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To cite this version:

Sylvain Dernat, François Johany. Tick bite risk as a socio-spatial representation between health and landscapes. 28. Permanent European Conference for the Study of the Rural Landscape (PESCRL) : European Landscapes for quality of Life ?, Sep 2018, Clermont-Ferrand, France. pp.12. hal-01868804

HAL Id: hal-01868804

https://hal.science/hal-01868804v1

Submitted on 5 Jun 2020

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Tick bite risk as a socio-spatial representation between health and landscapes. An exploratory study in the Chaîne des Puys/Combrailles area, France.

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Keywords: socio-spatial representations, health risk, landscapes.

Abstract:
The majority of vector-borne diseases in temperate regions of the northern hemisphere are due to mites, mainly ticks. According to Jongejan and Uilenberg (2005), Lyme borreliosis is currently the most common vector-borne disease throughout its range, which appears to be closely related to that of its vector, the tick. However, it appears that knowledge of tick bite risk remains low in the population (Butler et al., 2016) although some results strongly suggest that social and spatial factors are important considerations in designing effective prevention campaigns (Aenishenslin et al., 2015). The spatial dimension of the tick bite risk is therefore major. Nevertheless, the skill of spatial understanding of the risk in the population remains underestimated notably in its link with the perception of the risk landscapes.

As part of a multidisciplinary research project associating epidemiology and social sciences, we focused on the sociospatial representations (Dias & Ramadier, 2015) of the public concerning this tick bite risk. We wish validate the risk related to ticks as a social representation in the population and analyze in the structure of this representation, the elements that make sense to the public, especially in relation to the associated landscapes elements (forests, mountains, lakes…).

The data collection was done through short personal interviews of about 20 minutes mobilizing "free association" (Rodrigues et al., 2015), and mental maps coupled with textual analysis (Dernat et al., 2016). This technique is particularly suitable for the socio-spatial study of the risk. Indeed, the exploration of categorization processes related to representations of space is necessary to understand the relationship between an environment and social relations (Dias & Ramadier, 2017). More than a hundred people were surveyed during 2018 in several sites of the Massif Central through an epidemiological, geographical and social sampling.

This talk aims to present the results of this exploratory study. It will highlight the constitutive elements of the representation by showing their construction network articulating health and landscape elements. It will also show how landscape elements associated with representation need to be assessed with regard to prevention policies.

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PESCRL 2018 - Clermont-Ferrand - 3rd september 2018
Dernat Sylvain and Johany François, INRA - UMR Territoires

TICK BITE RISK AS A SOCIO-SPATIAL REPRESENTATION BETWEEN HEALTH AND LANDSCAPES.

AN EXPLORATORY STUDY IN THE CHAÎNE DES PUYS/COMBRAILLES AREA, FRANCE.

FIRST

cause of vector disease transmission in industrialized countries

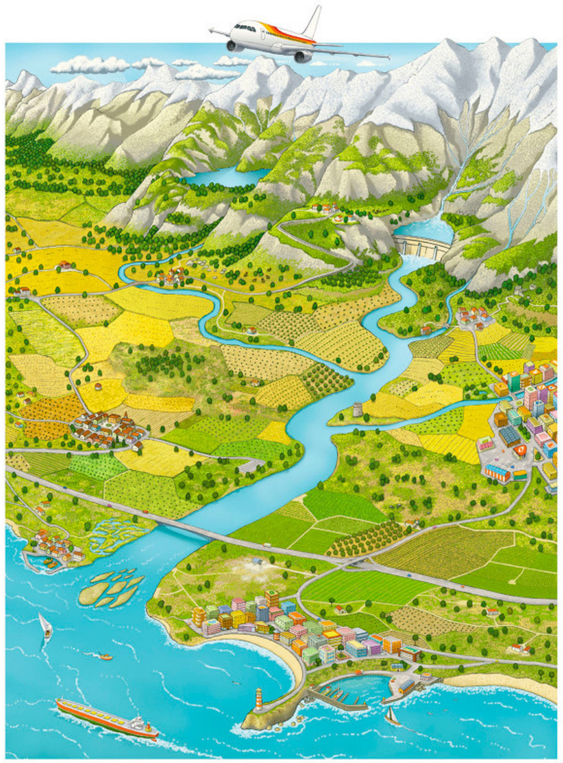
57%

of population have a good knowledge about tick risks (Butler et al., 2016).

