should be used for any figures in print

**Graphical Abstracts / Highlights files (where applicable)**

**Supplemental files (where applicable)**

Further considerations
- Manuscript has been 'spell checked' and 'grammar checked'
- All references mentioned in the Reference List are cited in the text, and vice versa
- Permission has been obtained for use of copyrighted material from other sources (including the Internet)
- A competing interests statement is provided, even if the authors have no competing interests to declare
- Journal policies detailed in this guide have been reviewed
- Referee suggestions and contact details provided, based on journal requirements

For further information, visit our Support Center.

**BEFORE YOU BEGIN**

**Ethics in publishing**

The work described in your article must have been carried out in accordance with *The Code of Ethics of the World Medical Association (Declaration of Helsinki)* for experiments involving humans [http://www.wma.net/en/30publications/10policies/b3/index.html]; *EU Directive 2010/63/EU for animal experiments* [http://ec.europa.eu/environment/chemicals/lab_animals/legislation_en.htm]; *Uniform Requirements for manuscripts submitted to Biomedical journals* [http://www.icmje.org]. For further information on Ethics in publishing and Ethical guidelines for journal publication see [https://www.elsevier.com/publishingethics](https://www.elsevier.com/publishingethics) and [https://www.elsevier.com/ethicalguidelines](https://www.elsevier.com/ethicalguidelines).

**Studies in humans and animals**

If the work involves the use of human subjects, the author should ensure that the work described has been carried out in accordance with *The Code of Ethics of the World Medical Association (Declaration of Helsinki)* for experiments involving humans. The manuscript should be in line with the *Recommendations for the Conduct, Reporting, Editing and Publication of Scholarly Work in Medical Journals* and aim for the inclusion of representative human populations (sex, age and ethnicity) as per those recommendations. The terms *sex* and *gender* should be used correctly.

Authors should include a statement in the manuscript that informed consent was obtained for experimentation with human subjects. The privacy rights of human subjects must always be observed.

All animal experiments should comply with the *ARRIVE guidelines* and should be carried out in accordance with the U.K. Animals (Scientific Procedures) Act, 1986 and associated guidelines, *EU Directive 2010/63/EU for animal experiments*, or the National Institutes of Health guide for the care and use of Laboratory animals (NIH Publications No. 8023, revised 1978) and the authors should clearly indicate in the manuscript that such guidelines have been followed. The sex of animals must be indicated, and where appropriate, the influence (or association) of sex on the results of the study.

**Declaration of interest**

All authors must disclose any financial and personal relationships with other people or organizations that could inappropriately influence (bias) their work. Examples of potential conflicts of interest include employment, consultancies, stock ownership, honoraria, paid expert testimony, patent applications/registrations, and when applicable grants or other funding. Authors should complete the declaration of interest statement using this template and upload to the submission system at the Attach/Upload Files step. If there are no interests to declare, please choose: 'Declarations of interest: none' in the template. This statement will be published within the article if accepted. More information

AUTHOR INFORMATION PACK 9 Mar 2021 www.elsevier.com/locate/dcn
Submission declaration and verification
Submission of an article implies that the work described has not been published previously (except in the form of an abstract, a published lecture or academic thesis, see 'Multiple, redundant or concurrent publication' for more information), that it is not under consideration for publication elsewhere, that its publication is approved by all authors and tacitly or explicitly by the responsible authorities where the work was carried out, and that, if accepted, it will not be published elsewhere in the same form, in English or in any other language, including electronically without the written consent of the copyright-holder. To verify originality, your article may be checked by the originality detection service Crossref Similarity Check.

Preprints
Please note that preprints can be shared anywhere at any time, in line with Elsevier's sharing policy. Sharing your preprints e.g. on a preprint server will not count as prior publication (see 'Multiple, redundant or concurrent publication' for more information).

Use of inclusive language
Inclusive language acknowledges diversity, conveys respect to all people, is sensitive to differences, and promotes equal opportunities. Content should make no assumptions about the beliefs or commitments of any reader; contain nothing which might imply that one individual is superior to another on the grounds of age, gender, race, ethnicity, culture, sexual orientation, disability or health condition; and use inclusive language throughout. Authors should ensure that writing is free from bias, stereotypes, slang, reference to dominant culture and/or cultural assumptions. We advise to seek gender neutrality by using plural nouns ("clinicians, patients/clients") as default/wherever possible to avoid using "he, she," or "he/she." We recommend avoiding the use of descriptors that refer to personal attributes such as age, gender, race, ethnicity, culture, sexual orientation, disability or health condition unless they are relevant and valid. These guidelines are meant as a point of reference to help identify appropriate language but are by no means exhaustive or definitive.

