

POPULARIZATION COMPONENT – EXPLOITATION

EXPLOITATION 1 – PRACTICAL TOOLKIT FOR COHABITATION ISSUES

CONTEXT

GENERAL CONTEXT

Cohabitation issues are a major obstacle to biodiversity preservation and species protection. Most of humans are not willing to be involved in protection of a species they have issues to cohabitate with. Many fails in reintroduction programs are due to human malevolent or negligent interactions with a species inhabitants consider as pest (see for example work of Mäekivi and Magnus, in Documents section).

Some of these issues are factual and would need material responses – like acts of aggression or material destructions – but some of them are not. They are either emotional, symbolic or both, and can be addressed through semiotic perspective, in order to reduce the global cohabitation issues between humans and another species.

INSIDE THE PROJECT

The methodology proposed in Workpackage 1 has shown that it is a relevant way to diagnosis cohabitation issues. If the Deliverable 5 proposed a theoretical toolkit to establish this kind of diagnosis, the present document aims to be a more practical tool.

BACKGROUND AND ISSUES

BACKGROUND

Most of the cohabitation issues found during Workpackage 1 were quite similar to the ones found in a previous study in Paris (Delahaye 2021):

- A lot of factual nuisances are not where most of the people think, at first, they are. In Paris, people thought that rats were dangerous for health and pests for restaurant, when the costliest damages were in automobile sector. In Tartu, people complained a lot of noises, when droppings and aggressive behaviour during nesting season are far more intrusive in inhabitants' lives.
- A lot of nuisances perceived as factual are in fact symbolic or emotional. In Paris, people thought rats were dirty and aggressive, except for generations that were early exposed to positive pop culture rat figures. In Tartu, a lot of complaints about noises or attitudes are in fact about aesthetical divergences – some inhabitants are very found of the aesthetic gathered by the crows.

These common points lead to think that a common sample of data and resources can be used in order to diagnosis cohabitation issues, and easily found which ones can be addressed semiotically.

ISSUES AND QUESTIONS

The practical toolkit can be difficult to apply in areas where multiple data set (as explained in the Results section) are missing. But it can indicate how to create such data sets if they are needed.

The practical toolkit is applicable for cohabitation issues implying agency of both parties, and is not suitable for humans-parasites issues and humans-“non-animal beings” issues. The practical toolkit may not be applicable for humans-animals issues where human lives are in danger, as none of the nuisances studied involved a real and factual threat for human life.

The practical toolkit is not the relevant tool to choose when wanting to solve a cohabitation issue involving a critically endangered species, as it focusses on non-coercive measures, that can be needed to protect endangered species.

PRACTICAL ASPECT

RESULTS GATHERED BY THE PROJECT

The theoretical toolkit (see document D5) showed that a accurate and relevant mapping of the cohabitation situation can be obtained by answering three sets of questions.

The first set of questions aims to map the factual biological and behavioural situation of the species currently studied. These questions can be classified as such:

- **Questions about the species per se:** What is the health of the population? Are the individuals numerous enough? Are they able to act in the different aspects of all their natural behaviour? Are there immediate dangers that can be spotted easily (population declining, toxic environment or alimentation, inability to nest or reproduce, conflict with other species)?
- **Questions about ecosystem:** Are there areas where they are located or are they spread? What are the other species that must be taken into account when studying the situation (because they are preys or predators, or trying to occupy the same ecological niche, or they are endangered or invasive and measures taken about them will affect the studied species)?

The second set of questions aims to map the symbolic values implicated in the cohabitation situation. These questions can be classified as such:

- **Questions about symbols that inhabitants may be awarded of:** What roles play the studied species for the inhabitants? Is the studied species a particular symbol of something important in the culture of inhabitants (deity avatar or messengers, emblem of an invader etc.)? Are there myths, legends, folklore, popular stories etc. revolving around the studied species?
- **Questions about symbols that inhabitants may be non-awarded of:** Do the inhabitants and the species have an important common history (hunting, diseases transmitted, animal-emblem etc.)? How is the studied species described? Is this description coherent with factual data about the biology or the behaviour of the species? Are there myths, legends, folklore, popular stories etc. revolving around the studied species? (This last question belongs to both categories)

The third set of questions aims to map the emotional values implicated in the cohabitation situation. These questions can be classified as such:

- **Questions about individual emotions:** How are the inhabitants feeling about the species? What kind of vocabulary, linked to which emotions or concepts, are they using to describe them? Are the inhabitants expressing particular values about the species (spiritual value, aesthetic value, memorial value etc.)?
- **Questions about collective emotions:** How are the inhabitants feeling about the species? (This first question belongs to both categories) What roles do the inhabitants think they play for the species? Are the inhabitants expressing particular values about the species (spiritual value, aesthetic value, memorial value etc.)? (This last question belongs to both categories)

DISCUSSION

The purpose of the different sets of questions is to map areas of consistency, areas of paradox and to spot gaps. These three aspects do not carry positive or negative value per se: a subjective can be consistent between factual data and emotional one, for example, and still be a real cohabitation issue.

