SENSITIVE MAPPING AS A 2D MODEL OF THE TERRITORY

Revealing the complexity of the territory through an emotional approach

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INTRODUCTION

Sensitive mapping is a tool that graphically materializes the subjective experience of the territory, functioning as a two-dimensional model of perceptions and emotions. This approach frees itself from geographical representation to capture the sensitive and affective dimension of the human experience of the environment, revealing territorial issues often invisible in traditional cartographic approaches. As a transition tool between the space experienced by students and the scientific analysis of the territory, it facilitates the transition from the classroom to the field by structuring individual perceptions to build a collective understanding of spatial issues.

For example, a sensitive map of a home-school journey allows us to simultaneously visualize the zones of comfort and discomfort in sound, the variations in emotional atmosphere, the sources of stress or well-being and their complex interconnections - abrupt transitions between quiet and noisy spaces, accumulation of nuisances at certain intersections, unexpected sound refuges. Similarly, a sensitive risk map reveals the complexity of perceptions of danger, variations in emotional intensity according to places and times, as well as the factors of appeasement or worry that a simple hazard map could not show, while a sensitive map of a neighborhood makes visible the complexity of emotional ties to the territory, the emotional interdependencies between spaces and the points of crystallization of collective representations.

Sensitive maps - whether they concern a neighborhood, a route, a sound environment, etc. - are tools for representing feelings used in many fields of research. They reveal emotions and perceptions, sensory variations, and the complexity of emotional relationships with the territory, at a scale that allows the observer to have a global, personal vision, and adopt different angles of interpretation.

This work on sensory complexity is essential. Indeed, sensory maps are often used as an intermediate step between an objective and a subjective vision of the object of study, for example in the context of a territory, as a tool for moving from the geographical plan or technical measurement to a complete vision of the lived environment, feelings and forms of emotional appropriation of space, but also sensory interactions and individual representations. The transition to this more complex vision makes it possible to make issues that seem invisible visible. And thus to understand their emotional dimension, their role in daily experience, at home, in our familiar environment.

Building a sensitive map also facilitates the transition from lived space to analyzed space by allowing the formalization of feelings, based on daily experience - what students feel every day when they cross their territories - to position themselves in the role of analyst - students must reflect on their emotions to faithfully transcribe them in their cartographic tool. This approach makes it possible to understand and tame the complexity of the territory through the reflective positioning of the student.

Sensitive Cartography, Quentin Lefèvre - https://quentinlefevre.com/cartographie-sensible/
Sensitive mapping, All on foot - https://www.tousapied.be/articles/la-cartographie-sensible/
Sensitive Map, GeoConfluence Glossary of Lyon - https://geoconfluences.ens-lyon.fr/glossaire/carte-sensible Sensitive and participatory cartography as a lever for learning geography, Sophie Gaujal - https://journals.openedition.org/vertigo/24604