5%

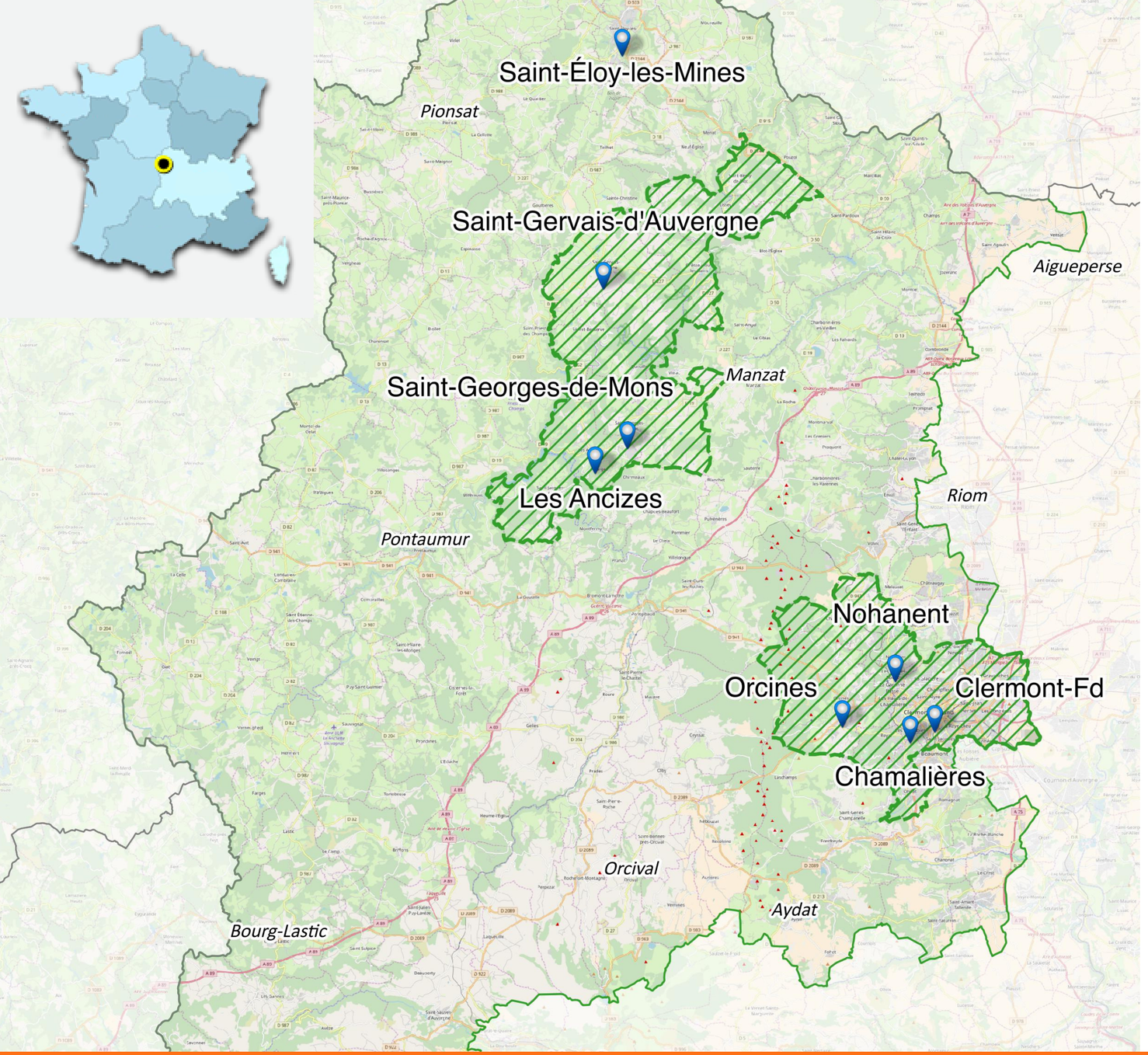
and less of researchs that are interested in prevention and almost none about spatial representations

AN APPROACH BETWEEN ENVIRONMENTAL PSYCHOLOGY AND GEOGRAPHY



Landscapes theories

Social representations theory (SRT), and especially socio-spatial representations.



