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Relating Systems Thinking and Design (RSD12) Symposium | October 6–20, 2023

Spatialisation and Memory Mapping: An artistic cartographic method for reconstructing the city

Christine Wacta and Xinyi Liu

This poster illustrates the architectural project from ideation to final proposal. The process follows a *Geospatial Game of the Unknown*, an approach that uses science and suitability studies to find evidence of historical significance about a place and in comparison to current socioeconomic and cultural trends. It engages using predictive analysis to map suggestions about the best solution for the future of the place in terms of human needs, lands and nature. At the start of such a process, the site location and program details are unknown and emerge from cross-referencing data layers to validate location and programs based on the population's past-present and future needs for work, leisure, and the suitability of the land. The creation process involves the pictorial illustration of the environmental experience through a spatial engagement represented in cartographical illustrations that use mixed media (hand + digital) to tell the story of the systemic architectural design process artistically. The poster encapsulates the idealism of storytelling with the practicality of building information modelling. The contrasting medium helps each viewer connect at a different and unique level since the Artistic content does not need to be explained but embodied by each visitor and visualised in a way that highlights the interconnected subsystems to allow individuals to read and understand the city system their way. This process adapts to *La Derive* theory as presented by *Les Situationists (1956)*, a methodology applied to pedagogy to introduce the complexity in the system of thoughts and understandings that exists in the intertwined urban realities (historical, human habitus, economics, temporal events). In this poster, the evolving geospatial technology is used to help connect

humans and their environments. The geospatial diagnostic and suitability studies inform the proposed location for this project (near the Savannah Riverfront).

KEYWORDS: spatial thinking, urban realities, historical contexts, systems, timeline

RSD TOPICS: Architecture & Planning

Project description

The poster is an illustration of the process for the design of the *Savannah Train Station in the digital age*. It combines history, memory, data science and analytics to engage the audience in an enriching and unique way. The poster comprises a succession of hand-drawn original diagrams of the train station alongside multiple contextual maps that tell a complete story by merging the tangible and intangible while cross-referencing the science of the place. The site information is communicated loosely through each map to allow each interaction to evolve naturally based on the time and the type of interest of the viewer. The creative process highlights the analytical thinking techniques and the freedom to be expanded by the interaction. Hand drawings and digital editing are critical to this piece, and the analytic style mediums help emphasise the shift from the past to the future through the present. The loose art and CAD drawings create a duality that brings about an interesting contrast between the past and the future, with the present acting as the essential linkage.

The work follows the principle of urban drift (Debord, 1956), going beyond Debord's graphical hand drawings by combining painting and computer-generated models with interactive visuals to graphically tell the story of *Then* through the lenses of *Now*. The hand-generated drafting and memory-projected illustrations are overlaid onto digital computer-generated existing infrastructure to reconnect the socio-dynamics subsystems with the city static systems and re-align the natural interdependencies that exist between them. The work reveals an intertwining system of networks, including traffic lanes, highway systems, human traces, and communication networks that make up the complex urban system and can be visually deconstructed to better understand the various stages of urban development. The overlays of hand drawings onto

geospatial data highlight a complex blend of styles from which a comprehensive design process emerges.

Intentions and concept

The concept involves using pictorial means to suggest, reflect and invite the viewers to participate and be associated with a complex historical, cultural or emotional experience that is directly tied to each participant's own development of what is perceived as either positive or negative, with regard to their pleasing or displeasing emotional connection to the piece. The poster invites the audience to re-piece together an intertwining, broad, often disrupted and deconstructed past and collage it together as it fits each individual's memory of the past. This poster aims to fill the gap that exists between the iconic buildings that represent the landmark and essential elements of the city and the human traces that make the history of the city alive and without which there would be no city.

Creative process

This poster applies the geospatial methodology initiated in a fourth-year architecture studio. It blends art and design with perceived and lived experience and uses multiple mediums to tell an entangled story of a place and its people. The developing strategy of this approach originated from cross-referencing the past to inform the future proposal. The ideation stage consists of data collection, analysis, and context articulation into graphical representation to systemically establish the relationships between all components.

In the initial design phases, the geospatial tools are used to generate accurate scale references, north-south orientation, building densities, civil land boundaries, natural features, and urban infrastructure.

Reflection

The poster borrowed the sensation of hand drawings to indicate the reminiscence of the unprecedented, fast-paced development of the design fields. As digital tools increasingly evolve (3D-printing, AI, etc..), our thinking strategies are changing following

the renewing technologies. So, too, should design education—so that each decision in the line weight, colour saturation, hue, and shape is made specifically to achieve the best result for the imagery. The work celebrated hand drawing as a reference to digital models and an opportunity to showcase the beauty of architectural structures, spatial arrangements, and classical textures. The design concepts align with systematic dissections of various layers of urban environments over time, though there's still potential for refinement.

Conclusion

This poster showcases an early stage of architectural, urban, and historical research studies for informed design. Undeniably, there's still potential for growth. It takes the viewer through a phase of discovery in systemic thinking and design logic and conveys the reflections of design, not only to the present but across a vast time span in support of its creation and decision-making. In this work, the system is represented at many scales and in various forms and together, forming one reality of our daily experiences.

