



Nuclear fission: Economically sound or inherently unsafe?

Theoretical background on and overview
of the framing of nuclear fission

Framing and Counterframing

Theoretical background

Framing

“To frame is to **select some aspects of a perceived reality** and make them more salient in a communicating text in such a way as **to promote a particular problem definition, causal interpretation, moral evaluation and/or treatment recommendation** for the item described”

R.M. Entman (1993)

Framing: Toward clarification of a fractured paradigm

Framing



Three Mile Island Reactor, Unit 1
Picture by Exelon Corporation

Source:

<http://www.exeloncorp.com/PowerPlants/threemileisland/Pages/profile.aspx>



Three Mile Island Reactor, Unit 1
Picture by Greenpeace

Source

http://www.greenpeace.org/switzerland/de/News_Stories/News-Archiv/nuclear/-fda429f3eb/

Framing

Frames draw on cultural elements to tell a story

(Gamson & Modigliani, 1989; Van Gorp, 2007, 2010)

- Myths and legends
David and Goliath, Pandora's Box, ...
- *Dramatis personae*
Hero, innocent victim, villain, damsel in distress, ...
- Metaphors, proverbs and sayings
- Etc.

→ Quickly convey a whole association of meanings

→ Reader will complete the story based on the provided cues

Framing

Most often, frames *problematize* the issue, as the public gives more attention to problems.

- **News media:** higher news value
- **Stakeholders:** get the issue on the public and political agenda, and keep it there.

“If we close the nuclear plants, we’ll be lighting our houses with candles in ten years”

“The power plants were built in the 1970s, with the technology and know-how from that time. To illustrate: back then, computers worked with punch cards”

Problematization is not welcomed by all stakeholders

Counterframing

Same facts, different conclusion:

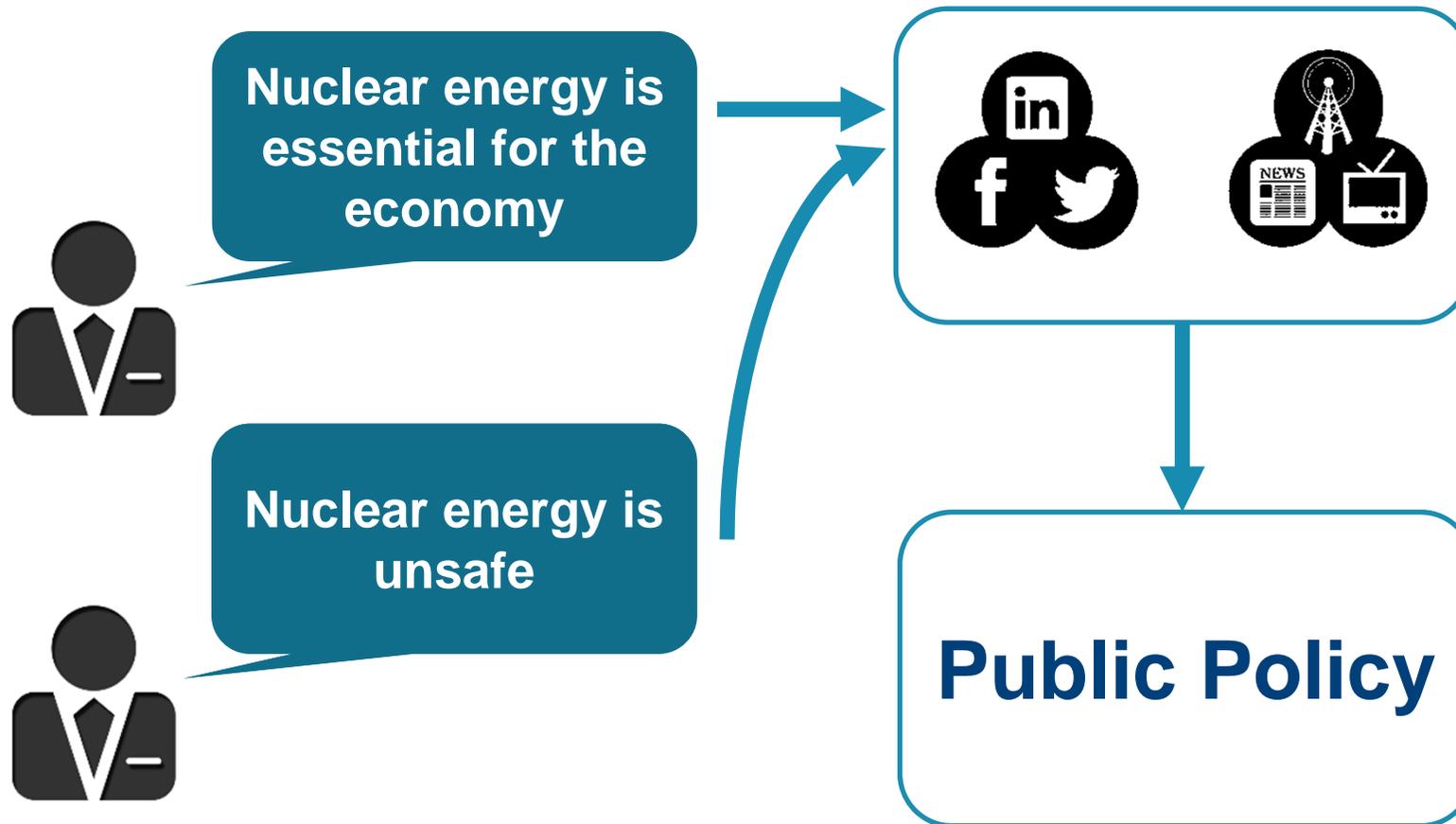
Issue is less or even non-problematic

“The statistics of traffic casualties show that premium grade petrol is a deadlier assassin than enriched uranium”

“Nuclear power is cheap, secure and eco-friendly. No other source of energy performs better”

Deproblematization is also not always the preferred solution!

Framing in public debate



Framing of nuclear fission (power plants)

Method

Inductive framing analysis
70 sources
548 framing devices

Newspaper articles
Belgian newspapers
2010-2015

Stakeholder releases
Pro / Neutral / Contra

Frame Matrix

Frame	Counterframe
Russian Roulette	Witch Hunt
Atomic Bomb	
Dinosaurs	Cutting Edge Technology
Snake Oil	Sidekick
	Superhero
Liars, Cheats and Thieves	The Professional

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Russian Roulette

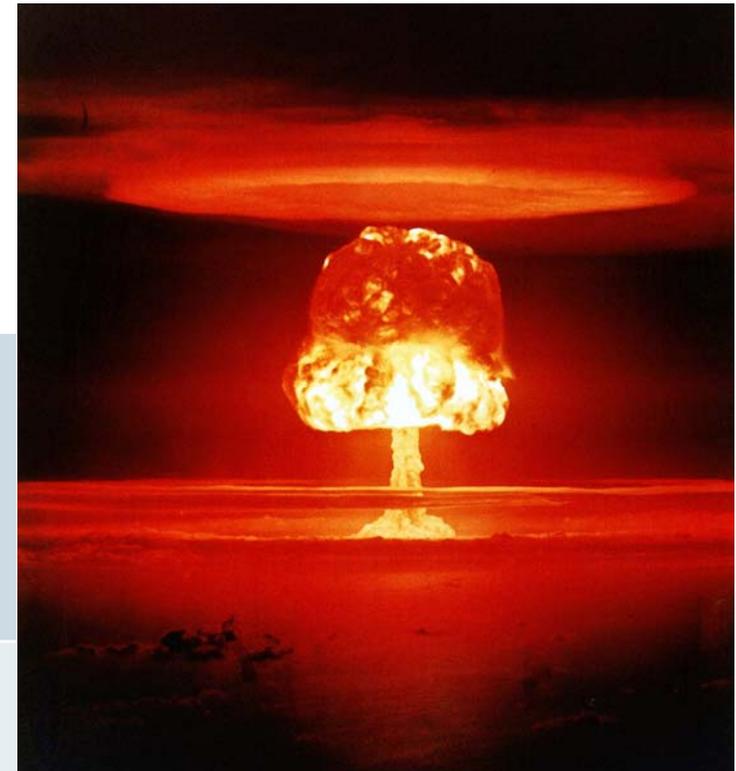
<i>Nuclear Fission...</i>	... is a dangerous gamble with human lives: it is a certainty that something will go wrong one day. The only question is when and who will be the victim.
<i>Solution</i>	Close down all nuclear power plants immediately, before more people get hurt.
<i>Catchphrase</i>	<i>The chance of a major nuclear accident is five to fifty times greater than the chance of winning the lottery. Even so, thousands play the lottery each week, and there often is a winner</i>