Author contributions
For transparency, we encourage authors to submit an author statement file outlining their individual contributions to the paper using the relevant CRediT roles: Conceptualization; Data curation; Formal analysis; Funding acquisition; Investigation; Methodology; Project administration; Resources; Software; Supervision; Validation; Visualization; Roles/Writing - original draft; Writing - review & editing. Authorship statements should be formatted with the names of authors first and CRediT role(s) following. More details and an example

Changes to authorship
Authors are expected to consider carefully the list and order of authors before submitting their manuscript and provide the definitive list of authors at the time of the original submission. Any addition, deletion or rearrangement of author names in the authorship list should be made only before the manuscript has been accepted and only if approved by the journal Editor. To request such a change, the Editor must receive the following from the corresponding author: (a) the reason for the change in author list and (b) written confirmation (e-mail, letter) from all authors that they agree with the addition, removal or rearrangement. In the case of addition or removal of authors, this includes confirmation from the author being added or removed.

Only in exceptional circumstances will the Editor consider the addition, deletion or rearrangement of authors after the manuscript has been accepted. While the Editor considers the request, publication of the manuscript will be suspended. If the manuscript has already been published in an online issue, any requests approved by the Editor will result in a corrigendum.

Article transfer service
This journal is part of our Article Transfer Service. This means that if the Editor feels your article is more suitable in one of our other participating journals, then you may be asked to consider transferring the article to one of those. If you agree, your article will be transferred automatically on your behalf with no need to reformat. Please note that your article will be reviewed again by the new journal. More information.

Copyright
Upon acceptance of an article, authors will be asked to complete a 'License Agreement' (see more information on this). Permitted third party reuse of open access articles is determined by the author’s choice of user license.

Author rights
As an author you (or your employer or institution) have certain rights to reuse your work. More information.

*Elsevier supports responsible sharing*
Find out how you can share your research published in Elsevier journals.

**Role of the funding source**
You are requested to identify who provided financial support for the conduct of the research and/or preparation of the article and to briefly describe the role of the sponsor(s), if any, in study design; in the collection, analysis and interpretation of data; in the writing of the report; and in the decision to submit the article for publication. If the funding source(s) had no such involvement then this should be stated.

**Open access**
Please visit our Open Access page for more information.

*Elsevier Researcher Academy*
Researcher Academy is a free e-learning platform designed to support early and mid-career researchers throughout their research journey. The "Learn" environment at Researcher Academy offers several interactive modules, webinars, downloadable guides and resources to guide you through the process of writing for research and going through peer review. Feel free to use these free resources to improve your submission and navigate the publication process with ease.

**Language (usage and editing services)**
Please write your text in good English (American or British usage is accepted, but not a mixture of these). Authors who feel their English language manuscript may require editing to eliminate possible grammatical or spelling errors and to conform to correct scientific English may wish to use the English Language Editing service available from Elsevier's Author Services.

**Submission**
Our online submission system guides you stepwise through the process of entering your article details and uploading your files. The system converts your article files to a single PDF file used in the peer-review process. Editable files (e.g., Word, LaTeX) are required to typeset your article for final publication. All correspondence, including notification of the Editor's decision and requests for revision, is sent by e-mail.

**Referees**
Please submit, with the manuscript, the names, addresses and e-mail addresses of at least 3 potential referees (up to a maximum of 6). Authors can indicate non-preferred referees. Note that the editor retains the sole right to decide which reviewers are used.

**PREPARATION**

**NEW SUBMISSIONS**
Submission to this journal proceeds totally online and you will be guided stepwise through the creation and uploading of your files. The system automatically converts your files to a single PDF file, which is used in the peer-review process.

