

# Beyond confrontation: the triialogue strategy for mediating climate change



Hot Science & Global citizens project  
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# Linear Communication strategies: Houston, there is a problem

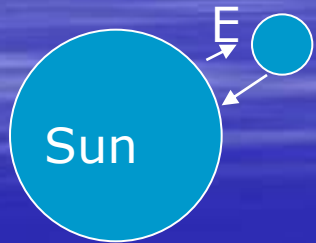
- Linear, top-down, one-way flow of knowledge doesn't work, for complex institutions with complex messages in complex situations. Museums communicating about climate change need adequate communication, more than 'effective' communication.
- Research into what people think about complex issues like climate change needs to tap into complex, dynamic meanings
- There needs to be a balance between 'thick' communication (complex, dynamic, interactive, multi-media) and 'thin' communication (standardised, one-way, replicated and multiplied). That balance needs to be tilted towards 'thick' communication, in situations such as research into and dissemination of climate change messages by public institutions (e.g. museums and science centres, public scientific bodies.)

# Museums as complex communicators: The AM statement on climate change

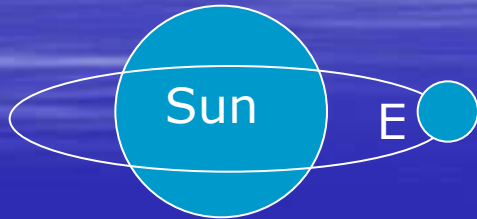
- In its role as a leading scientific institution, the AM recognises that climate change poses a serious environmental, economic and social threat to our current way of life and to the security of future generations around the globe...
- What can we do about climate change? AM scientists are making significant contributions to the science that will help improve models for predicting further climate change...
- How can we minimize the effects on climate change caused by our current way of life? The three R's are a good way to start: Reduce, Repair and Recycle

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- The AM is more than a leading cultural attraction in Sydney: it's also a hub of information, education, resources and research. Find out more about Australia's first museum

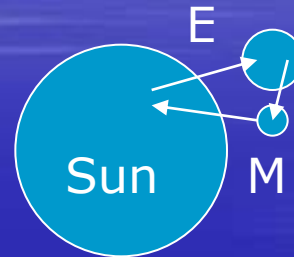
# Three-body analysis: Poincare's model



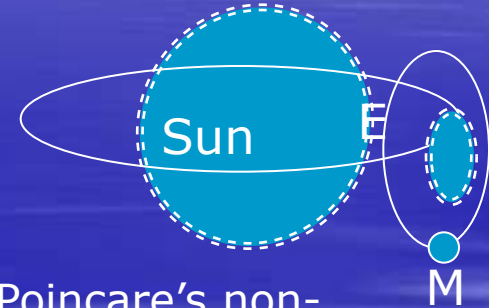
2-body system



Kepler/Newton ellipse: gravity v. momentum



3-body system plus moon



Poincare's non-determinate system

- Behaviour of solar system solved as interaction between gravity and momentum (inertia), assumed to be in a state of permanent balance
- Newton & Poincare treat each body as a point-mass, i.e. as though it had only one dimension. But bodies are 4-dimensional.
- The 3-body problem had practical impact on an aspect of climate system: predicting tidal phenomena. It may be a factor in a climate-change related phenomenon, thermohaline circulation (ocean currents) Egbert & Ray, 2000, Wunsch 2000.
- This system may be self-similar at different scales: i.e. fractal

# 3-body models and communication research

- Humans are not celestial bodies, but their highly complex interactions can be understood as systems.
- Scientific models abstract from and represent similarities across physical phenomena. They can do the same for social and communicative behaviours.
- Triadic models of communication are increasingly used to capture more complexity e.g. Gunaratne 2002

# Triologue research in the HSGC project

- Assumption: the engine of good communication is knowing the complex relation between what you want to say and how things are
- The 3-bodies we proposed for a minimally complex interaction were Science, Museums and Humanities (communications), each represented by a single exemplary (not 'typical') individual: for science, Prof David Karoly and Prof Jann Conroy; a senior member of staff from each museum; and Prof Bob Hodge, present at all sites.
- Each representative had significant prior experience of the other areas of expertise, and they changed over the process of the triologue. In this sense they were each fractals of the larger structure.
- Each triologue took 3 hours, recorded on video, held at each partner institution (Australian Museum, Melbourne Museum: Liberty Science Centre, Powerhouse Museum, Questacon) Unfortunately the Questacon recording had fatal technical problems.
- Each triologue was a series of relatively self-contained discussions, usually around 3 minutes, focused around an object or following a theme generated by the object
- The approximately 12 hours of video footage were edited by Dr Juan Salazar with Sally Leggo down to 7 separate videos, each of around 7-10 minutes. Each video had elements from 3 or 4 sites, always including both a museum and a science centre. In this way they were fractals of the sector as a whole, including both kinds of institution.

# Triologue Analysis and extrapolation

- Each object discussed in a triologue has been fractally framed, so that object-plus-discussion can be subjected to intense and detailed analysis.
- Each theme, as related to the context and the perspectives of the speakers, can be subjected to intense and detailed analysis.
- Each higher level can be analysed at the appropriate granularity in terms of the recurring set of features of the fractal structure.
- The set of texts at each level up to the full corpus of triologues can be aggregated and analysed in the same terms. The full set of triologue texts will be capable of producing statistically significant conclusions.

# Triologue uses

- For researchers: to produce a large set of texts from which subtle, complex and sometimes unexpected interpretations may be derived.
- For museum staff: videos may be the focus of workshops, either in house for individual institutions or for staff across institutions
- In displays. The current videos have not been produced to this standard or with this use in mind, but the full set of recordings may become a resource, re-edited accordingly.
- As models. For purposes of research, the triologues featured a scientist, a museum staff and a communication expert. As parts of exhibitions they could use different 3-body systems: e.g. scientist, museum staff and member of public, around specific objects or exhibits. These could be used where currently videos in site are monologic, designed to speak to members of the public.
- An interactive version could be developed, in which members of the public could become the third body, with electronic space for them to insert their voice.



# Analysing trialogues

1. David: One of the things about this project I found interesting is, how we explore, with museums, the level of engagement with the community...the greater level of engagement, but without undermining that sense of independence and trust that has been built up over probably the last 100 years
2. Wayne: We should certainly be a source of conversations, and people gathering, and information sharing, and we have to figure out [how]
3. David: I guess my view at the moment is that much of that engagement in the past has been for the community to come to the museum and take away information
4. Wayne: We have been traditionally pushing information to the unwashed, OK, in a way the masses, you know...
5. David: Partly washed... (Laughter)
6. Wayne: Partly washed, depending on the day of the week!
7. Wayne: People are generating their own content, they are as much empowered to generate the information, it's much more of a dialogue between them, and we just provide the facility to allow that dialogue to occur.