Picture: "Russian roulette" by Ahmet Erdogan

Atomic Bomb

<i>Nuclear Fission...</i>	... is inherently linked with military uses: the technology can be used to create atomic weapons and the waste can be used to make dirty bombs.
<i>Solution</i>	To truly stop proliferation, we need to stop using nuclear power as well.
<i>Catchphrase</i>	<i>“Nuclear power was birthed from nuclear weapons. Almost all countries that have developed nuclear weapons, have done so posing the projects as “civil” nuclear programs”</i> <i>“It is very easy to make dirty bombs from radioactive materials from nuclear power plants”</i>



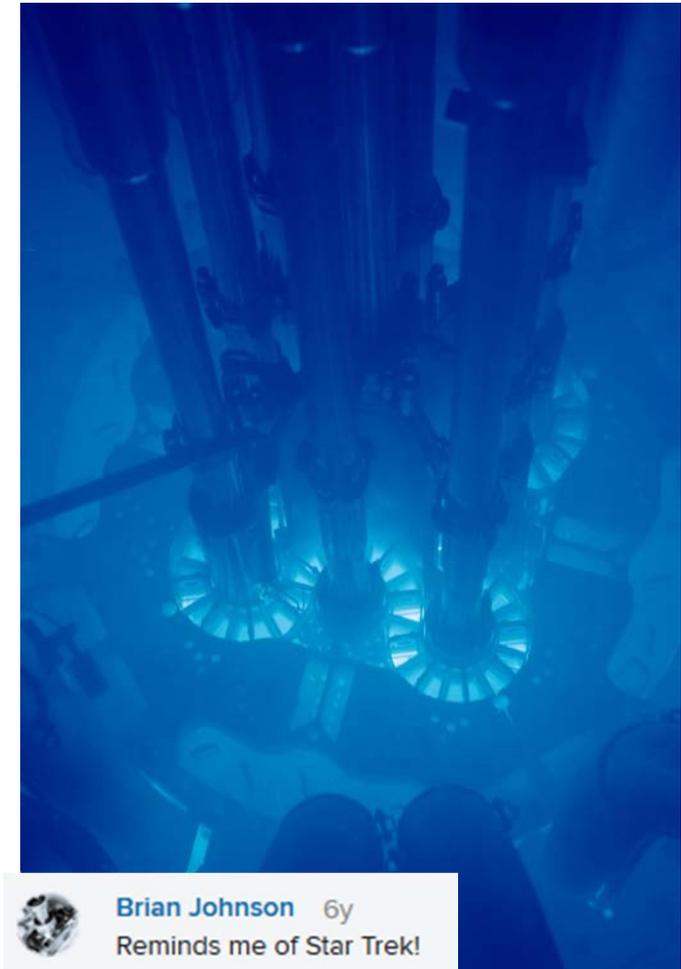
Dinosaurs

<i>Nuclear Fission...</i>	... is a relic of the past. It used to be the dominant source of energy, but now it is outdated and not up to standards. This combined with the limited uranium supplies ensures that nuclear fission will go extinct sooner or later: it has no real future.
<i>Solution</i>	Close down the nuclear plants and start investing in the energy sources of the future.
<i>Catchphrase</i>	<i>“The power plants were built in the 1970s, with the technology and know-how from that time. To illustrate: back then, computers worked with punch cards”</i>



Cutting Edge Technology

<i>Nuclear Fission...</i>	... is innovative and way ahead of its time. Science will find ways to improve nuclear fission even further, eventually turning flaws into strengths.
<i>Solution</i>	Invest more in science, so it can keep improving nuclear energy.
<i>Catchphrase</i>	<i>“Don’t judge nuclear energy on what it was, but on what it is and can become”</i> <i>“Because of its high safety factor this innovative technology [i.e. subcritical reactors] has a promising future”</i>



