

Instant-Expert: Thermodynamic uncertainty and the new architect-engineer

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Thermodynamic Modeling Software is unique among the growing zoo of knowledge-based expert-systems, offering a brief moment-of-opportunity for the Architectural profession to appropriate the expertise of another discipline. By providing technical feedback and inferred recommendations, the application of these simulation/visualization tools represents the externalization of the intellectual labor typically performed by the engineering consultant. Apart from potentially extending the efficiencies of consultants, Thermodynamic simulations inherently privilege form, thus opening a new territory for design. The integration of these tools into practice echoes the disciplinary transformation experienced by the 19th-century Architect-Engineers, for whom Graphic Static Analysis distilled the experience of construction into an abstract symbolic logic ideal for work, leading to a period of profound structural and spatial innovation. This paper will contrast the developmental history of expert systems within the engineering disciplines with an examination of precedents for sublimating analogous tools into contemporary design practice.

Biography:

Filip Tejchman is an Assistant Professor at the University of Wisconsin-Milwaukee School of Architecture and the principal of Untitled Office. He has taught at MIT, Pratt Institute, and Columbia University and worked in the offices of Joel Sanders Architects and DillerScofidio+Renfro. His writing has been published in Praxis and Volume.