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Climate Change - what a tragedy?

Brenthel, Adam

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LUND UNIVERSITY

PO Box 117
221 00 Lund
+46 46-222 00 00

Science Documentaries on Climate Change:

What a tragedy (?)

Keywords: climate change, science documentary, public engagement, Aristotelian poetics

Introduction

I will not show many images but try to talk about them in order to understand them in new ways. My aspiration with this paper presentation is to offer one example where it seems reasonable to view images as some else than representations of a referent. The images that I will talk about are science documentaries on climate change that is shown on television and the Internet. My question is whether there are other affects of dramatized scientific imagery than the more slow discursive effects on the public opinion? And this paper will propose an alternative to see and analyze these documentaries as representations of the world by approaching them as theatrical plays instead. I will look at the public as if it wore a theatre audience. I find this affects somewhat neglected in science studies and media studies that always seem to approach them with a discourse analysis. I view these documentaries, as tragedies and my analysis will hopefully justify this. The documentaries I am thinking of are *An Inconvenient Truth*¹ and many similar documentaries that followed it and either agree with it or challenge it. But no matter if they agree or challenge it they are all dramatized in similar ways to affect the audience in other ways than just intellectually. I will call all these documentaries for *Climate Dramas* and they claim to recount for a purely scientific view on climate change. Another reason why I believe that it is worthwhile for the symposium *The Image in Science* to scrutinize these dramas and its affects is that I have found examples of a similar kind produced by scientists themselves. The project that drew my attention to this question in the first place was the WorldView project at Linköping University, Unfortunately I cannot show these images as they are projected in an immersive doom but the project describe their ambitions in short as:

*"With room for at least 100 visitors, the theatre doom at the Centre for Visualizations in Norrköping offers an environment for border-crossing plays. The experience of being surrounded by sound and sight leaves no one unaffected, which is particularly import when addressing as important societal concerns as climate change."*²

Note the expressions; *border-crossing play, experience, leaves no on unaffected* and *societal concern*, these are words and phrases that is used when talking about the plays in the theatres or maybe artworks and this is only logical when looking at the lineage that connects this project with the material I have been looking at.

¹ *An Inconvenient Truth* by Al Gore (2006)

² "Med plats för drygt 100 besökare erbjuder domteatern på Norrköpings Visualiseringscenter en miljö för gränsöverskridande föreställningar. Upplevelsen av att befinna sig omsluten av ljud och bild lämnar ingen oberörd, något som gör det särskilt angeläget för att ansvarsfullt lyfta viktiga samhällsfrågor såsom klimatförändringar."

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And the WorldView project at the Centre for Visualizations in Norrköping is not unique in its ambitions, a number of centres for visualizations are being planned and built in many places in Sweden and there seem to be a shared belief that it is possible to communicate science to the public with variety of spectacular effects. It is thought that the aesthetic performance does things that traditional science communication fail to do. First, lets look at *the* climate drama, the one that now has many followers. This is the trailer to *An Inconvenient Truth*, you have probably seen the whole film before, and this is just to remind you of the cadence of the film. <http://www.youtube.com/watch?v=b58HSyjN6k8>

Progression of the Climate Drama

This is how the climate dramas often is performed – it starts with an aerial photo of beautiful islands surrounded by blue water and coral reefs; we enter this Eden-like world through the cumulus clouds. Next, a boreal forest with a lake or river meandering through it, then a mountain area with patches of white snow, animals on the savannah, whales in the oceans, natives in the outback. The music in the background turn from peaceful to threatening dense and maybe a cry from nature accompany the imagery of the disappearing pastoral. A voiceover starts to explain what we are witnessing as we see chimneys that belch out smoke, heavy traffic on an almost jammed highway and coalmines scarring the earth. We see a young woman in her car, people rushing on a big city street, an aerial photo from a smoggy mega city. This compilation of images is the *first scene* in the climate dramas if we see it as a theatre play. This first scene show the elements that due to their “nature” inevitably will come in conflict. The many aerial photos give the audience the feeling of seeing the world as it really is. It then introduces a scientist or a representative who can recount for how science describe what is happening, a graph of rising carbon dioxide is shown, first we see only the section covering the last 50 years or so, then 200 and finally thousands of years to conclude that this is neither cyclic nor natural but only final and man-made. Climate dramas often linger in this moment; it is the moment of tragic error and it makes up the main part of the climate drama. A prognosis is shown of how the carbon dioxide concentration will rise dramatically as an extrapolation of the historical curve, the worst-case scenario is compared with the least bad case scenario, and neither is a bright future. The message is that we have not seen the effects of our committed error yet; thresholds may be crossed causing ecological breakdowns, the Gulf Stream might reverse and Pacific islands will be drenched. The climate dramas do not change scene setting until towards the very end of the drama; this is where the audience is presented with a technological solution to the threat. The only thing we can do is to develop and use new clean technology. A question that I will return to later is whether this solution to the tragic error is a resolution that Aristotle would approve of. I have looked at a number of these climate dramas, on DVD, television and the Internet and they all share this structure more or less; pastoral entrance, lingering on the error of humankind and the technological resolution. Now let us compare these climate dramas to the Attic tragedy, which Aristotle considered to have been organically evolved to become the perfect drama, he even claimed that the Attic “tragedy ceased to evolve, since it had achieved