As part of the Your Paper Your Way service, you may choose to submit your manuscript as a single file to be used in the refereeing process. This can be a PDF file or a Word document, in any format or layout that can be used by referees to evaluate your manuscript. It should contain high enough quality figures for refereeing. If you prefer to do so, you may still provide all or some of the source files at the initial submission. Please note that individual figure files larger than 10 MB must be uploaded separately.

**References**
There are no strict requirements on reference formatting at submission. References can be in any style or format as long as the style is consistent. Where applicable, author(s) name(s), journal title/book title, chapter title/article title, year of publication, volume number/book chapter and the article number or pagination must be present. Use of DOI is highly encouraged. The reference style used by the journal will be applied to the accepted article by Elsevier at the proof stage. Note that missing data will be highlighted at proof stage for the author to correct.
**Formatting requirements**

There are no strict formatting requirements but all manuscripts must contain the essential elements needed to convey your manuscript, for example Abstract, Keywords, Introduction, Materials and Methods, Results, Conclusions, Artwork and Tables with Captions.

If your article includes any Videos and/or other Supplementary material, this should be included in your initial submission for peer review purposes.

Divide the article into clearly defined sections.

**Figures and tables embedded in text**

Please ensure the figures and the tables included in the single file are placed next to the relevant text in the manuscript, rather than at the bottom or the top of the file. The corresponding caption should be placed directly below the figure or table.

**Peer review**

This journal operates a single anonymized review process. All contributions are typically sent to a minimum of two independent expert reviewers to assess the scientific quality of the paper. The Editor is responsible for the final decision regarding acceptance or rejection of articles. The Editor’s decision is final. Editors are not involved in decisions about papers which they have written themselves or have been written by family members or colleagues or which relate to products or services in which the editor has an interest. Any such submission is subject to all of the journal’s usual procedures, with peer review handled independently of the relevant editor and their research groups. More information on types of peer review.

**REVISED SUBMISSIONS**

**Use of word processing software**

Regardless of the file format of the original submission, at revision you must provide us with an editable file of the entire article. Keep the layout of the text as simple as possible. Most formatting codes will be removed and replaced on processing the article. The electronic text should be prepared in a way very similar to that of conventional manuscripts (see also the Guide to Publishing with Elsevier). See also the section on Electronic artwork.

To avoid unnecessary errors you are strongly advised to use the 'spell-check' and 'grammar-check' functions of your word processor.

**Article structure**

**Subdivision - numbered sections**

Divide your article into clearly defined and numbered sections. Subsections should be numbered 1.1 (then 1.1.1, 1.1.2, ...), 1.2, etc. (the abstract is not included in section numbering). Use this numbering also for internal cross-referencing: do not just refer to 'the text'. Any subsection may be given a brief heading. Each heading should appear on its own separate line.

**Introduction**

The introduction should be a maximum of 1000 words. State the objectives of the work and provide an adequate background, avoiding a detailed literature survey or a summary of the results.

**Material and methods**

Provide sufficient details to allow the work to be reproduced by an independent researcher. Methods that are already published should be summarized, and indicated by a reference. If quoting directly from a previously published method, use quotation marks and also cite the source. Any modifications to existing methods should also be described.

**Results**

Results should be clear and concise. Graphical illustrations / representations of data are encouraged.

**Discussion**

This should explore the significance of the results of the work, not repeat them. A combined Results and Discussion section is often appropriate. Avoid extensive citations and discussion of published literature. This section should be 2000 words maximum.

**Conclusions**

The main conclusions of the study may be presented in a short Conclusions section, which may stand alone or form a subsection of a Discussion or Results and Discussion section.
Appendices
If there is more than one appendix, they should be identified as A, B, etc. Formulae and equations in appendices should be given separate numbering: Eq. (A.1), Eq. (A.2), etc.; in a subsequent appendix, Eq. (B.1) and so on. Similarly for tables and figures: Table A.1; Fig. A.1, etc.