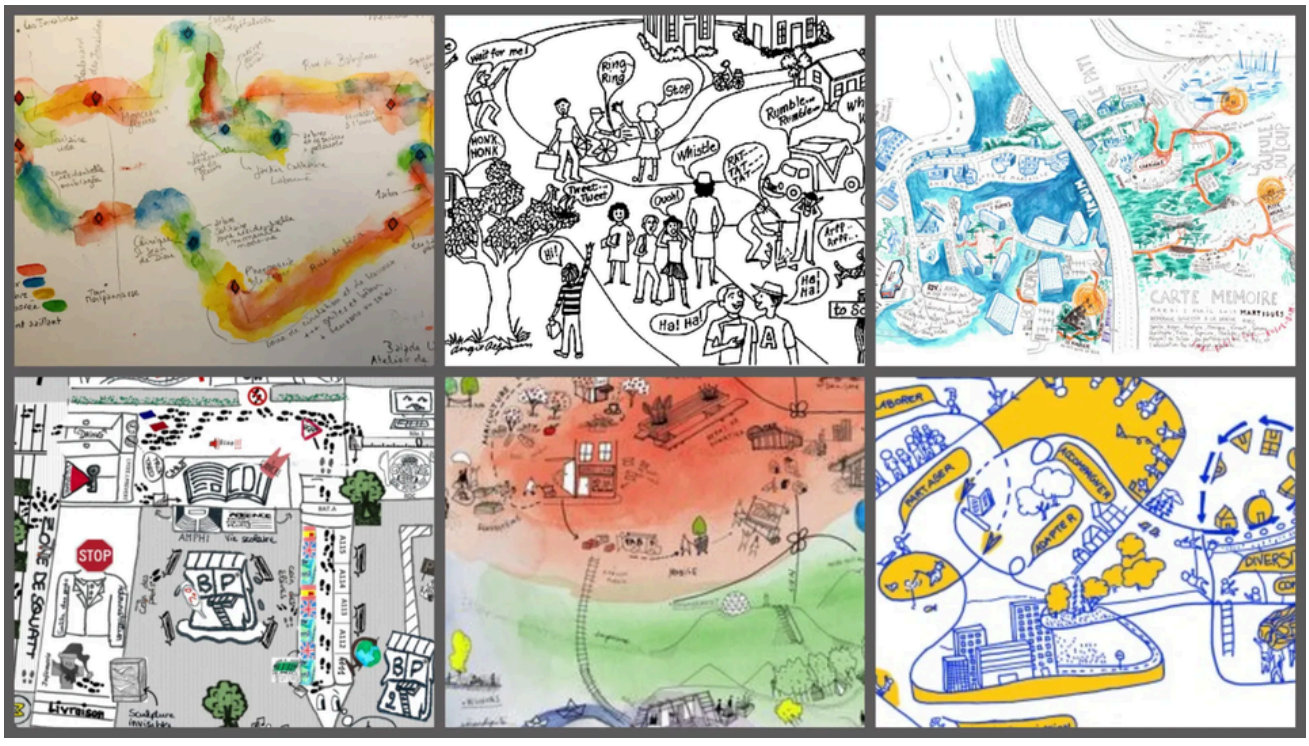
DEFINING THE CONTOURS OF A METHOD: SENSITIVE MAPPING AS AN EMOTIONAL MODEL

Sensitive mapping is defined as a method of spatial representation that prioritizes emotional and sensory experience over objective geographical description. At SteamCity, we consider this approach to be a modeling tool, albeit two-dimensional, but which would allow us to materialize, in a context of freedom and personal expression, individual feelings about a given territory. It is part of a phenomenological approach which considers that the understanding of a space cannot be limited to its measurable physical characteristics, but must integrate the sensitive and affective dimension of human experience.

This method is characterized by a great freedom of graphic and even artistic expression that deliberately frees itself from the constraints of classic cartography. Respect for the geographical scale, cardinal orientation or the presence of a standardized legend are not imperatives, the main objective being to faithfully restore the emotional effect that the environment produces on the individual who experiences it. This freedom allows students to express their creativity while developing their capacity for sensitive analysis and their reflexivity in the face of their own perceptions.

The sensory map generally takes the form of a drawing. But it is also possible to use an existing map and annotate it using drawings and graphic additions (pictograms, color flows based on feelings, drawings, etc.).

In the field of sound environment education, for example, sensitive noise mapping not only locates sound sources, but also reveals areas perceived as pleasant, stressful, reassuring, or worrying according to the subjective experience of each student. Similarly, in the study of daily mobility, this approach makes it possible to identify spaces perceived as familiar or foreign, reassuring or anxiety-provoking, regardless of their objective characteristics. This subjective dimension constitutes essential data for understanding the spatial behaviors and representations that individuals develop in the face of territorial issues.



