

# **The impact of emotions on public attitudes and social acceptability of coal gas exploitation after the outbreak of the conflict**

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# Sommaire

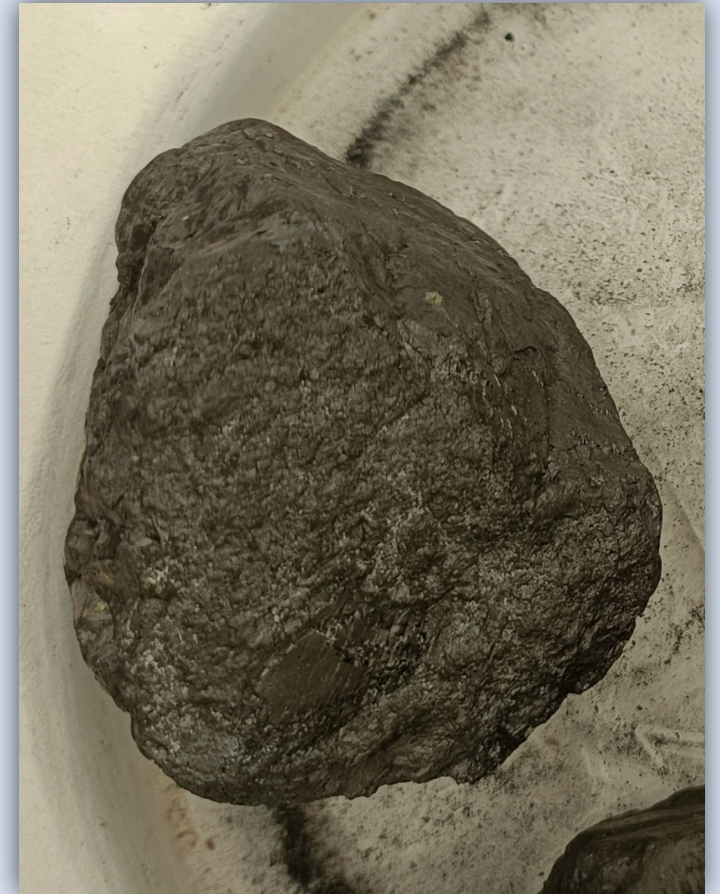
1. Theoretical framework
2. Problematic et hypotheses
3. Method
4. Results
5. Discussion

# Context

Exploitation of coal gaz in Lorraine

Mixed opinions :

- Former miners : positive representations
- local residents and people far from the operation: positive and negative representations
- Environmentalists : negative representations



# Acceptability

“A process of political evaluation of a socio-technical project that brings into interaction a plurality of actors involved at various scales and from which institutional arrangements and rules are progressively built that are recognized as legitimate, because they are coherent with the vision of the territory and the development model favored by the actors concerned” (Fournis & Fortin, 2015, p.15).