Research area and population sample

- Based on an **epidemiologic area** investigated by EpiA lab. Three variables to structured researchs :
  - **proximity** with forests.
  - **rural/urban** areas
  - **socio-economics variables** of population.
- **143 people surveyed** reflecting socio-demographic **heterogeneity** and outdoor practices.

FREE ASSOCIATION

MENTAL MAP

QUESTIONNARY

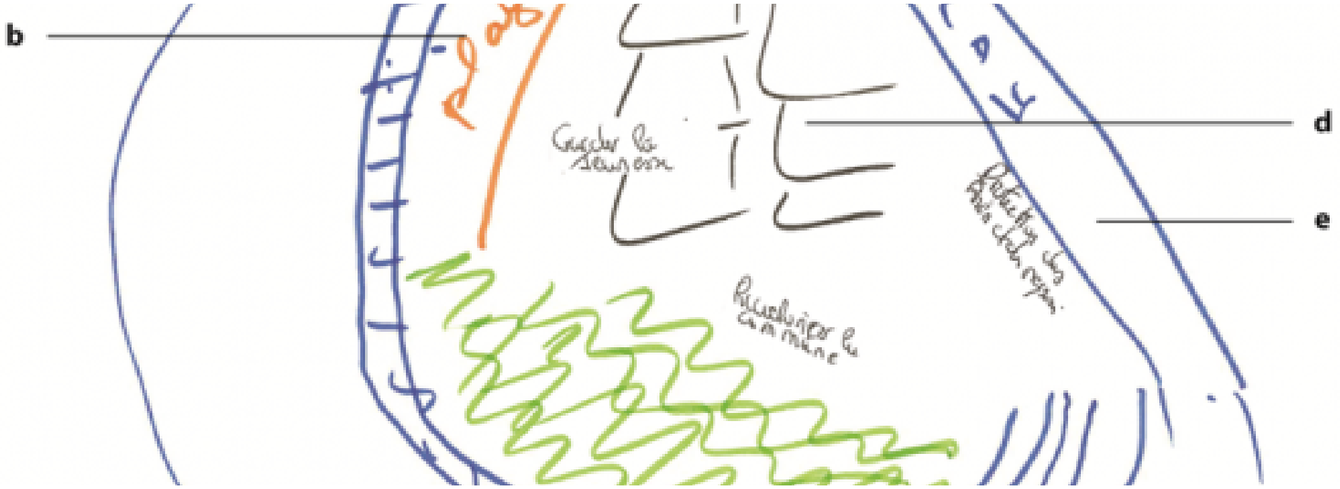
PROTOTYPICAL ANALYSIS

Based on Vergès (1992), it allows to understand the structure of the representation and the place of the spatial elements in it.

	Rang moyen	
Fréquence moyenne	**Zone centrale** Fréquence élevée et rang faible *(Case 1)*	**Zone potentielle d** Fréquence élevée *(Case*
	Zone potentielle de changement Fréquence faible et rang faible *(Case 3)*	**Périphérie e** Fréquence faible *(Case*

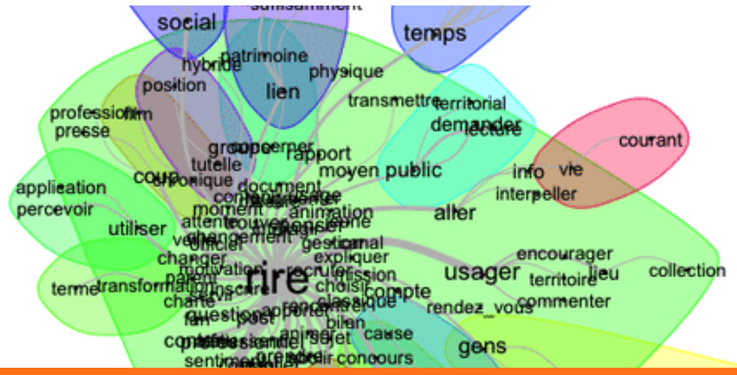
PRE-ICONOGRAPHIC ANALYSIS

Based on Le Moel et al. (2016) adapted of Pavlofsky (1967), it allows to understand which structures of the landscapes are identified for tick risk.