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its own nature”³. When Aristotle wrote the *Poetics* he described the tragedies played in Athens 300BC, but the concepts developed and the structure prescribed by Aristotle are still used and lively discussed.

The structure of the proper drama

Today when we are talking of the dramatic structure of films or plays we often refer to Gustav Freytag, inspired by Aristotle, he tells us about the proper structure of the tragedy in his book *Technique of the Drama* from 1900. He writes that the tragedy “rises from the introduction with the entrance of the exciting forces to the climax, and falls from here to the catastrophe”⁴. The progression of the proper tragedy should have a pyramidal shape when plotted like a graph.

The exciting forces are introduced and the scene is set as we sweep over pastoral landscape, grazing cattle, traffic jams and belching chimneys. It is not obvious who the main characters are but Aristotle writes, “tragedy is an imitation not of men but of action and of life, and life consists of action (...) and (...) without action there could be no tragedy, but without character there could be”⁵. It is action that is key to the tragedy not the characters. The actions that come in conflict in the *attic tragedy* must be intrinsic to the elements of the drama and this is most easily done when making the main characters all part of a well-known family, explaining why the tragedy often revolves around one family which makes the relations and conflicts obvious to anyone. The audience of *climate dramas* know how the conflict will be developed as we see heavy traffic and melting glaciers, the two make up a unity that necessarily will come in conflict and we can easily see us selves as drivers of one of the cars in the traffic jam. The tragic error is evident. Pastoral nature comes in conflict with industrialized culture. Almost everyone will recognise himself or herself in this conflict and this is the recognition within the audience with what is shown on stage. Recognition is a precondition to become engaged in the drama, to be struck by it and eventually to learn something from it according to Aristotle. At this point the curved line that describes historical carbon dioxide concentration is extrapolated from the present concentration towards the possible future and this imbue fear in the audience. According to Aristotle it is necessary that the threat seem plausible to have its proper affect. This is achieved as both the worse case scenario as well as the best-case scenario is threatening and leads to an uncertain future. In the plot everything appears as necessary; there is little rescue to hope for, the audience is affectively struck as they recognize their part in the drama. Aristotle writes “tragedy’s most potent means of emotional effect are components of plot, namely reversals and recognitions”⁶. The result of this movement from bad to worse and the recognition in the audience results in a fully developed *hamartia*.

