Summary
This studio explores meaningful form generating processes by the use of parametric tools and introduces the notion of the digital vernacular in architectural and urban design thinking. Our studio site will be Xixinan, our programme the rural return of the urban elite to the countryside.

Content
The advent of new digital technologies has had a twofold impact on architectural thinking and urban design, transforming, on one hand, the processes for form generation and design production through algorithmic and parametric technologies, and, on the other hand, enabling an escape from the static fate of the built environment by facilitating dynamic interaction between inhabitants and their surrounding. Our interest in the orientation “Form + Type” is to explore meaningful form generating processes by the use of algorithmic and parametric tools and introduce the notion of digital vernacular in architectural and urban design thinking. In particular, we examine the potential of responsive morphogenetic design to explore intuitive form finding processes that address bio-climatic and socio-economic challenges.

This Spring studio (the “Xixinan Spring Studio”) builds on our fall studio, and explores in depth and at a finer architectural resolution the site-specific interventions in Xixinan, taking into account the material ecology, digital fabrication and traditional skills, off-site and on-site assembly, with a view to possibly realize a 1:1 prototype on site.

The intellectual aim of the studio is to question the extent to which the data-scape can artificially generate architectural and constructive form. Our interest is directed at the decoding and recoding of two distinct domains of knowledge: exteriority which represents a many-layered geographic condition and anteriority which represents the embedded knowledge of local architectural typologies and systems. While the exteriority of geographic data is crucial to our research, we place a primary emphasis on the generative potential of typology- what we have called “growth typologies”. Decoding anterior form and then recoding and deploying it across new territories allows us to challenge the role of architecture in urban developments of increased scale and complexity.

Keywords
Digital Vernacular - Data-driven Design - Parametricism - Morphogenesis - Artificial Design.

Learning Prerequisites
Required courses
N/A
Recommended courses

AR-401(Y) Théorie et critique du projet MA1 (Huang).

Learning Outcomes
By the end of the course, the student must be able to:

• Interpret the site-specific parameters and other issues of relevance to the project using drawings and diagrams.
• Critique a specific project brief and a specific context and respond with a meaningful data-driven design concept.
• Translate a data-driven design concept into meaningful architectural propositions at appropriate scales and levels of granularity.
• Produce coherent architectural representations and models at sufficient levels of detail.
• Formulate the morphogenetic narrative and create convincing arguments for the design propositions.
• Develop convincing final diagrams, drawings, renderings, simulations, physical and digital models.

Transversal skills

• Design and present a poster.
• Collect data.
• Make an oral presentation.

Expected student activities

• Architectural projects will be developed individually (or exceptionally in groups of 2).
• Some group work may occur in the analysis stages.

Assessment methods

Projects will be reviewed and assessed based on:
(1) their conceptual strength and innovation,
(2) the coherence and resolution of their architectural translation,
(3) their representative clarity and expressive power, and
(4) the persuasiveness of their communication, both orally, and through the physical and digital artifacts.

Supervision

Office hours Yes
Assistants Yes
Forum No

Resources

Bibliography

Ressources en bibliothèque
• Growth typologies, localities and defamiliarisation / Huang

Websites
• https://morphogenesis16.wordpress.com