

Travel and the Structural Engineer

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Abstract

Travel facilitates the exchange of ideas and can lead to creative new designs for the built environment. By traveling, structural engineers can visit notable structures, designers, studios, laboratories, and cultures, as well as engage in dialogues. These opportunities, while celebrated in other creative disciplines such as architecture, have perhaps not been as appreciated in structural engineering. Recent scholarly research has examined the impact of travel on the practice of architecture [1, 2, 3], but its effect on structural engineering is perhaps not so well explored. The authors have previously begun investigating how opportunities for travel can affect structural engineering education [4]. The objective of this paper is to demonstrate the influence that travel has had on specific structural engineers and the practice of structural engineering more generally. Documented examples of prominent engineers traveling and having it affect their work include , Othmar Ammann, Peter Rice, and Jörg Schlaich.

To generate a more complete understanding of how travel impacts structural engineering, engineers need to actively reflect on their experiences through writing, drawing, photography, modeling, audio recordings, or video, and share those experiences with a wider audience. This primary source material can then be critically analyzed, but perhaps more importantly, be provided directly to aspiring structural engineers while they are students. Reflections by the authors on their own travel will be presented to provide examples for how this information can be shared with practitioners and students. This study ultimately seeks to understand the range of ways that travel impacts the profession. This study also seeks to celebrate some pioneering aspects, among the many, of the life and work of David Billington – his own travel, his documentation of the travel experiences of other great engineers, and his encouragement and sponsorship of many of his own students to travel as part of their development as structural engineers.

References

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