Northumbria Research Link

Editorial **Featured Graphics: migrating from EP-A to EP-B**

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It has been said many times before, a picture is worth a thousand words, recently by our own co-editors in this very journal (Crooks and See, 2022). This truism applies not only to the pictures we take, but also to the images we create, whether graphs, plots or maps. Such artefacts have been an essential means of communication for designers and planners alike for many decades and we have published numerous articles "with visuals" in this journal right from the very first issues. Notable examples from the earlier *Planning and Design* days, are Holtier et al.'s (2000) complex representations of urban built form, Park's (2000) "subsymmetry" analysis of architectural designs and Asami & Ohtaki's (2000) model for predicting the shape of detached houses from the shape of residential lots, all at the turn of the millennium. Despite attempts to introduce innovative visualisations, such as Steadman et al.'s (2000) complex mosaic graph (although not acknowledged as such) summarising floor area by built form types and Hyman & Mayhew's (2000) diagrams of radial catchment areas in London, early visualisation attempts were often constrained by the capabilities afforded by graphing/coding software of their times.

Roll forward 17 years and alongside the change of the journal name to *Environment and Planning B: Urban Analytics and City Science* (Batty 2017) where its scope has evolved, we have also experienced a dramatic improvement in the way authors have been communicating their analyses and findings visually. The winning article for the Breheny Prize for a previous year, by Salvini & Fabrikant (2016) presented alongside a thorough analysis and interpretation, seven figures ranging from flow charts and scatterplots to complex network graphs communicating clearly the analysis and findings of their research on the global city network. The year before Yamu & Frankhauser (2015) had already raised the bar by securing their Breheny Prize, with nine sophisticated graphs and maps, visualising the analysis and results of "Fractalopolis" their multiscale, multifractal simulation model looking at spatial accessibility to amenities, natural areas and urban green spaces. The Breheny Prize is not about visuals, it is awarded to the most innovative paper in EP-B annually, but one only has to look at the winning entries of the past 17 years (2004-2020), to understand the importance of graphics (whether maps, graphs or other visualisations) in communicating visually the steps and results of complex analytical processes.

Increasingly, EP-B articles exceed the word limit set by the journal and authors resort to providing even more graphics as supplemental material; for example, see the recent article by Gutiérrez-Mora & Oto-Peralías (2022) analysing and visualising urban gender bias by looking at 15 million street names of Spanish cities. There is increasing demand for disseminating our scholarship through non-traditional forms, beyond the words and tables in our articles. Furthermore, some of the most cited EP-B articles are the ones with comprehensive visual content. This brings us to the most recent development of EP-B in relation to graphics. As the *Environment and Planning* family of journals has been extended with the establishment of *EPF: Philosophy, Theory, Models, Methods and Practice* (Castree et al., 2021) and EP-B introduced the new section "Urban data/code" (Arribas-Bel et al., 2021), the editors also felt that the "Featured graphics" series in EP-A would better fit the scope of this journal. The "Featured graphics" series started thirteen years ago in EP-A issue 4 (volume 41) with a graphic of world income distribution produced in Microsoft Excel by Sutcliffe (2009, page 764). By today's standards it was a simple 3D bar-chart, nevertheless it clearly visualised income inequalities within and between 140 countries in a very concise way. Featured graphics have become more complex since then, with many published in the intervening years, as can be seen on the dedicated EP-A

website. Starting with issue 4 (2022), "Featured graphics" have migrated from EP-A to EP-B partly because of an increasingly stronger emphasis on graphics in papers submitted to urban analytics and city science.

In the current EP-B issue, we are publishing three excellent examples from different parts of the world utilising a variety of datasets, at different scales and with unique perspectives of what "graphics" are. Gu & Xu (2022) present a diachronic visualisation of China's internal migration patterns at the country, region and province level simultaneously. They achieve this through an innovative repurposing and expansion of the Voronoi-based Kaleidoscope diagram developed by the German Federal Statistical Office (2022) for monitoring price trends of goods and services. Taylor & Archer (2022) are visualising the representational "clout" of American States at the US Senate through a conventional map, a demographic cartogram and a simple, but effective textual cartogram with the letter size varying in relation to the representational power of each State on the Senate. Xu et al. (2022) utilise a 3D pedestrian network for the whole of Hong Kong to compare the 500-m walking coverage area with the 10-min walking distance area around 90 metro stations; their panel of 15x6 mini-maps (one per metro station) is mesmerising in its visual brevity.

The three short articles published as "Featured graphics" in this issue provide excellent examples of what we are looking for in future submissions. Potential authors should remember that featured graphics are principally about the graphic, very broadly defined. The graphic(s) should be largely self-explanatory, interesting to a wide audience, and ideally novel in design. We understand that it is impossible for all new graphics to be novel and strikingly different from their predecessors, but it is always possible to aim for brevity in the text that describes each graphic. Our own experience suggests that similar graphics by different people are hardly ever the same: individual creativity always finds a way to manifest itself, as the three published examples demonstrate. However, for the section to be successful, it is essential to reference properly and fully the original sources of inspiration (whether publications, websites or code repositories) as the authors in the current issue have done.