³ Aristotle. *Poetics* 1449a15

⁴ Freytag 1900

⁵ Aristotle, *Poetics*. 1450a16-25

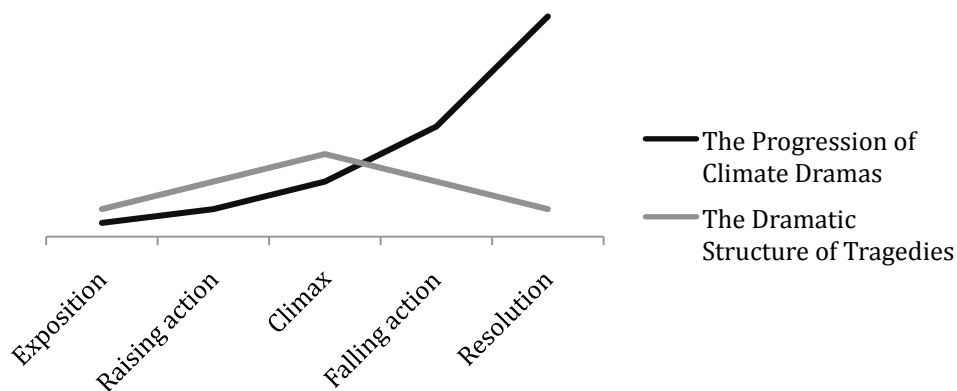
⁶ Aristotle, *Poetics* 1450a31-33

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The philologist Brenner writes, “Aristotle’s *hamartia* denotes a wrong action committed in ignorance of its nature, effect and which is the starting point of a causally connected train of events ending in disaster”.⁷ *Hamartia* is a central concept in the poetics and it describes what happens to the main character, and the audience who identify herself or himself with the main character. The *hamartia* makes up the turning point of the tragedy, the *peripeti*, and the result of the *hamartia* has fatal consequences for the main character personally. In the climate drama we become subjected to our necessary destiny, now it is inevitable we are told, sea level will raise, no more ice on Killimanjaro.⁸ And no matter what you do it seems impossible to stop emitting green house gases, every alternative to fossil fuels seems to lead to other emissions, starvation in Africa or deforestation in Amazonas, there is no way out and there is no outside, the audience is sucked in to the play. And this is also the point in the progression of the drama where the climate dramas diverge from the Attic tragedy. When the Attic tragedy leads to very tragic but still beautiful resolution from here on, the curve of climate dramas point infinitely upwards towards the unknown, carbon dioxide will rise and rise. The audience is left with the tension between manifest error and an absent solution.



But in the Attic tragedy *hamartia* must be followed by some kind of resolution, otherwise the tragic error is eternal and then more like the *original sin*; the audience must not be left hanging in guilt. The *hamartia* should be the *peripeti* of the drama, from here on the intrinsic elements of the drama should proceed in their necessary trajectory towards resolution and the resolution must not come about by divine interference. But the climate dramas still linger on the error. Climate dramas do not offer a resolution that comes from the trajectory of the intrinsic elements, but rather the opposite when “clean tech” is dropped as the solution from heaven towards the very end of the story. In the introduction of the story technology

⁷ Brenner. p.99

⁸ Brenner. P. 63

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was a part of the conflict, suddenly it is the solution, it is a *deus ex machina* solution that Aristotle might not have approved, he writes; "Clearly the denouements of the plot should issue from the plot as such, and not from a *deus ex machina* (... which only) should be employed for events outside of the drama - preceding events beyond human knowledge (...) for we ascribe to the gods the capacity to see all things."⁹ It's a question of whether the audience believe that technology that will save us; otherwise there is no possibility to cathartic affects of this play. I will return to this. First lets look at the means of producing a dramatic imitations.

Expressions in Attic tragedy and climate drama

Aristotle concludes that the combination of three media exclusively belong to both comedy and tragedy; rhythm, melody and metre. Today, when genres are breaking up and mix constantly, it is hard to claim that there is any combination of expression that exclusively belongs to the climate dramas. But it is apparent that the climate dramas are using expressions from the theatre and films when conveying what they claim to be science and facts. *An Inconvenient Truth* spread globally and instantly the same message that natural scientists had tried to convey for 20 years without really reaching out. And when looking at *An Inconvenient Truth* and other climate dramas they all have thematic music and returning melodies, there are monologues and dialogues, and there is even a choir that deliver a refrain that return over and over again.

Representation in the Attic Tragedy

When I am approaching the climate dramas I am not trying to reveal something behind the scene, because there is nothing behind the scene from the vantage point I use to analyze my material. What I want to do is to propose an alternative to approach the climate dramas as either good or bad representations of the world. *An Inconvenient Truth* was accused of being unscientific and a judge in British High Court ruled that it contained at least nine significant errors.¹⁰ Even though it has been juridical established that it is a flawed representational of the world, it still a very popular reference and almost a model for other science documentaries on climate change. The simple reason is its form and not its claims. But it is not really the film made by Al Gore that is the model, the moulding form is more than 2500 years old.