STRUCTURING THE APPROACH: A FOUR-STEP SUPPORT PROCESS

Creating a sensitive map requires pedagogical support that guides students while preserving the free and creative dimension essential to this approach. The main challenge is to find the delicate balance between student supervision - a natural classroom activity where a teaching sequence is proposed with the objective of achieving a certain level of achievement - and freedom of expression, creative spontaneity, and respect for the feelings of each student, which can be expressed very differently from one individual to another.

Here we propose a methodology to support sensitive mapping within the framework of SteamCity and its classroom-to-territory approach. This method functions as a conceptual modeling tool that prepares for field investigation. The approach is organized around complementary moments that flow naturally according to the rhythm of the class and the emergence of questions, allowing students to freely appropriate this process of territorial expression. The main challenge is to harmoniously articulate individual creative expression and the construction of collective knowledge.

Moving from the hypothesis formulation phase to a sensitive approach to the field of study

As part of SteamCity, the sensitive mapping phase serves to understand the territory, a step prior to putting students in the field.

Unlike the use of a more traditional model, which highlights objective and factual elements - positioning of traffic lights, identification of areas with high CO2 emissions due to the presence of factories, etc. - sensitive mapping promotes another vision of the territory, that of perception and emotions. This work, which can be described as subjective, is nonetheless of capital importance for the scientific protocol. Each student has in their possession crucial data to understand the complexity of the study territory. Through their personal experiences, their perceptions of risks and issues, the field takes on a new dimension, which will be reflected in the data collection through a more comprehensive approach to investigation. Before going to observe and measure in the field, it is a question of understanding how each student perceives and experiences the challenges of research in their familiar environment, thus revealing dimensions often invisible in purely technical approaches.

Best practices for carrying out the phase

- The teacher recalls the hypotheses formulated previously by displaying or rereading the research questions defined during the problematization phase.
- The teacher organizes an open discussion by asking questions such as "How do these questions resonate with your daily life?", "Have you ever experienced situations related to these issues?"
- Students are invited to spontaneously verbalize their perceptions of the study area, their emotions associated with certain places, without constraints of form or content.
- The teacher facilitates expression by reformulating the testimonies and valuing each contribution: "You tell us that this crossroads stresses you out, can you explain why?"
- The teacher presents sensitive mapping as a way of graphically formalizing these perceptions to prepare for field investigation, specifying that there is no "good" or "bad" way of representing one's feelings.

Work individually on your feelings in the chosen creative form

Following the review of the research question, the class can begin its individual sensory mapping work. This creative phase constitutes the heart of sensory mapping, allowing each student to translate their personal understanding of the research issues through their lived experience of the territory.

Unlike traditional cartographic representations that impose codes and technical constraints—respect for scale, cardinal orientation, standardized legend—this stage favors total freedom of expression to reveal the authenticity of individual perceptions. Each student thus has the opportunity to explore all the creative forms that correspond to their sensitivity and skills. Each can choose the format, more or less artistic or graphic, integrating painting, drawing, photos, or collages. Their freedom of expression is a strength in this stage in order to avoid directing their achievements. The objective is to allow the emergence of a personal geography that articulates the student's daily experience with the scientific questions of collective research.

Best practices for carrying out the phase

- The teacher provides a wide variety of creative materials without favoring any particular technique.
- The teacher makes it clear that there are no aesthetic expectations and that only the authenticity of personal expression matters.
- Students freely choose their support and tools according to their personal inspiration
- The teacher regularly encourages by valuing the originality of approaches rather than their conformity to models
- The teacher circulates discreetly to encourage without influencing creative choices

Analyze the similarities and differences to begin to create a collective awareness of the territory

At the end of the personal creation phase, students can compare their individual perceptions to discover how their unique experiences can be articulated and reveal shared dimensions of the territory studied. The mapping certainly allowed them to highlight emotions that they had not spontaneously analyzed, which allows for a more structured dialogue, to feel better prepared to discuss something emotional in a safe environment.