Essential title page information
• Title. Concise and informative. Titles are often used in information-retrieval systems. Avoid abbreviations and formulae where possible.
• Author names and affiliations. Please clearly indicate the given name(s) and family name(s) of each author and check that all names are accurately spelled. You can add your name between parentheses in your own script behind the English transliteration. Present the authors' affiliation addresses (where the actual work was done) below the names. Indicate all affiliations with a lower-case superscript letter immediately after the author's name and in front of the appropriate address. Provide the full postal address of each affiliation, including the country name and, if available, the e-mail address of each author.
• Corresponding author. Clearly indicate who will handle correspondence at all stages of refereeing and publication, also post-publication. This responsibility includes answering any future queries about Methodology and Materials. Ensure that the e-mail address is given and that contact details are kept up to date by the corresponding author.
• Present/permanent address. If an author has moved since the work described in the article was done, or was visiting at the time, a 'Present address' (or 'Permanent address') may be indicated as a footnote to that author's name. The address at which the author actually did the work must be retained as the main, affiliation address. Superscript Arabic numerals are used for such footnotes.

Highlights
Highlights are mandatory for this journal as they help increase the discoverability of your article via search engines. They consist of a short collection of bullet points that capture the novel results of your research as well as new methods that were used during the study (if any). Please have a look at the examples here: example Highlights.

Highlights should be submitted in a separate editable file in the online submission system. Please use 'Highlights' in the file name and include 3 to 5 bullet points (maximum 85 characters, including spaces, per bullet point).

Abstract
A concise and factual abstract is required (maximum 200 words). The abstract should state briefly the purpose of the research, the principal results and major conclusions. An abstract is often presented separately from the article, so it must be able to stand alone. For this reason, References should be avoided, but if essential, then cite the author(s) and year(s). Also, non-standard or uncommon abbreviations should be avoided, but if essential they must be defined at their first mention in the abstract itself.

Graphical abstract
Submission of a Graphical abstract is encouraged for this journal. It should summarize the contents of the paper in a concise, pictorial form designed to capture the attention of a wide readership online. Authors must provide images that clearly represent the work described in the paper. Graphical abstracts should be submitted as a separate file in the online submission system. Maximum image size: 400 × 600 pixels (h × w, recommended size 200 × 500 pixels). Preferred file types: TIFF, EPS, PDF or MS Office files. See https://www.elsevier.com/graphicalabstracts for examples.

Keywords
Immediately after the abstract, provide a maximum of 6 keywords, using American spelling and avoiding general and plural terms and multiple concepts (avoid, for example, 'and', 'of'). Be sparing with abbreviations: only abbreviations firmly established in the field may be eligible. These keywords will be used for indexing purposes.

Abbreviations
Define abbreviations that are not standard in this field in a footnote to be placed on the first page of the article. Such abbreviations that are unavoidable in the abstract must be defined at their first mention there, as well as in the footnote. Ensure consistency of abbreviations throughout the article.
Acknowledgements
Collate acknowledgements in a separate section at the end of the article before the references and do not, therefore, include them on the title page, as a footnote to the title or otherwise. List here those individuals who provided help during the research (e.g., providing language help, writing assistance or proof reading the article, etc.).

Formatting of funding sources
List funding sources in this standard way to facilitate compliance to funder's requirements:

Funding: This work was supported by the National Institutes of Health [grant numbers xxxx, yyyy]; the Bill & Melinda Gates Foundation, Seattle, WA [grant number zzzz]; and the United States Institutes of Peace [grant number aaaa].

It is not necessary to include detailed descriptions on the program or type of grants and awards. When funding is from a block grant or other resources available to a university, college, or other research institution, submit the name of the institute or organization that provided the funding.

If no funding has been provided for the research, please include the following sentence:

This research did not receive any specific grant from funding agencies in the public, commercial, or not-for-profit sectors.

Units
Follow internationally accepted rules and conventions: use the international system of units (SI). If other units are mentioned, please give their equivalent in SI.

Math formulae
Please submit math equations as editable text and not as images. Present simple formulae in line with normal text where possible and use the solidus (/) instead of a horizontal line for small fractional terms, e.g., X/Y. In principle, variables are to be presented in italics. Powers of e are often more conveniently denoted by exp. Number consecutively any equations that have to be displayed separately from the text (if referred to explicitly in the text).

Footnotes
Footnotes should be used sparingly. Number them consecutively throughout the article. Many word processors build footnotes into the text, and this feature may be used. Should this not be the case, indicate the position of footnotes in the text and present the footnotes themselves separately at the end of the article.