→ Related to acceptance

# Factors of influence

1

**The type of information:**

Varies from one person to another

Could influence social acceptability

2

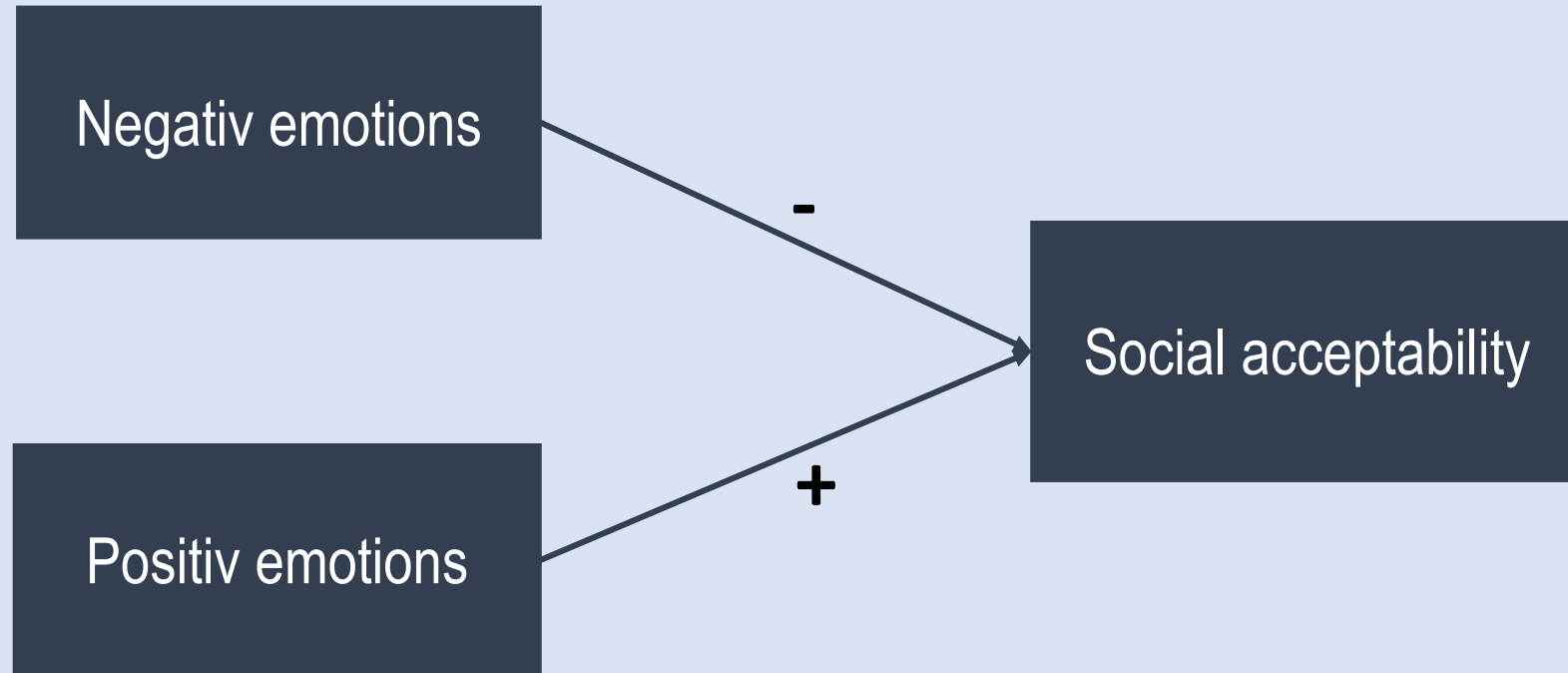
Physical distance

Social distance

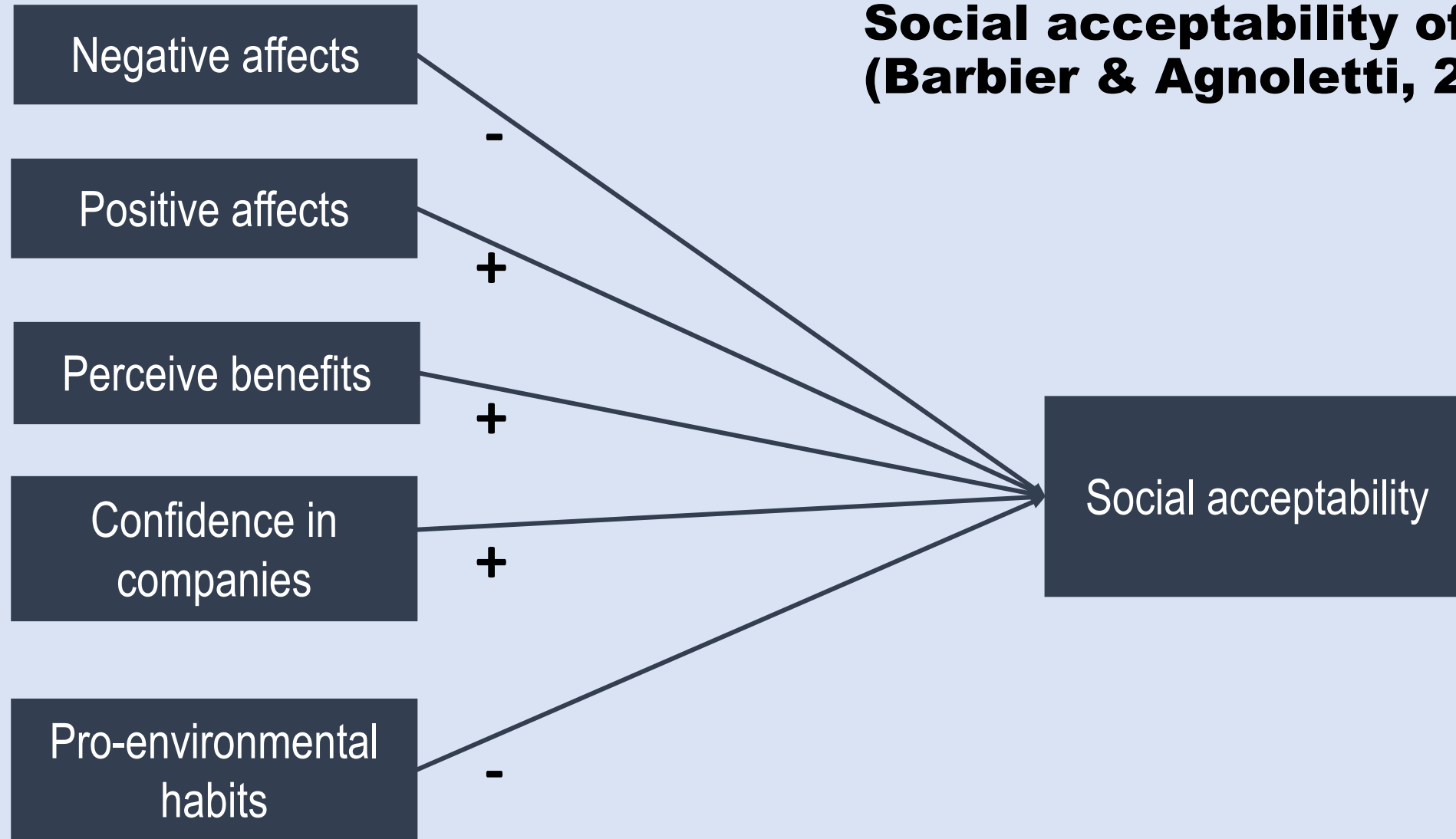
Social acceptability

# Factors of influence

3



## Social acceptability of coal gas (Barbier & Agnoletti, 2021)



**Aim:** Examine the possible evolution of representations of the Lorrain coal gas exploitation by focusing on the role of positive vs. negative emotions on the respondents' favourable vs. unfavourable attitudes towards the project and social acceptability.

### **Hypotheses :**

- Psychological distance from coal gas exploitation should influence social acceptability of this project
- Negative vs. positive emotions towards coal gas exploitation should influence social acceptability of this project
- The types of information respondents have about coal gas should influence social acceptability of this project
- Pro-environmental attitudes should influence the acceptability of coal gas extraction



## **Exploratory phase:**

- research interviews
- 9 participants

## **Confirmatory phase:**

- Survey
- Dependant variables: Acceptability; Confidence in industry, researchers, local elected officials and the government; Level of emotions of joy, surprise, relief, anger, anxiety and fear felt; Type of information; ~~Attitudes~~ pro-environmental Attitudes .
- 87 respondents

