Editorial

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Urban data/code: A new EP-B section

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In this editorial, we are introducing a new section in *Environment & Planning B* (EP-B) that we call "Urban Data/Code". In some ways, papers in "Urban Data/Code" will be similar to every other one at EP-B: high-quality pieces of scholarship concerned with Urban Analytics and City Science that will undergo standard peer-review before being accepted, and which will be published as part of each issue of the journal. In other ways, they will differ quite a bit: unlike traditional manuscripts, those in "Urban Data/Code" will exclusively contain *descriptions of novel software* or *data products* that will help us better understand cities and the people who inhabit them. In this editorial, we will provide some background to this new addition to the EP-B family as well as sketching out in more detail what we are looking for in candidate submissions.

Academic journals play a key role in legitimising and providing credit for scholarly work. In fact, it could be argued that they are the main mechanism by which the academic community can assess and evaluate the quality of work within a field. Journals are gatekeepers that decide what is relevant for a field, what constitutes the state of the art, and what direction of travel the "cutting edge" should follow. Hence, academic publications are also the main currency for academic careers. "*Tell me where you publish and I will tell you what kind of academic you are*". Articles published in certain journals make it to tenure and promotion cases, while the lack of them usually makes for a hard time for the unlucky candidate. In order to build a healthy and relevant community, it is thus important

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that journals can indeed fulfill their role as a comprehensive showcase of what a field has to offer to the world.

For a very long time, the bread and butter of academic journals has been the traditional research article. In these contributions, researchers present new ways of framing (*theory*), new ways of finding (*methods*), or new insights resulting from the application of both (*empirics*). Good, insightful academic articles are useful and important because they provide intellectual (theoretical, methodological, or empirical) tools to better understand the object of research. Other researchers can take them, build on them, and then create new knowledge. This process benefits entire fields of expertise. However, although the traditional research article is an excellent vehicle for intellectual communication, it is not the only one. Not anymore.

As the pages of this journal routinely document (and benefit from), the world we currently inhabit is increasingly mediated by computer code and data. This permeates all corners of society, including cities, and the research that tries to understand them. As computers have found their way into the very fabric that makes up cities, the use of data and code in research has become ever more pervasive. Additionally, current scholarship is rapidly moving to embrace the possibilities of the digital and computational era in which it takes place. It is not always the case that the traditional article is the only way to disseminate outputs. Alternative dissemination formats provide new opportunities to make research available to a wider audience and maximise its impact. If we want Urban Analytics to be as useful to the world as possible, we need to recognise this reality and act accordingly. We must signal that alternative forms of scholarship are not only valuable but also valued.[1]

In parallel to the traditional journal article, new artifacts are emerging as key research outputs. In particular, in Urban Analytics, two are quickly becoming arguably as important as the contributions made in traditional articles: *open data products* (ODPs), and *open source software* (OSS). *Open data products* are datasets, and the services surrounding them (such as web maps, dashboards or APIs), resulting from analysis or modelling that are made openly available to the community. *Open source software* is made up of structured collections of computer code released under open licenses that enable their users to perform operations in a generalisable way that allows for easy repurposing from the original context in which they were developed.

Like traditional articles, both ODPs and OSS have a clear and direct benefit to the Urban Analytics and City Science community. They provide scholarly infrastructure-intellectual building blocks-on top of which others can build and generate new insights. Just as traditional articles, they both require substantial skill, effort and time. *Unlike* articles, however, ODPs and OSS do not currently have a clear reward mechanism that provides the right incentives to generate *enough* of them. This gap is what we aim to help change with the new "Urban Data/Code" section.

"Urban Data/Code" welcomes high-quality submissions that provide concise descriptions of ODPs or OSS packages. These should focus on *what* they are, *how* they were created/can be used, and *why* they make a contribution to the Urban Analytics and City Science community. It is important to note "Urban Data/Code" publications will *not* include the artifacts themselves (the ODPs/OSS), but a description of them. Instead, it is a requirement for submission that the artifact be published with a digital object identifier (DOI) in a publicly accessible repository that ensures its continuing accessibility over time. The landscape of services available for this purpose is continuously evolving and we want to foster further innovation, so we do not require a specific one. However, several are currently available, both for ODPs (e.g. Figshare, Dataverse, UK Data Service) and OSS (e.g. Github, pypi, CRAN, CoMSES). Manuscripts will be shorter than regular submissions, i.e. up to 3000 words, and will follow the standard peer-review process. If accepted, they will be published in EP-B issues and will receive the same treatment as any other publication that the journal deals with. In the spirit of increasing usefulness and widening access, articles in "Urban Data/Code" will be free to read for everyone.

There is an old joke about academia that says that, after the opera, it is the second longest running institution still in operation and sometimes it shows. Accordingly, one might think that what all academics do is read leather-bound books, ponder idly while looking out the window of their spacious offices, and then write another ponderous tome. Reading, thinking and writing are still very much what most of us still aspire to do. However, what these activities look like today is quite different. We read data to learn about the world, use computers to think, and write code to express new ideas. The opera may not have changed much in recent centuries, but the world of music in which it is embedded is as vibrant, diverse and exciting as human beings can be. So is much of the contemporary scholarship on Urban Analytics and City Science. A lot is bubbling up under a seemingly stable editorial world. It is about time we bring it to the surface.

Note

1. We would point out that this is not an isolated effort. Supra-national institutions such as the European Commision, through its Open Science Working Group on Rewards/Recognition, are beginning to adopt similar points of view, recommending that researchers practising Open Science should be rewarded for their efforts (European Commission, Directorate General for Research and Innovation, 2017).

References

European Commission, Directorate General for Research and Innovation (2017) *Evaluation of Research Careers Fully Acknowledging Open Science Practices. Rewards, Incentives and/or Recognition for Researchers Practicing Open Science*. Luxembourg: Publications Office.