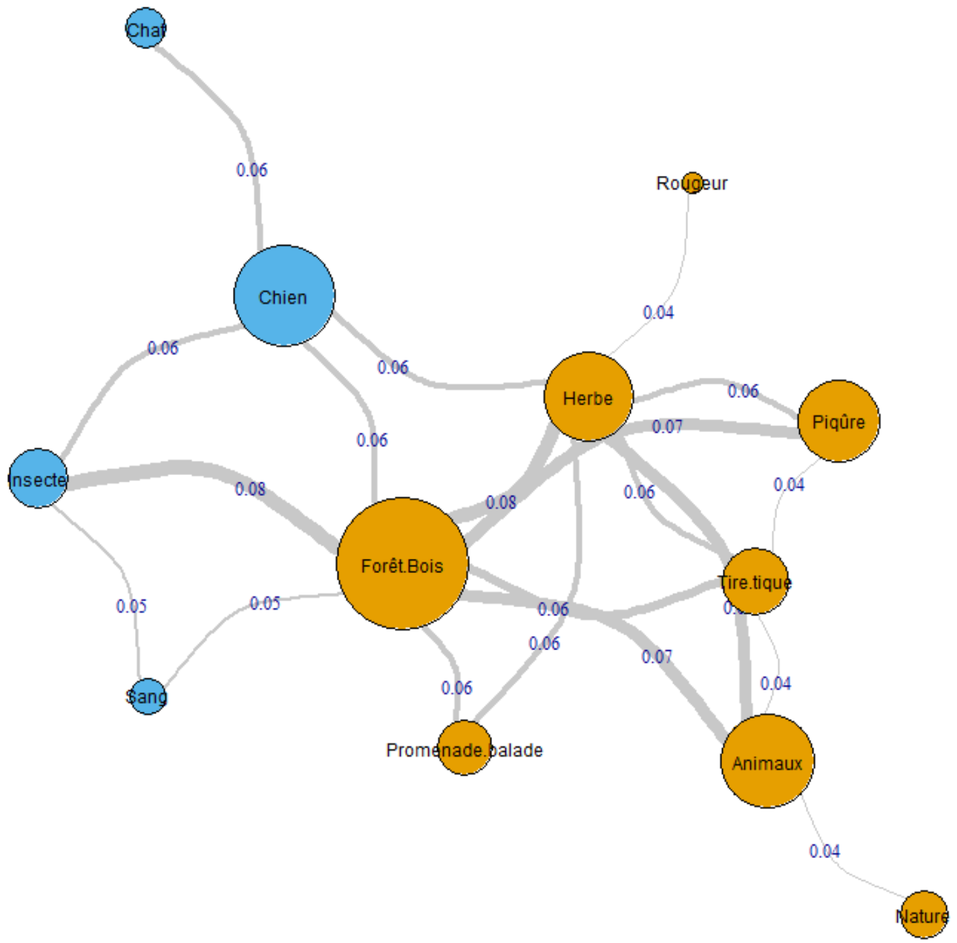
CROSSED ANALYSIS

Cross-analysis uses the results of previous analyzes + socio-demographic and spatial practice data.



THE FAMILY WALK IN THE FOREST WITH PETS: SPATIAL CORE OF THE REPRESENTATION

The risk is perceived around this activity practiced by more than 90% of responde



LYME DISEASE, THE CENTRAL ELEMENT

The health elements are central and revolve around Lyme disease.

A link between health and landscapes

- The themes of **health** (Lyme disease) and **environment** / **nature** are the most important.

- The representation of the tick risk is done around the **forest walk accompanied by pets**.

- Several elements of the landscape are **considered dangerous**: forest, undergrowth, tall grass, mountain ...

FOREST: PROPHYLACTIC VERSUS DANGEROUS NATURE

NO EMERGING SOCIODEMOGRAPHIC CHARACTERISTICS

PREVENTION MORE FOCUSED ON THE SPATIAL DIMENSION

THE END

THANK YOU

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