"Featured graphics" are usually in colour, but they do not always need to be. For submissions in colour the authors should remember that some readers may be red-green colour blind and even unaware of this; if in doubt, please consult the excellent ColorBrewer (Brewer 2022). Graphic designers should also assume that the reader of the graphic could be from anywhere in the world, may well not know the area being mapped, graphed or otherwise visually depicted and may well not be familiar with the subject matter of the graphic. It would be helpful if authors could try to include a single Figure in their featured graphic, for example by combining graphics in innovative ways, as two of the three contributions published in this issue effectively demonstrate (Gu & Xu, 2022 and Xu et al., 2022). An accompanying text, ideally of no more than four hundred words should be included, although it can be shorter. The text should explain why the graphic was produced, the data sources and software used as well as the necessary references. We receive many graphics submissions every month, so it is only worth submitting work that is striking and especially work that is unusual and novel. Conventional maps and graphics produced by standard software, and posters produced for academic conferences compete poorly with more innovative graphics especially designed for the Featured graphics section.

Back when the concept of Featured graphics was introduced at EP-A, Thrift (2009, page 763) wrote in the short Editor's announcement "Once again, this journal is trying to blaze a trail." It is fair to say that thirteen years later, EP-B is now taking on this mantle with aplomb and renewed enthusiasm. We look forward to receiving your submissions and to publishing even more impressive graphics in the forthcoming EP-B volumes!

References

Arribas-Bel D, Alvanides S, Batty M, Crooks A, See L, Wolf L (2021) Urban data/code: A new EP-B section. *Environment and Planning B: Urban Analytics and City Science*. 48(9):2517-2519.

Asami Y, Ohtaki T (2000) Prediction of the shape of detached houses on residential lots. Environment and Planning B: Planning and Design, 27(2): 283-295.

Batty M (2017) The future journal. *Environment and Planning B: Urban Analytics and City Science* 44(1): 6-9.

Breheny Prize https://journals.sagepub.com/page/epb/collections/the-breheny-prize (accessed 8 April 2022).

Brewer CA (2022) ColorBrewer 2.0: Color advice for cartography. Available at: http://www.ColorBrewer.org (accessed 8 April 2022).

Castree N, Leszczynski A, Stallins JA, Schwanen T, Patel Z. (2021) Reconstituting Geography for the 21st century. *Environment and Planning F* 10.1177/26349825211005376

Featured Graphics https://journals.sagepub.com/page/epn/collections/featured-graphics (accessed 8 April 2022).

German Federal Statistical Office (2022) Price Kaleidoscope. Available at: https://www.destatis.de/EN/Themes/Economy/Prices/Consumer-Price-Index/price-kaleidoscope-overview.html (accessed 8 April 2022).

Gu H, Xu Z (2022) Kaleidoscope visualisation of China's internal migration, 1985–2020. *Environment and Planning B: Urban Analytics and City Science* 10.1177/23998083221082916

Gutiérrez-Mora D, Oto-Peralías D (2022) Gendered cities: Studying urban gender bias through street names. *Environment and Planning B: Urban Analytics and City Science* 10.1177/23998083211068844

Holtier S, Steadman JP, Smith MG (2000) Three-dimensional representation of urban built form in a GIS. Environment and Planning B: Planning and Design, 27(1): 51-72.

Hyman G, Mayhew L (2000) The properties of route catchments in orbital-radial cities. Environment and Planning B: Planning and Design, 27(6): 843-863.

Park J-H (2000) Subsymmetry analysis of architectural designs: some examples. Environment and Planning B: Planning and Design, 27(1): 121-136.

Salvini MM, Fabrikant SI (2016) Spatialization of user-generated content to uncover the multirelational world city network. *Environment and Planning B: Planning and Design*. 43(1):228-248.

Steadman J.P., Bruhns H.R., Gakovic B. (2000) Inferences about built form, construction, and fabric in the nondomestic building stock of England and Wales. Environment and Planning B: Planning and Design, 27(5): 733-758.

Sutcliffe B (2009) The World Distribution of Gross National Income, 2007. *Environment and Planning A: Economy and Space*. 41(4):764 10.1068/a4227

Taylor PJ, Archer JC (2022) Senate Demographic Clout: An 18th century specification of 21th century America politics. *Environment and Planning B: Urban Analytics and City Science* 10.1177/23998083221088862

Thrift N (2009) Editor's Announcement. *Environment and Planning A: Economy and Space*. 41(4):763 10.1068/a4104ann

Xu Y, Chan H-Y, Chen A, Liu X (2022) Walk this way: Visualizing accessibility and mobility in metro station areas on a 3D pedestrian network. *Environment and Planning B: Urban Analytics and City Science* 10.1177/23998083221089321

Yamu C, Frankhauser P. (2015) Spatial accessibility to amenities, natural areas and urban green spaces: using a multiscale, multifractal simulation model for managing urban sprawl. *Environment and Planning B: Planning and Design*. 42(6):1054-1078.