Knowledge, uncertainty and the future: negotiating shale gas exploration locally in Poland

Dr Aleksandra Lis, UAM, Poznań, Poland
Dr Agata Stasik, ALK, Warsaw, Poland
Adam Mickiewicz University in Poznań (AMU), Poland

Shale gas as a new challenge for Europe: rethinking the role of expertise in European integration processes
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Hybrid forums, knowledge deficits and the multiple uncertainties of resource extraction: Negotiating the local governance of shale gas in Poland

Aleksandra Lis\textsuperscript{a}, Agata Kinga Stasik\textsuperscript{b}

\textsuperscript{a} Institute of Ethnology and Cultural Anthropology, Adam Mickiewicz University, ul. Św. Marcin 78, 61-809 Poznań, Poland

\textsuperscript{b} Institute for International Management, Koźmiński University, ul. Jagiellońska 57/59, 03-301 Warszawa, Poland
Public perception of fracking

- Shale gas exploration successful in the USA and Canada, but raises worldwide controversies
- **Perception of fracking** investigated mainly through discourse/media analysis and focus groups
- We need to understand the process „in-vivo”:
  - What happens when **shale gas industry attempts to enter a specific village**?
  - How is the local residents’ perception shaped when they communicate with industry representatives?
  - What are the challenges of obtaining a SLO?
Craze for shale

- Assessed deposit in Poland: 5.3 bln m³ (EIA 2011), 346-768 mln m³ (PIG 2012), 38 mln m³ (USGS 2012)
- Widely interpreted as a potential geopolitical game changer
- Most intensive works: 2014; later, withdrawal of most of the operating companies
- Around 70 exploratory wells (300 needed to give a reliable assessment of deposits)
- One well = 15-20 mln USD
- Changes in regulation: pro-business changes in environment protection, (potential) tax money to local governments
Analysis of three public meeting held in the Polish countryside

- ‘in-vivo’ interactions between local communities, industries, state representatives, experts and activists

- beyond studying perception of hydraulic fracturing (technology):
  - shale gas development as a situation of resource exploration loaded with multiple uncertainties
  - all sides of communication process have some knowledge deficits

- ‘hybrid forums’ (Callon, Lascoumes and Barthe 2009): spaces of co-creation of the shared understanding of facts, space and time crucial for imagining common future, important for SLO
Sites

1. April 2012 in Przywidz, northern Poland
2. January 2013 in Żurawlow, eastern Poland
3. May 2013 in Mikołajki Pomorskie in northern-eastern Poland
Hybrid forums and uncertainty

- gather heterogenous actors
- help to reveal and explicate uncertainties and multiple knowledge deficits in interactions:
  - What does shale gas exploration mean to a local community? Can a common future with the industry be imagined? Can an SLO be granted?
  - the main source of uncertainty: nobody knows the amount of exploitable resource before one started to drill
Search for common knowledge

- Uncertainty about the quality, quantity and location of shale gas locally:

Ex. 1.: “MP: The next question and the most important one for us: whether, and in which place exactly the drilling is planned in our municipality. Please, give me a specific answer.

Geologist: Unfortunately I cannot give you an answer //rumblings in the room//. Wait a second. I cannot answer whether and when the drilling will take place because the company has just finished to collect data. Don’t expect us to make decisions before we interpret these data.” (Przywidz)

Ex. 2:

“CR: At this moment, we have only 44 drills for 112 companies with licenses. Based on that, nobody can tell how much gas there is and whether it will be economically viable to produce it. This stage of exploration is the longest one and burdened with the highest risk. After five years it may turn out that there is no gas there, and it will all end up with nothing! (Mikołajki Pomorskie)”
Search for common knowledge

- CR/geologists’ perspective:
  - drilling as an epistemic challenge: „we are here to obtain knowledge”
  - attempt to stop other participants from analyzing potential social and political consequences of such a study („we first need to know, then we can start planning”)

- Residents:
  - want to negotiate the „terms of co-existence” at the very moment of the meeting: after the deposit will have been located with a great financial cost, their negotiation position will be much weaker
Uncertainty about waste management and specific benefits for the communities

Ex. 1:

MP: What are you going to do with the liquid waste produced in the process?
CR: It will be refined first... I can’t tell you what technology we are going to use, as it depends on what kind of waste is produced.