## Qualitative Analysis

<b>Mental state towards the coal gas exploitation project (27.5% of forms)</b>	<b>Gas representations (31.2% of forms)</b>	<b>Perceived risks of coal gas development (17.5% of forms)</b>	<b>Territory (23.6% of forms)</b>
To feel ( $\chi^2=9,75$ )	To hear ( $\chi^2=5,71$ )	To feel ( $\chi^2=20,36$ )	Region ( $\chi^2=55,97$ )
Anger ( $\chi^2=8,06$ )	To know ( $\chi^2=11,56$ )	Fear ( $\chi^2=6,46$ )	Place ( $\chi^2=20,01$ )
Worry ( $\chi^2=10,82$ )	To talk ( $\chi^2=7,79$ )	Explosion ( $\chi^2=24,33$ )	Close ( $\chi^2=9,82$ )
To arrive ( $\chi^2=8,06$ )	Natural gas ( $\chi^2=7,87$ )	Risk ( $\chi^2=33,66$ )	Abandonment ( $\chi^2=13,17$ )
Electricity ( $\chi^2=10,82$ )	Shale gas ( $\chi^2=9,03$ )	Dangerous ( $\chi^2=19,34$ )	To impact ( $\chi^2=13,17$ )
Advantage ( $\chi^2=13,61$ )	Coal gas ( $\chi^2=5,77$ )	Potential ( $\chi^2=19,34$ )	To touch ( $\chi^2=20,01$ )

*Table 1. Frequency of most significant words in the different classes of lexical analysis*

## Quantitative Analysis

	Social distance	Physical distance
<b>Acceptability</b>	Kendall'S Tall B=.314, $p<0.001$	Kendall'S Tall B=-.257, $p=0.003$
<b>Confidence in industry</b>	Kendall'S Tall B=.208, $p=.009$	Kendall'S Tall B=-.257, $p=0.001$
<b>Confidence in researchers</b>	NS	NS
<b>Confidence in local elected officials</b>	Kendall'S Tall B=.165, $p=0.042$	Kendall'S Tall B=-.277, $p<0.001$
<b>Confidence in the government</b>	Kendall'S Tall B=.201, $p=0.014$	Kendall'S Tall B=-.196, $p=0.019$

Table 2. Effect of social and physical distance on the acceptability of coal gas development



Figure 1. Effect of positive ( $B=.554$ ) vs negative ( $B=-.572$ ) emotions felt on the acceptability of coal gas (Hasselberger & Agnoletti)