Artwork
Electronic artwork
General points
- Make sure you use uniform lettering and sizing of your original artwork.
- Preferred fonts: Arial (or Helvetica), Times New Roman (or Times), Symbol, Courier.
- Number the illustrations according to their sequence in the text.
- Use a logical naming convention for your artwork files.
- Indicate per figure if it is a single, 1.5 or 2-column fitting image.
- For Word submissions only, you may still provide figures and their captions, and tables within a single file at the revision stage.
- Please note that individual figure files larger than 10 MB must be provided in separate source files.

A detailed guide on electronic artwork is available.

You are urged to visit this site; some excerpts from the detailed information are given here.

Formats
Regardless of the application used, when your electronic artwork is finalized, please 'save as' or convert the images to one of the following formats (note the resolution requirements for line drawings, halftones, and line/halftone combinations given below):
- EPS (or PDF): Vector drawings. Embed the font or save the text as 'graphics'.
- TIFF (or JPG): Color or grayscale photographs (halftones): always use a minimum of 300 dpi.
- TIFF (or JPG): Bittedmapped line drawings: use a minimum of 1000 dpi.
- TIFF (or JPG): Combinations bitmapped line/half-tone (color or grayscale): a minimum of 500 dpi is required.

Please do not:
• Supply files that are optimized for screen use (e.g., GIF, BMP, PICT, WPG); the resolution is too low.
• Supply files that are too low in resolution.
• Submit graphics that are disproportionately large for the content.

**Color artwork**
Please make sure that artwork files are in an acceptable format (TIFF (or JPEG), EPS (or PDF) or MS Office files) and with the correct resolution. For further information on the preparation of electronic artwork, please see [https://www.elsevier.com/artworkinstructions](https://www.elsevier.com/artworkinstructions).

**Figure captions**
Ensure that each illustration has a caption. A caption should comprise a brief title (not on the figure itself) and a description of the illustration. Keep text in the illustrations themselves to a minimum but explain all symbols and abbreviations used.

**Tables**
Please submit tables as editable text and not as images. Tables can be placed either next to the relevant text in the article, or on separate page(s) at the end. Number tables consecutively in accordance with their appearance in the text and place any table notes below the table body. Be sparing in the use of tables and ensure that the data presented in them do not duplicate results described elsewhere in the article. Please avoid using vertical rules and shading in table cells.

**References**

*Citation in text*
Please ensure that every reference cited in the text is also present in the reference list (and vice versa). Any references cited in the abstract must be given in full. Unpublished results and personal communications are not recommended in the reference list, but may be mentioned in the text. If these references are included in the reference list they should follow the standard reference style of the journal and should include a substitution of the publication date with either 'Unpublished results' or 'Personal communication'. Citation of a reference as 'in press' implies that the item has been accepted for publication.

*Reference links*
Increased discoverability of research and high quality peer review are ensured by online links to the sources cited. In order to allow us to create links to abstracting and indexing services, such as Scopus, CrossRef and PubMed, please ensure that data provided in the references are correct. Please note that incorrect surnames, journal/book titles, publication year and pagination may prevent link creation. When copying references, please be careful as they may already contain errors. Use of the DOI is highly encouraged.

A DOI is guaranteed never to change, so you can use it as a permanent link to any electronic article. An example of a citation using DOI for an article not yet in an issue is: VanDecar J.C., Russo R.M., James D.E., Ambeh W.B., Franke M. (2003). Aseismic continuation of the Lesser Antilles slab beneath northeastern Venezuela. Journal of Geophysical Research, [https://doi.org/10.1029/2001JB000884](https://doi.org/10.1029/2001JB000884). Please note the format of such citations should be in the same style as all other references in the paper.

*Web references*
As a minimum, the full URL should be given and the date when the reference was last accessed. Any further information, if known (DOI, author names, dates, reference to a source publication, etc.), should also be given. Web references can be listed separately (e.g., after the reference list) under a different heading if desired, or can be included in the reference list.

*Data references*
This journal encourages you to cite underlying or relevant datasets in your manuscript by citing them in your text and including a data reference in your Reference List. Data references should include the following elements: author name(s), dataset title, data repository, version (where available), year, and global persistent identifier. Add [dataset] immediately before the reference so we can properly identify it as a data reference. The [dataset] identifier will not appear in your published article.