Ex. 2:

MP: What financial incomes, incomes from taxation do you expect from this investment? How much have the community already got? Have you done any financial simulation?
CR: At this moment we don’t know if we are going to produce any gas at all, and how much. It’s impossible to assess what you are asking us about.
Search for common knowledge

„Abstract shale gas” vs „our shale gas”

► CR/geologists’ perspective:
  • Offer knowledge about „shale gas / fracking in general” (e.g. geological history, schemes of fracking operations)
  • Assume that lack of understanding of these processes causes unrest
  • Unable to answer very specific questions

► Residents:
  • Need information which make it possible to imagine a potential co-existence with shale gas in the given location
  • an abstract notion of „the fracking technology” is not the main problem, but rather uncertainty about the way of applying it in a specific location and its local consequences
Search for common knowledge

- lack of knowledge about (changing) regulations and how they are going to be applied

MP: If drills will be in every 2.5 km, how you are going to reach them? How are you going to use the land?

CR: At this moment, we are going to lease the land, but at the stage of industrial production it will look differently. I don’t know how it is regulated by the Polish law, but I guess that it will be different than now.

MP: Relocation is possible according to the law. And here we have agricultural land, often inherited from past generations, and today we can see how people’s property is taken away from them by a single bill of law... (Mikołajki Pomorskie)
Search for common space

- CR/geologists’ perspective:
  - Regions (potentially) rich in shale gas
  - Territories covered by drilling licences
  - Statistical analysis

“CR: Statistics show that the efficiency of our exploration activities is around 80%. Not in every case do we manage to discover huge volumes of resource. It is like searching a needle in a haystack.”
Search for common space

- Residents’ perspective:
  - How will drilling be organized? How will it change people’s experience of the place?

Ex 1

„MP: I have a question and I demand a concrete answer. If it turns out that there is a chance for commercial exploitation of shale gas here, what is the possible scale of it? How many drills would be made and what would be the distance between the wells?

CR: If we found something here we would make another exploration round - 5-10 wells in one locality but this is complicated.

MP: But what does it look like in practice? Do you drill every 2 km or every 200 m?

CR: It all depends on the efficiency of the rock. We do not know it yet.”

Ex 2:

“I would like to know if the drilling rig is going to be in my backyard or in the neighbour’s backyard or maybe we are all going to have it in our backyards.”
Search for common time

- Shale gas:
  - „not such a novelty”
  - Underground time of shale gas formations (millions of years)
  - Time of knowledge production on shale gas as a resource (from 1970’)

- Fracking:
  - New vs. proven technology
Residents:

„the village of Žurawłów is one of the oldest documented villages in the region. My stay here has also been documented for a long period of time, and thus, me and all of us have a right to decide about what is going on in this place”

„In 30 or 40 years you will leave and we will stay here, just like Native Americans, with polluted environment, closed in our houses and with holes in the ground”

CR:

„We can discuss conditions when we decide about production... We don’t take this decision yet. As we said very clearly, this stage is only explorative.”

„We want to discuss only explorative stage, as there is no point in counting our chicken before they hatch...”
Conclusions

- Uncertainty is generated in multiple ways: the reservation connected to the „novelty of technology” or its impact on the environment is just a top of the iceberg. The conclusion that hostility towards fracking is there because of the knowledge deficit on the side of the community members is too limited, focused on the easiest thing to spot.

- Residents and activists are aware of the hybrid nature of uncertainty: they bring up simultaneously issues of regulations, technology, environment, economy, (mis)trust and agency. They refuse to discuss „technological aspects” only.

- Company representatives, not having enough knowledge themselves, are unable to play the role of experts who are able to answer every question.
Conclusions

- Inhabitants, companies and experts operate on different temporal and spatial scales which becomes apparent in interactions;
- SLO is also an outcome of such in-vivo interactions during which uncertainties are revealed, difficulties in answering all the questions constitute a big challenge in getting an SLO
Thank you

Dr Aleksandra Lis, alis@uam.edu.pl
Dr Agata Stasik, astasik@kozminski.edu.pl