The Aristotelian poetics denounce that the performed tragedy is representational of the real world. The tragedy is mimetic but not representational. The difference is that the representation relates to actual events, while the imitation to events that might occur. Aristotle explains, dramas are more philosophical and more elevated than representations of history, since poetry relates more to the universal, while history only relates to particulars."¹¹ When science documentaries are dramatized with melody, rhythm and metre, and we experience them as if they wore tragedies and recognize our own part we stop questioning its representational relation to the world. Instead we enjoy it as the play that it is. It is

⁹ Aristotle, Poetics. 1453a34-38

¹⁰ <http://www.washingtonpost.com/wp-dyn/content/article/2007/10/11/AR2007101102134.html>

¹¹ Aristotle, Poetics. 1451b1-5

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simply a plausible and possible imitation of the world, and the threatening future of it. The difference lies between representation and imitation. Lets take an illustrative example from biology. When the little insect *planthopper* mimics a leaf on a stem we do not ask whether this insect is a good representation of the leaf he looks like, we ask if he plays the role in a convincing way. The *planthopper* has evolved this mimicry because it is advantageous. And according to Aristotle, The same goes for the attic tragedy, "it ceased to evolve, since it had achieved its own nature"¹², it was perfect since it imitated life, it was played again and again, new plots same form. Maybe the same goes for *An Inconvenient Truth*: it was successful in producing affects in the audience, therefore it has many followers, and its form is spreading to academia as well, what else can be expected.

The refrain of Climate Dramas

I think it is very interesting that the climate dramas I have looking at stay devoid of apocalyptic resolutions, it would have been easy to give these dramas cataclysmic endings, the ingredients are definitely there. But it is not like the ordinary catastrophe film we are used to see. The tragic error in climate dramas is said to eventually lead to the apocalypse but it is never shown only, it is only shown a possible and plausible threat. This might seem strange, but the violent endings with special effects are there to resolve the tension in movies and offer the audience catharsis, and climate dramas want something else. This is consistent with the intention that the producers of climate dramas say that they have; to spread knowledge, produce engagement and above all make a difference. The apocalyptic and violent ending a catastrophe film relieves the audience from tension and the audience leave the cinema horrified but pleased. The climate dramas do not offer that relief. If the climate change would make us belief that it is the end of the world, there would be no reason to change the way we live, rather the opposite, who wouldn't spend it all if the end is closing in? Then, the question is what does the climate dramas do with the audience? What are its affects?

Conclusion

When listening to common talk on climate change, some things seem to return over and over again; *glaciers are rotting, ice bears are starving, the ocean is rising, and between the lines, the flood is coming.* And this is the refrain in climate dramas; we repeat this refrain when it seems to fit, it has become a familiar rhythm we easily fall into. You have heard these lines many times since 2006, it is almost as Al Gore became the choir leader of common talk. We sing the ice bear refrain, the flooding refrain and the ecosystem collapse refrain. The climate dramas leave the audience with the tension between tragic error and absence of resolution, the *deus ex machina* technological solution does not produce the cathartic relief, what else can we do but continue singing the tragic choir refrain; glaciers are melting, ice bears are drowning and the ocean will flood us. This is off little comfort but something to cling to because the refrain have a function, Deleuze & Guattari writes:

¹² Aristotle. Poetics 1449a15

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*A child in the dark, gripped with fear, comforts himself by singing under his breath. He walks and halts to his song. Lost, he takes shelter, or orients himself with his little song as best as he can. The song is like a rough sketch of a calming and stabilizing, calm and stable, center in the heart of chaos. Perhaps the child skips as he sings, hastens or slows his pace. But the song itself is already a skip: it jumps from chaos to the beginning of order in chaos and is in danger of breaking apart at any moment. (Deleuze & Guattari 1837: Of the Refrain in *Thousands Plateaus*, 1980)*

Deleuze & Guattari suggests that the song is a way for the child to produce something familiar that makes sense in the heart of chaos and crisis. Of course, the audience is that child. The theatre extends into the everyday talk. My conclusion is the climate dramas are successful and prolific because they become plays of repetition instead of plays of representation. We repeat what we were told in the climate dramas. Deleuze writes that the theatre of repetition affect the audience outside representation: "it is a question of producing within the work a movement capable of affecting the mind outside of all representation (...) of inventing vibrations, rotations, whirlings, gravitations, dances or leaps which directly touch the mind"¹³

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¹³ Deleuze, *Difference and Repetition*, p. 9