Snake Oil



<i>Nuclear Fission...</i>	... is not the solution to our problems, even though it is presented as such: nuclear energy is not green, is not cheap and is not secure.
<i>Solution</i>	“Buy” the real solution: green energy and other forms of alternatives
<i>Catchphrase</i>	<p>“Four times the current number of 436 commercial nuclear reactors are needed to decrease worldwide CO2-output by just 6%. Too little, too late”</p> <p>“Nuclear energy is not sustainable: it puts a high mortgage on the well-being and health of our children”</p>

Sidekick

<i>Nuclear Fission...</i>	... not ideal, but the best we have got at this time. Using nuclear fission will buy us time to develop better sources of energy.
<i>Solution</i>	Keep using nuclear power for the time being, but invest in alternative sources of energy so we can get rid of nuclear energy eventually.
<i>Catchphrase</i>	<i>“Nuclear phase-out is a luxury our country cannot afford at the moment”</i> <i>“Nuclear energy is a necessary intermediate step towards a more sustainable energy supply”</i>



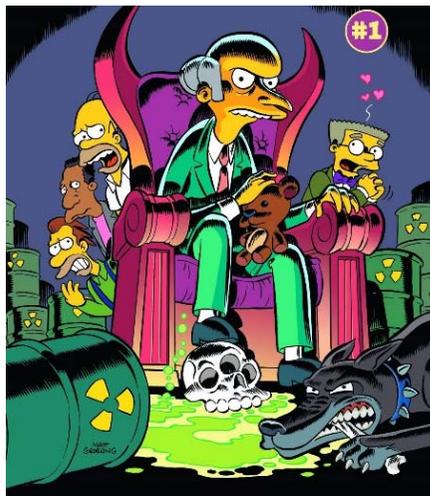
Superhero

<i>Nuclear Fission...</i>	... solves all problems regarding clean and secure energy, it bolsters local economies and secures countries' independence.
<i>Solution</i>	Keep using nuclear energy and keep investing in more nuclear power plants
<i>Catchphrase</i>	<i>"Nuclear power is cheap, secure and eco-friendly. No other source of energy performs better"</i>



Liars, Cheats and Thieves

<i>Nuclear Fission...</i>	... is not to be trusted, as the owners of the plants are shady figures, who will do anything to earn money – even endanger public health and safety.
<i>Solution</i>	Nuclear power plants can stay when they are operated and controlled by trustworthy and objective people, and if nuclear energy can compete in the free market.
<i>Catchphrase</i>	<i>“The major problem with any plant is that the operators start fiddling with the risk estimates and try to keep all costs down”</i>



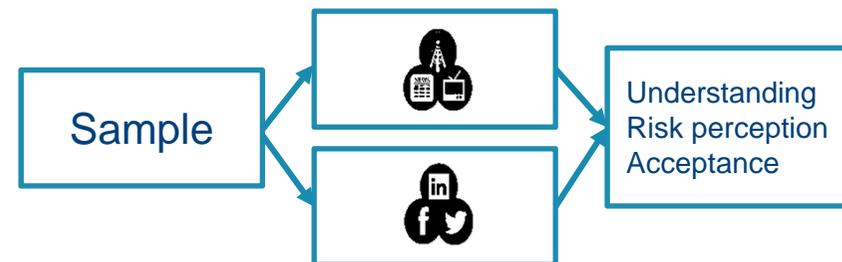
The Professional



<i>Nuclear Fission...</i>	... is operated and controlled by highly-trained, highly-skilled, responsible experts, who work in an environment that is imbued with a culture of nuclear safety.
<i>Solution</i>	Place your trust in the experts, their long training, their experience, their objectivity and neutrality.
<i>Catchphrase</i>	<i>“The safety in a nuclear power plant is determined by the professionalism of the operators, who are continuously trained and highly imbued by a culture of nuclear safety”</i>

Next steps

- Focus groups
 - Expert audience
 - Lay public
- Content analysis
 - Newspapers
- Effects research





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