*References in a special issue*
Please ensure that the words 'this issue' are added to any references in the list (and any citations in the text) to other articles in the same Special Issue.
Reference management software
Most Elsevier journals have their reference template available in many of the most popular reference management software products. These include all products that support Citation Style Language styles, such as Mendeley. Using citation plug-ins from these products, authors only need to select the appropriate journal template when preparing their article, after which citations and bibliographies will be automatically formatted in the journal's style. If no template is yet available for this journal, please follow the format of the sample references and citations as shown in this Guide. If you use reference management software, please ensure that you remove all field codes before submitting the electronic manuscript. More information on how to remove field codes from different reference management software.

Users of Mendeley Desktop can easily install the reference style for this journal by clicking the following link:
http://open.mendeley.com/use-citation-style/developmental-cognitive-neuroscience
When preparing your manuscript, you will then be able to select this style using the Mendeley plug-ins for Microsoft Word or LibreOffice.

Reference formatting
There are no strict requirements on reference formatting at submission. References can be in any style or format as long as the style is consistent. Where applicable, author(s) name(s), journal title/book title, chapter title/article title, year of publication, volume number/book chapter and the article number or pagination must be present. Use of DOI is highly encouraged. The reference style used by the journal will be applied to the accepted article by Elsevier at the proof stage. Note that missing data will be highlighted at proof stage for the author to correct. If you do wish to format the references yourself they should be arranged according to the following examples:

Reference style
Text: All citations in the text should refer to:
1. Single author: the author's name (without initials, unless there is ambiguity) and the year of publication;
2. Two authors: both authors' names and the year of publication;
3. Three or more authors: first author's name followed by 'et al.' and the year of publication.
Citations may be made directly (or parenthetically). Groups of references can be listed either first alphabetically, then chronologically, or vice versa.
Examples: 'as demonstrated (Allan, 2000a, 2000b, 1999; Allan and Jones, 1999).... Or, as demonstrated (Jones, 1999; Allan, 2000)... Kramer et al. (2010) have recently shown ...

List: References should be arranged first alphabetically and then further sorted chronologically if necessary. More than one reference from the same author(s) in the same year must be identified by the letters 'a', 'b', 'c', etc., placed after the year of publication.
Examples:
Reference to a journal publication:
Reference to a journal publication with an article number:
Reference to a book:
Reference to a chapter in an edited book:
Reference to a website:
Reference to a dataset:

Journal abbreviations source
Journal names should be abbreviated according to the List of Title Word Abbreviations.
**Video data**
The journal encourages video material and animation sequences to support and enhance your scientific research. Authors who have video or animation files that they wish to submit with their article are strongly encouraged to include these within the body of the article. This can be done in the same way as a figure or table by referring to the video or animation content and noting in the body text where it should be placed. All submitted files should be properly labeled so that they directly relate to the video file's content. In order to ensure that your video or animation material is directly usable, please provide the files in one of our recommended file formats with a maximum size of 30 MB and running time of 5 minutes. Video and animation files supplied will be published online in the electronic version of your article in Elsevier Web products, including ScienceDirect: http://www.sciencedirect.com. Please supply 'stills' with your files: you can choose any frame from the video or animation or make a separate image. These will be used instead of standard icons and will personalize the link to your video data. For more detailed instructions please visit our video instruction pages at https://www.elsevier.com/artworkinstructions. Note: since video and animation cannot be embedded in the print version of the journal, please provide text for both the electronic and the print version for the portions of the article that refer to this content.

**Data visualization**
Include interactive data visualizations in your publication and let your readers interact and engage more closely with your research. Follow the instructions here to find out about available data visualization options and how to include them with your article.

**Supplementary material**
Supplementary material such as applications, images and sound clips, can be published with your article to enhance it. Submitted supplementary items are published exactly as they are received (Excel or PowerPoint files will appear as such online). Please submit your material together with the article and supply a concise, descriptive caption for each supplementary file. If you wish to make changes to supplementary material during any stage of the process, please make sure to provide an updated file. Do not annotate any corrections on a previous version. Please switch off the 'Track Changes' option in Microsoft Office files as these will appear in the published version.

**Research data**
This journal encourages and enables you to share data that supports your research publication where appropriate, and enables you to interlink the data with your published articles. Research data refers to the results of observations or experimentation that validate research findings. To facilitate reproducibility and data reuse, this journal also encourages you to share your software, code, models, algorithms, protocols, methods and other useful materials related to the project.