Gaps and paradoxes are interesting and particularly focused in this work between they are the areas where semiotic solutions can be proposed.

RECOMMENDATIONS FOR EXPLOITATION AND IMPLEMENTATION

FOR MAPPING

Questions about species per se are usually answered by precise and detailed biodiversity data, and will require the participation of local specialists.

Questions about ecosystem can be answered the same way, but they are usually too vast. Specialists may not have studies, time or human resources to have accurate answers to them, so the use of citizen science programs or data bases should be privileged.

Questions about symbols that inhabitants may be awarded of and questions about individual emotions can both be answered by first-hand textual sources. Interviews are a good way to complete the data to answer these questions.

Questions about symbols that inhabitants may be non-awarded of and questions about collective emotions can both be answered by a combination of second-hand textual sources and bias spotted in inhabitants' behaviour through the practice of citizen science. Large-scale surveys are a good way to complete the data to answer these questions.

FOR SOLUTIONS

Depending on the nature of the issues spotted, different kinds of solutions could be proposed:

- Factual and consistency issues are usually not a good match for semiotic solutions. Semiotic solutions can be used to sensitize and explain these issues to officials, city government or urbanism services, but solutions will come most of the time from urban conception or city management.
- In cases where a species must be chased away from city for human safety, zoosemiotic techniques can be used in order to lead astray and keep away species with causing them as few harm as possible (pheromones use, noise repellents etc.)
- Symbolical issues can be addressed through the creation and diffusion of cultural narratives proposing other point of view and symbolism regarding the species. This solution can also address some of the emotional issues.
- Other emotional issues can also be addressed by creating empathy toward the target species. Citizen science programs, guided city tours or popularization works can be examples of programs able to create empathy.
- Depending of the strength of the semiotic link between the species and the symbolic or emotional value, sensitization and any kind of evidence-based solutions can clearly be non-efficient enough. Most of the time, a combination of emotional work (creating empathy) and evidence-backed explanations will be needed.

GENERAL PROJECT – CURRENT STATE OF PLAY

CURRENT STATE OF PLAY

These results are an important part of Workpackage 1, as they can be seen as the practical material produced by the WP1 that can be used outside of the project. These results, combined with Deliverable D5 and the paper linked to Deliverable P1, are the final production of the case-study 1.

In order to produce more precise, detailed and useful content, the guidelines detailed here will be used, tested and improved in Workpackage 2.

PROPOSITIONS FOR OTHER ASPECTS OF THE PROJECT

ACADEMIC ASPECTS

These results are an annexe material composing the first scientific publication of the project (see document P1) and important parts of the second publication (see document P2).

As for Deliverable D4, these results will also be partially used in a communication at the Gatherings in Biosemiotics 2022 conference (see document C1). They will probably be partially included in an international presentation (see document I1) for the French Society of Zoosemiotics (see link in the References and links section, in French).

RESEARCH ASPECTS

The potential introduction of these results to the French Society of Zoosemiotics can also be twined with a conference for general public (as this kind of event is already organized by the society).

These results are also the practical side of a two-faces work, and a more theoretical and analysis-oriented toolkit is already available (see document D5).

NEXT STEPS

These results are closing the Workpackage 1, leading to a next step, the launching of Workpackage 2 (Workpackage 3 being a work-in-progress for the full length of the project).

ANNEXES

REFERENCES AND LINKS

REFERENCES

Delahaye, Pauline. 2021. « Rats, Mice and Humans ». *Linguistic Frontiers* 4 (1): 44-52.
<https://doi.org/10.2478/lf-2021-0004>.

LINKS TO WEBSITES AND DOCUMENTS

Société Française de Zoosémiotique: <https://societefrancaisedezeosemiotique.fr/>

DOCUMENTS

Abstract for Streams conference by Nelly Mäekivi and Riin Magnus “Relations between local people and the reintroduced European mink: an ecosemiotic analysis” (PDF version of panel – 27/01/2022)