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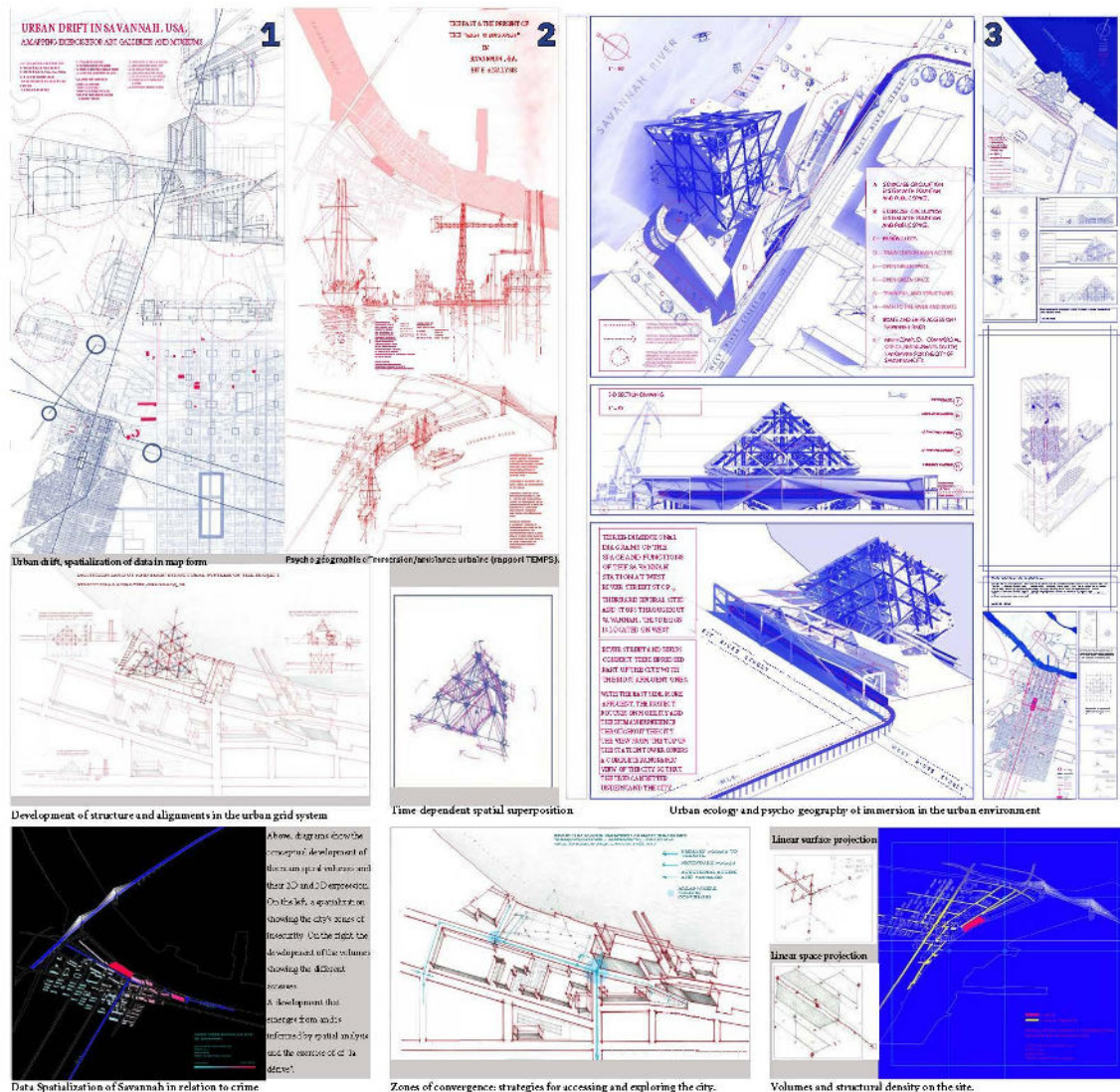
"SPATIALIZATION AND MEMORY MAPPING: AN ARTISTIC CARTOGRAPHIC METHOD FOR RECONSTRUCTING THE CITY"

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Psychogeography of immersion in the urban environment

This poster illustrates urban project development through cartography, based on a collection of emotions and spatial analysis of real data, lived experience and the use/integration of GIS and BIM. It is a systemic approach whose results emerge as a function of the spatial analyses carried out. The poster presents the stages in the development of an urban planning project in its spatial context. It's an avant-garde approach to artistic expression, which sees the art of building as a work of art in its own right, with its own distinction.

The emotional effect in the spatial context is presented psychogeographically through the concept of Derive. In this context, the reality of experiences is replaced by 'spectacles' in society, and translated into more personalized feelings and sensations.

Consequently, this approach tends to address the problems and concepts of the relationship between the environment and the users of the city within it in a rather "dialectical" or "conservative" way, and by trying to show these hidden flows and potentials of energy in a more visual/graphic and symbolic way through cartography.

Aesthetic expression with artistic elements is therefore sometimes more important and dominant in the Drift diagram than the reality it represents, as the language used can be more abstract or extracted from its subject. Thus, on the basis of this parameter, and in this work, a map of Savannah conveys information about the city's basic geo-graphical configuration, its main economic facilities and, of course, most significantly, the emotional reaction these different locations give to visitors to the city of Savannah, Georgia, Savannah, USA.

Diagram (1), for example, covers the geographical and functional information of art museums and galleries in general. Stages:

This work is developed in three stages

1. The exercise of urban drift: city experience, psycho-geography, capturing the lived experience.
2. Spatializing data through GIS spatial analysis.
3. The translation of cartography into augmented urban design scenarios adapted to real city problems.

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