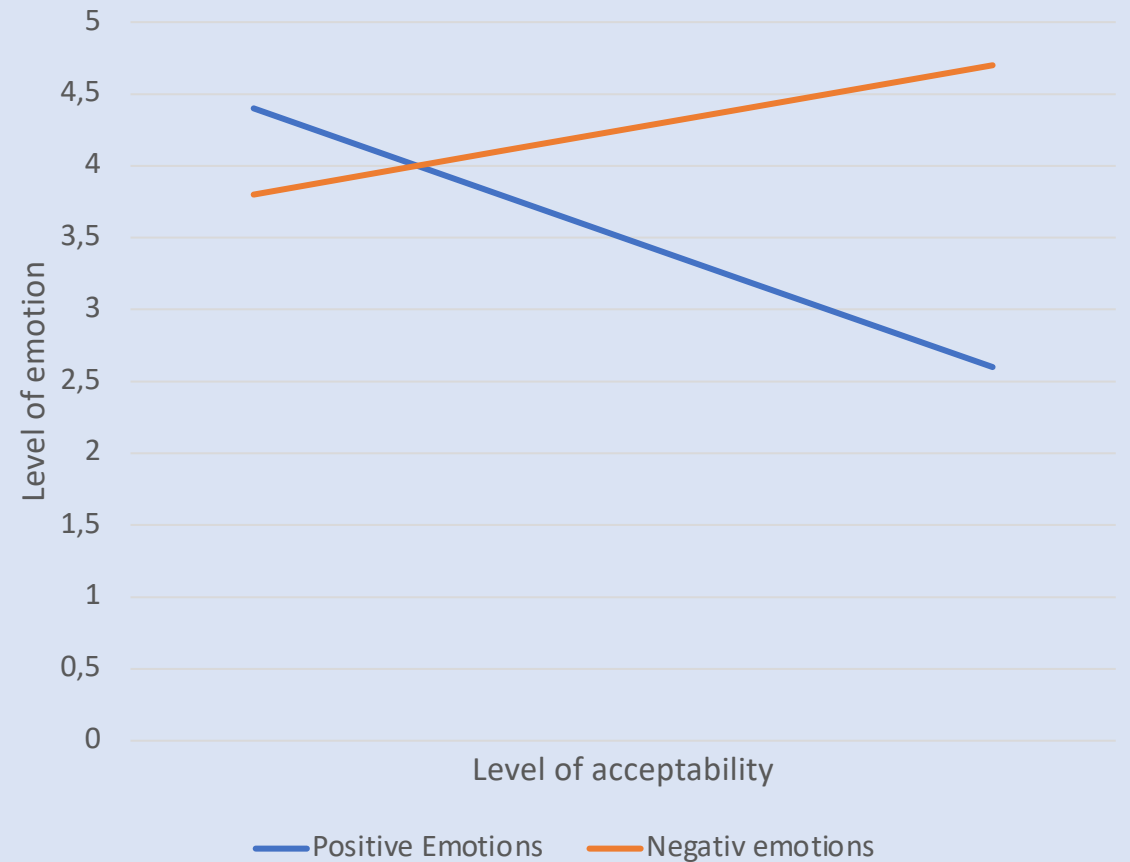


Figure 2. Effect of positive ( $B=.56$ ) vs negative ( $B=-.256$ ) felt emotions on the acceptability of coal gas (Barbier & Agnoletti, 2021)

	Social acceptability
<b>Dangerous</b>	Kendall'S Tall B=-.555, p<0.001
<b>Impact on the environment</b>	Kendall'S Tall B=-.456, p<0.001
<b>The fact that it requires a non-mastered technique of industrial</b>	Kendall'S Tall B=-.246, p=0.006
<b>France's independence from Russia</b>	Kendall'S Tall B=.315, p<0.001
<b>Reducing international trade</b>	Kendall'S Tall B=.342, p<0.001
<b>Reducing energy import industrial</b>	Kendall'S Tall B=.366, p<0.001
<b>Positive impact on the expenses of French households</b>	Kendall'S Tall B=.378, p<0.001
<b>Financial benefit for France</b>	Kendall'S Tall B=.433, p<0.001
<b>Reduction in the number of wars in the world</b>	Kendall'S Tall B=.434, p<0.001
<b>Reduction in industrial energy production carbon impact</b>	Kendall'S Tall B=.444, p<0.001
<b>Reduction in industrial global warming</b>	Kendall'S Tall B=.537, p<0.001

**Legend:**

- Related to the environment
- Related to the conflict
- Related to the economy

*Table 3. Effect of type of information on the social acceptability of coal gas*



Figure 3. Effect of environmental involvement on the acceptability ( $B=-.343$ ) of coal gas (Hasselberger & Agnoletti)



Figure 4. Effect of environmental involvement on the acceptability ( $B=-.218$ ) of coal gas (Barbier & Agnoletti, 2021)

## Negative perception of coal gas development

The acceptability of coal gas :

- Positively related to social distance and negatively to physical distance

→ Link to an abstract and fuzzy representation (Kim & Kim, 2021) .

- Positively related to the emotion of joy and relief and negatively to the anger, fear and anxiety

→ Negative ones link to the perception of a threat, positive ones to a success (Bettiga & Lamberti, 2018; Tcherkassof & Frijda, 2014).

- Related to the type of information.
- Negatively related to environmental engagement (Agnoletti, 2019).

Limits :

- Small sample size

Conclusion



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**Thank you for your attention!**