Below are a number of ways in which you can associate data with your article or make a statement about the availability of your data when submitting your manuscript. If you are sharing data in one of these ways, you are encouraged to cite the data in your manuscript and reference list. Please refer to the "References" section for more information about data citation. For more information on depositing, sharing and using research data and other relevant research materials, visit the research data page.

**Data linking**
If you have made your research data available in a data repository, you can link your article directly to the dataset. Elsevier collaborates with a number of repositories to link articles on ScienceDirect with relevant repositories, giving readers access to underlying data that gives them a better understanding of the research described.

There are different ways to link your datasets to your article. When available, you can directly link your dataset to your article by providing the relevant information in the submission system. For more information, visit the database linking page.

For supported data repositories a repository banner will automatically appear next to your published article on ScienceDirect.

In addition, you can link to relevant data or entities through identifiers within the text of your manuscript, using the following format: Database: xxxx (e.g., TAIR: AT1G01020; CCDC: 734053; PDB: 1XFN).
Mendeley Data
This journal supports Mendeley Data, enabling you to deposit any research data (including raw and processed data, video, code, software, algorithms, protocols, and methods) associated with your manuscript in a free-to-use, open access repository. During the submission process, after uploading your manuscript, you will have the opportunity to upload your relevant datasets directly to Mendeley Data. The datasets will be listed and directly accessible to readers next to your published article online.

For more information, visit the Mendeley Data for journals page.

Data in Brief
You have the option of converting any or all parts of your supplementary or additional raw data into a data article published in Data in Brief. A data article is a new kind of article that ensures that your data are actively reviewed, curated, formatted, indexed, given a DOI and made publicly available to all upon publication (watch this video describing the benefits of publishing your data in Data in Brief). You are encouraged to submit your data article for Data in Brief as an additional item directly alongside the revised version of your manuscript. If your research article is accepted, your data article will automatically be transferred over to Data in Brief where it will be editorially reviewed, published open access and linked to your research article on ScienceDirect. Please note an open access fee is payable for publication in Data in Brief. Full details can be found on the Data in Brief website. Please use this template to write your Data in Brief data article.

Data statement
To foster transparency, we encourage you to state the availability of your data in your submission. This may be a requirement of your funding body or institution. If your data is unavailable to access or unsuitable to post, you will have the opportunity to indicate why during the submission process, for example by stating that the research data is confidential. The statement will appear with your published article on ScienceDirect. For more information, visit the Data Statement page.

AFTER ACCEPTANCE
Online proof correction
To ensure a fast publication process of the article, we kindly ask authors to provide us with their proof corrections within two days. Corresponding authors will receive an e-mail with a link to our online proofing system, allowing annotation and correction of proofs online. The environment is similar to MS Word: in addition to editing text, you can also comment on figures/tables and answer questions from the Copy Editor. Web-based proofing provides a faster and less error-prone process by allowing you to directly type your corrections, eliminating the potential introduction of errors. If preferred, you can still choose to annotate and upload your edits on the PDF version. All instructions for proofing will be given in the e-mail we send to authors, including alternative methods to the online version and PDF.

We will do everything possible to get your article published quickly and accurately. Please use this proof only for checking the typesetting, editing, completeness and correctness of the text, tables and figures. Significant changes to the article as accepted for publication will only be considered at this stage with permission from the Editor. It is important to ensure that all corrections are sent back to us in one communication. Please check carefully before replying, as inclusion of any subsequent corrections cannot be guaranteed. Proofreading is solely your responsibility.

Offprints
The corresponding author will be notified and receive a link to the published version of the open access article on ScienceDirect. This link is in the form of an article DOI link which can be shared via email and social networks. For an extra charge, paper offprints can be ordered via the offprint order form which is sent once the article is accepted for publication. Both corresponding and co-authors may order offprints at any time via Elsevier's Author Services.

AUTHOR INQUIRIES
Visit the Elsevier Support Center to find the answers you need. Here you will find everything from Frequently Asked Questions to ways to get in touch. You can also check the status of your submitted article or find out when your accepted article will be published.

© Copyright 2018 Elsevier | https://www.elsevier.com