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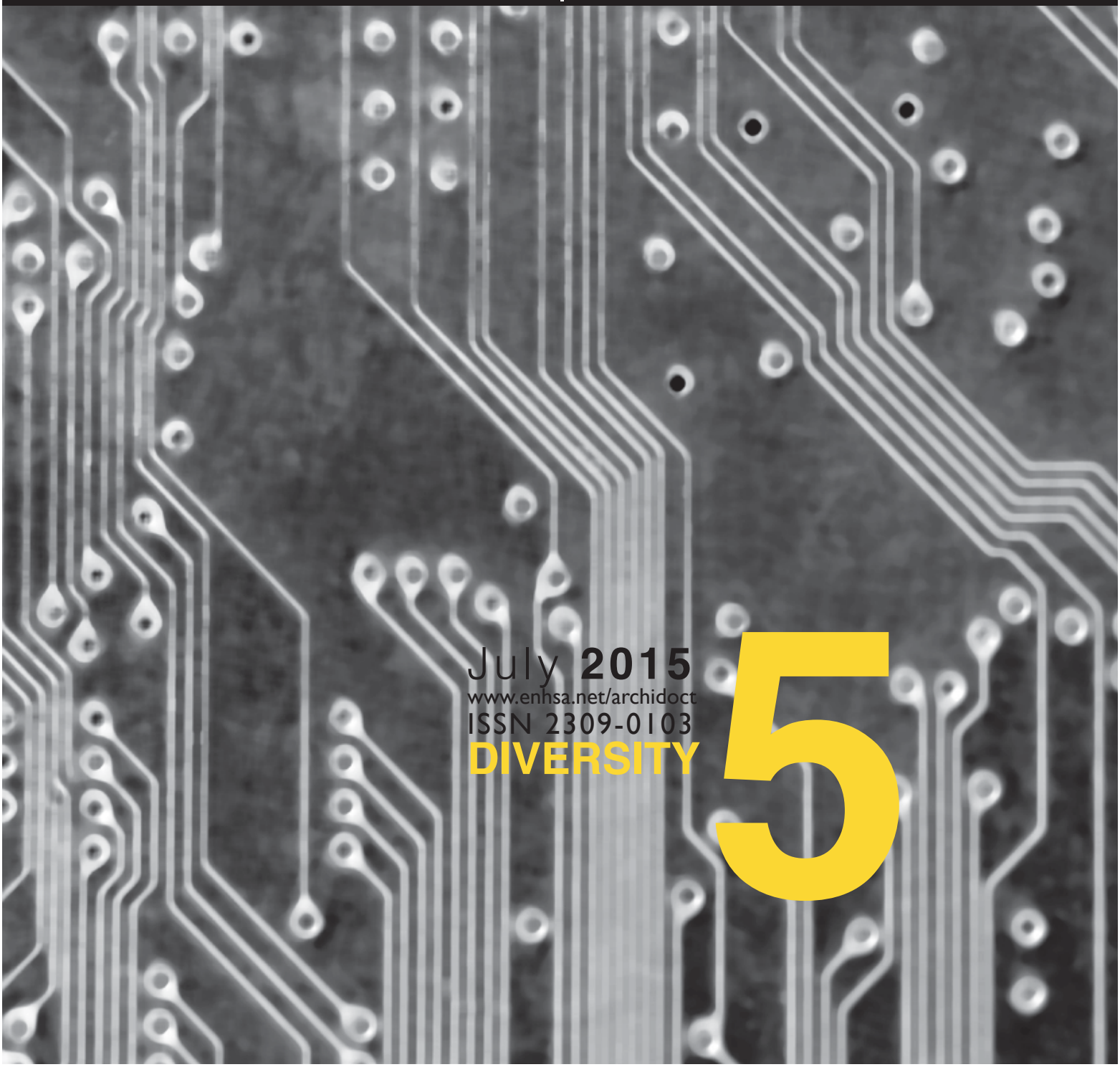

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Editorial

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While the Anglo-Saxons would round numbers around the dozen, mathematics classifies five as a Fermat prime; therefore a regular polygon with 5 sides (a regular pentagon) is constructible with compass and unmarked straightedge, according to Wikipedia. This is the feeling we share as editors of the first five issues of our journal; after five attempts there is a sense of having found our compass and unmarked straightedge. There could be no contemporary journal addressed to doctoral students if there were no error-embraced tactics involved. After the first five volumes that are accompanied with 25 selected papers, worked and reworked in collaboration with 50 academics from our reviewing committee, enhanced by five good-practice examples of rigorous academic writing. We keep learning to make better. This time, like in all of them, we selected, reviewed and mentored five essays.