Unlike a traditional presentation where each student presents their work in isolation, this stage is based on a free discussion whose objective is to bring out significant recurrences and divergences that are the result of personal experience. This analysis proceeds through collective questioning, respecting the singularity of each perception while gradually building a shared vision of territorial issues. The objective is to identify the factors that influence individual perceptions to enrich the collective understanding of the determinants of territorial experience and prepare for a more detailed field investigation. A post-it table can, for example, allow us to begin to create something collective by visually organizing the similarities and divergences observed.

Best practices for carrying out the phase

- The teacher organizes the display of all the maps to allow an overview
- Each student briefly presents their map, explaining their creative choices.
- The teacher facilitates discussions by asking open questions about the similarities and differences observed.
- The class collectively identifies the places or phenomena that appear recurrently, for example using a post-it table to visually organize the observations.
- The teacher guides the discussion to understand the differences in interpretation
- Students respectfully question their classmates' choices to deepen mutual understanding

Collectively create a sensitive fresco of the study area

Armed with this comparative analysis, and with an initial collective organization of observations using tools such as the post-it board, the class is ready to materialize its shared understanding of the territory through the creation of a common fresco. This collaborative synthesis phase constitutes the culmination of the sensitive mapping process, transforming individual discoveries and the first collective groupings into a unified visual tool for preparing for field investigation. Unlike a simple compilation of individual work, this step aims to create a collective representation that harmoniously integrates the different sensitivities expressed while revealing the priority territorial issues identified by the class during the comparative analysis. This joint creation can take various forms depending on the available resources - artistic assembly, three-dimensional model, collective installation - but the essential thing remains to materialize the wealth of sensitive discoveries to concretely prepare the field investigation. This fresco functions as a conceptual model that familiarizes students with the places they will discover and reduces the apprehension linked to the change in learning environment.

Best practices for carrying out the phase

- The teacher suggests several formats for collective creation based on the groupings already made during the comparative analysis.
- Students collectively discuss the representation choices using the observations organized previously
- The teacher helps to identify the essential elements to integrate: areas of consensus, places of divergence, question marks arising from the analysis work
- The students explain the links between the sensory fresco and the research hypotheses initially formulated.

Anticipate the use of this work during field investigation

Now that the class has a materialized collective representation of its perceptions of the territory, it is essential to explain how this sensitive work will enrich and guide the scientific investigation that will follow in the field. This articulation phase transforms the collective fresco into an operational tool for preparing and supporting the outing outside the classroom walls, giving meaning to the creative process carried out and reassuring the students about the usefulness of their investment. Unlike an approach where sensitive mapping would remain an isolated pedagogical exercise, this step anchors the creative work in the continuity of the scientific approach. The objective is to identify precisely how the sensitive perceptions materialized in the fresco will direct direct observation, guide data collection and facilitate the appropriation of the study space by the students. The fresco becomes a mobile reference support that will accompany the class in the field, allowing the initial perceptions to be regularly compared with the observations made and the collective understanding of the territorial issues studied to be gradually adjusted.

Best practices for carrying out the phase

- The teacher helps the class to identify on the fresco the priority places to observe during the field investigation, based on the areas of interest revealed by the collective analysis.
- The students collectively formulate the specific questions raised by their sensory perceptions organized in the fresco.
- The class is preparing a mobile and practical version of the fresco that can be easily consulted on site.

For teachers who cannot organize a field trip - due to logistical, security or organizational constraints - sensitive mapping retains all its educational interest as a tool for territorial analysis and the development of critical thinking in the face of subjective perceptions, allowing students to question their relationship to the daily environment and to develop their capacity for observation even without direct investigation.

USING SENSITIVE MAPPING DURING STEAMCITY

The following projects were produced as part of the SteamCity protocol on noise pollution with a group of young people aged 12 to 15. After explaining the approach to them, they were able to freely explore their city to identify the areas that bring them well-being and those in which they feel vulnerable. Once completed, this work led to the identification of points of tension on a geographical map of the neighborhood associated with a common territory qualification sheet in which each person was able to identify, using post-it notes, the elements they wished to study.