Diversity, the current issue, includes five essays from a broad spectrum and a great geographic spread, hence its title. More specifically the first contribution is made by Ashok Ganapathy Iyer, a PhD candidate, from the Welsh School of Architectureand is entitled "Approaches to Learning in Architectural Education adopted by the Beginning Architecture Student in the Coursework of Architectural Design – A Review". Ashok's essay reviews selected literature on research into architectural education where the definition of approaches to learning adopted by beginning architecture students in the coursework of architectural design is compared with surface and deep approaches. The categorized approaches identified in an earlier study adopted by first and fourth year architecture students is connected to this review to how the concepts of deep and surface approaches to learning manifest themselves in architectural education. In conclusion, the study and the review points towards a more complex set of approaches to learning than just a simple deep and surface division. It also raises a further question on whether the categorized approaches from the study form different points to a continuum between deep and surface, or if there are some in a different dimension. The review on beginning architecture students' approaches to learning seems to point towards learning approaches tending to the surface dimension and go on in the direction of deeper approaches through years of training and reflective practice in architectural education.

The second contribution, made by Aikaterini Chatzivasileiadi, is the second in this issue from Welsh School of Architecture, Cardiff University, UK. It is entitled "How can batteries 'fuel' the built environment?" The study presented is set out to gain a better understanding of how battery systems can contribute to the design of a future built environment where renewable energy systems will play a significant role. The essay provides suggestions that will enhance design while integrating battery storage to buildings, emphasising on their spatial requirements. An analysis is undertaken to assess the footprint, the volume, the weight as well as the investment cost of eight different battery technologies able to electrically supply a house in the UK. The house is assumed to be powered by renewable energy sources (RES), was able to operate off-grid and was electrically heated. Three scenarios are explored in order to assess the spatial requirements of each of the battery technologies in 2030. It is concluded that Li-ion, Zn-air and NaNiCl battery technologies are the most favourable options for electrical energy storage (EES) integration in buildings in all 2030 scenarios due to their small footprint, small volume and low weight. Cost-wise Li-ion batteries currently have the highest investment cost, but are expected to be a cost competitive option in 2030.

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Efrosini Charalambous, from the Bartlett School of Architecture, University College of London, U.K. contributes an essay entitled "A pilot study on Spatial Cognition: Brain activity during the integration of distinct Spatial Representations". It describes what has become a common ground amongst three distinct domains; those of spatial cognition, neuroscience and architecture. From the fact that research in cognitive neuroscience offers a deeper understanding of how we perceive and experience our environment, the essay embarks on finding how to 'transfer' the knowledge offered by the cognitive sciences, from lab experimental conditions into to real world dynamic and complex situations. It is proposed that by adopting a new perspective and approaching the notion of wayfinding as 'a continuous problem solving situation under uncertainty', a study of specific mental events in real-world scenarios and data collection using neuroscientific methods, such as EEG (electroencephalography) can be allowed. The paper departs from the exploration of the ways in which the human brain structures the information of environmental stimuli and of the ways in which we use different reference frames to represent spatial relations and store them in memory. The main focus of the study presented, is to explore the differences in brain activity when orienting in relation to locations of a small-scale indoor environment in comparison to a large-scale surrounding environment. Some initial findings of a pilot experiment on orientation that introduces the use of EEG recordings in real-world situations is presented.

The fourth essay entitled "Event Platforms: Proposing a new computational design tool for integrating spatial events into the architectural design process" is authored by Panagiotis Chatzitsakyris, from Aristotle University of Thessaloniki, School of Architecture, Greece. The essay embarks on the premise that architectural design can be viewed as the manipulation of physical material space in relation to human events that take place inside it. As it claims, whilst architects have a multitude of computational design tools at their disposal, the vast majority of these applications focus on the manipulation of physical form. The essay proposes a new experimental design tool that enables the creation of parametric components that represent potential spatial events within three-dimensional digital models. The goal is to improve the decision-making process of architectural designers by enabling them to evaluate and iterate their design revisions based not only on the building's form but also on the human spatial events that take place inside it.

Last but not least, the fifth essay authored by Despojna Zavraka is entitled "Shifting matters of mortality: Neo-medievalism and re-contextualisation of macabre". The essay departs from the premise that death arises a whole new era in design, which is subject to thought, cultural responsiveness and emergent materiality. It aspires to dip into diversity of speculative projects exploring fictional scenarios on transcultural funerary conditions. This variety is aliquoted into imaginative interplays and cynical approaches on the confinement between the 'seen' and the 'unseen'. Based upon extended doctoral research, this essay attempts comparatives between re-contextualization of macabre concepts and precedents of the past. The notion of neo-medievalism refers to emerging mechanisms of re-speculating one's own death, beyond localities. Contemporary design cultures often reveal multi-layered references to the 'darkness of death' and present interesting cases and transformations of the 'horrific'. These cases refer to a fragile balance between a profound fascination and simultaneous transcending of death's obscurity and grotesque. It is within this essay's goals to trace this fragile balance.

Our aim is now to experiment with more focused essays associated with a thematic. The forthcoming volume will be dedicated to eco, which will embrace issues of sustainability, environmental design, energy consciousness, climatic building control but also with the anthropocene and the ecology of design is a more global and systemic context as this is embraced by contemporary post-human theorists.